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Education:

Ph.D. 2000	Soil & Environmental Chemistry, Department of Agronomy, Kansas State University
M.S. 1995	Soil Chemistry, Department of Agronomy, Kansas State University
B.Sc. 1991	Faculty of Agriculture, University of Peradeniya, Sri Lanka (Major: Soil Science)

Professional Experience:

Current

2016 June- present
Professor of Soil and Environmental Chemistry, Department of Agronomy, Kansas State University, Manhattan, KS, USA

2023-present
Visiting Scientist/General User, Stanford Synchrotron Radiation Lightsource, Menlo Park, CA

2013-present
General User, Canadian Light Source, Saskatoon, Saskatchewan, Canada.

2002-present
Visiting Scientist/General User, National Synchrotron Light Source, Brookhaven National Laboratory, Upton, NY

2002-present
Visiting Scientist/General User, Advanced Photon Source, Argonne National Laboratory, Argonne, IL

Past

2007- 2025 June
Adjunct Professor, Discipline of Soil and Land Systems, School of Earth and Environmental Sciences, The University of Adelaide, Australia

2018 May-2018 August
Visiting Scientist, Agriculture and Food, Commonwealth Scientific and Industrial Research Organization (CSIRO) Land and Water, Adelaide, Australia

2012 June- 2016 June
Associate Professor of Soil and Environmental Chemistry, Department of Agronomy, Kansas State University, Manhattan, KS, USA

2008 January- 2012 June
Assistant Professor of Soil and Environmental Chemistry, Department of Agronomy, Kansas State University, Manhattan, KS, USA

2008 January- 2011 January
Visiting Scientist, CSIRO Land and Water, Environmental Biogeochemistry Directorate, Centre for Environmental Contaminant Research, Australia

Professional Experience (cont.):

2007 March- 2008 January
Research Scientist, CSIRO Land and Water, Environmental Biogeochemistry Directorate, Centre for Environmental Contaminant Research, Glen Osmond, South Australia, Australia.

2004 December- 2007 March
Senior Research Associate, Department of Soil and Water, School of Earth and Environmental Sciences, The University of Adelaide, Australia

2002 December- 2004 December
Senior Lecturer, Soil and Environmental Chemistry, Department of Soil Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka

2000 September-2002 November
Postdoctoral Research Fellow, National Risk Management Research Laboratory, USEPA

2000 May-2000 September
Postdoctoral Research Associate, Department of Agronomy, Kansas State University

1996-2000 May
Graduate Research Assistant, Department of Agronomy, Kansas State University

1998 Fall/ 1997 Spring/ 1996 Fall
Graduate Teaching Assistant, Department of Agronomy, Kansas State University

1993-1994
Visiting Lecturer in Chemistry, Affiliated University College, Uwa Province, Sri Lanka

1993- 2002 December
Lecturer in Soil Science, Department of Soil Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka (from 1994 to 2002-on study leave)

1992- 1993
Assistant Lecturer in Soil Science, Department of Soil Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka

Honors and Awards:

2026 Kansas State University Graduate Faculty Mentor Award
2023 Kansas State University Sigma Xi Outstanding Scientist Award
2023 Kansas State University Professorial Performance Award
2021 The Jackson Soil Chemistry and Mineralogy Award, Soil Science Society of America
2021 Soil Science Society of America Fellow
2020 Researcher of the Year 2019, Fluid Fertilizer Foundation
2019 American Society of Agronomy Fellow
2018 CSIRO Agriculture and Food, Visiting Fellowship (May-August 2018)
2013-2014 College of Agriculture Teaching Excellence Honoree
2013 North American Colleges and Teachers of Agriculture Teacher Fellow Award
2013 Kansas State University Gamma Sigma Delta Outstanding Faculty Research Award
2012-2008 NSF ADVANCE Speaker Awards (3), Hosted Drs. Dean Hesterberg at North Carolina State University, Rufus Chaney at USDA-ARS, and Scott Fendorf at Stanford University
2009 NSF ADVANCE Travel Award to travel to 10th International Conference on Biogeochemistry of Trace Elements, Chihuahua, Mexico, July 2009

Honors and Awards (cont.):

2004-2007 Australian Research Council (ARC) Research Fellowship, The University of Adelaide, Adelaide, Australia
2000-2003 Oak Ridge Institute of Science and Education (ORISE) Postdoctoral Fellowship, US-Environmental Protection Agency's National Risk Management Research Laboratory, Cincinnati, OH
2000 ORISE Postdoctoral Fellowship, Oak Ridge National Laboratory, Oak Ridge, TN (Declined)
1996-2000 Graduate Research/Teaching Assistantship in Soil Chemistry for Ph.D., Funded by Dep. of Agronomy and US-EPA EPSCoR
1997 The Roscoe Ellis, Jr. Soil Science Scholarship, KSU
1996 Neal and Florence E. Morehouse Graduate Scholarship, KSU
1995 Irvin D. and Dora Mae Atkins Family Scholarship, KSU
1994-1996 Fulbright Scholarship, U.S.A. for M.S.
1994 Presidential Award, Sri Lanka, UK for M.S. (Combined with the Fulbright scholarship)
1987-1992 University Grants Commission Open Scholarship for B.Sc.

Selected Research Accomplishments:

My research program integrates soil chemistry, environmental remediation, nutrient management, and waste reutilization to develop sustainable solutions for agricultural and environmental challenges while advancing a mechanistic understanding of soil processes.

(a) Advanced science- and bioavailability-based approaches for the sustainable management of contaminated anthropogenic soils, including urban and mine-impacted soils, to protect human and ecological health. This work integrates field-scale investigations under natural conditions with laboratory studies and synchrotron-based spectroscopic analyses at national user facilities to elucidate contaminant fate, transformation, and bioavailability in soils (Sobin et al., 2022; Gutierrez et al., 2022; Alasmary et al., 2021; Karna et al., 2018; Attanayake et al., 2017; Karna et al., 2016; Attanayake et al., 2014; Defoe et al., 2014).

(b) Advanced the fundamental understanding of the fate and transport of macro- and micronutrients in soils. These findings have informed strategies to address nutrient deficiencies, improve nutrient use efficiency, and support the development of more sustainable fertilizer technologies (Chahal et al., 2026; Weeks and Hettiarachchi, 2020; Pierzynski and Hettiarachchi, 2018; Milani et al., 2015; Premarathna et al., 2012a,b; Hettiarachchi et al., 2008a,b).

(c) Advanced the science-based recycling and beneficial reuse of agricultural, municipal, and industrial wastes and wastewaters through mechanistic investigations of soil and environmental processes. This work has contributed to safer land application of waste-derived materials and the development of sustainable alternative nutrient sources for agriculture (Galkaduwa et al., 2018, 2017; Paredez et al., 2017; Hettiarachchi et al., 2006b, 2003b; Karna et al., 2022; Gamage et al., 2026; Dodampe Muduyaselage and Hettiarachchi, 2026; Heronemus et al., 2021).

Selected Honors and Recognition: Recipient of the 2021 Jackson Soil Chemistry and Mineralogy Award from the Soil Science Society of America, recognizing outstanding contributions to soil chemistry and mineralogy. I was the second woman to receive this honor since its establishment in 1991.

Five Selected Publications and Their Scientific Contributions:

1. Pitumpe Arachchige, P.S., **G.M. Hettiarachchi**, C.W. Rice, J.J. Dynes, L. Maurmann, J. Wang, C. Karunakaran, A.L.D. Kilcoyne, C.P. Attanayake, T.J.C. Amado & J.E. Fiorin. 2018. Sub-micron level investigation reveals the inaccessibility of stabilized carbon in soil microaggregates. *Scientific Reports.* 8: 16810. (Times cited: 36)

   Key Scientific Contribution: Using novel sub-micron-scale analytical techniques, this study provided direct evidence that interactions among soil minerals, microorganisms, and organic matter determine the accessibility and persistence of stabilized soil carbon, advancing mechanistic understanding of carbon sequestration in soils.

2. Attanayake, C.P., **G.M. Hettiarachchi**, A. Harms, D. Presley, S. Martin, and G.M. Pierzynski. 2014. Field Evaluations on Soil Plant Transfer of Lead from an Urban Garden Soil. J. Environ. Qual. Vol. 43: 475-487. (Times cited: 168)

   Key Scientific Contribution: Demonstrated that external soil contamination adhering to vegetable surfaces contributes more substantially to lead concentrations in edible tissues than root uptake under many urban gardening conditions, providing important implications for human exposure assessment and risk management.

3. Milani, N., **G.M. Hettiarachchi**, D.G. Beak, M. J. McLaughlin, J. K. Kirby, and S. P. Stacey. 2015. Fate of zinc oxide nanoparticles coated onto macronutrient fertilizers in an alkaline calcareous soil. PLoS ONE 10(5): e0126275. (Times cited: 150)

   Key Scientific Contribution: Through the application of advanced synchrotron-based spectroscopic techniques, this study provided the first mechanistic evidence that zinc oxide nanoparticles do not exhibit greater solubility or mobility than conventional zinc oxide in alkaline calcareous soils, helping guide the development of more cost-effective fertilizer technologies.

4. **Hettiarachchi, G.M.**, J. A. Ryan, K. G. Scheckel, S. R. Sutton, and M. Newville. 2006b. μ-XANES and μ-XRF investigations of metal binding mechanisms in biosolids. J. Environ. Qual. 35: 342-351. (Times cited: 80)

   Key Scientific Contribution: This pioneering study used synchrotron-based micro-scale analyses to reveal that iron oxides are key binding phases controlling trace metal sequestration in biosolids. The findings provided a mechanistic foundation for understanding the enhanced trace metal retention in biosolids-amended soils and the long-term environmental stability of biosolids-borne metals.

5. **Hettiarachchi, G. M.**, G. M. Pierzynski, and M. D. Ransom. 2000. In situ stabilization of soil lead using phosphorus and manganese oxide. Environ. Sci. Technol. 34, 4614-4619. (Times cited: 363)

   Key Scientific Contribution: This pioneering study demonstrated that combined phosphorus and manganese oxide amendments are a more effective strategy for reducing lead bioavailability than single-amendment approaches. The findings helped establish the scientific basis for in situ stabilization as a practical remediation option for lead-contaminated soils.

Publications:

Refereed (118 peer-reviewed publications, 6304 citations, h-Index= 40, i-10 index=87)

1. de Souza, J.S., G.M. Hettiarachchi, A.S. Westbrook, B. Rutter, & J.A. Dille. 2026. Effects of soil texture and pH on soybean emergence and injury from sulfentrazone and chlorimuron-ethyl herbicides. Weed Science. 2026;74(1):e79. https://doi:10.1017/wsc.2026.10159
2. Cominelli, S., J. Lacasa, R.L.V. Cott, G.M. Hettiarachchi, D.A. Ruiz Diaz. 2026. Comparison of statistical methods to characterize yield response to phosphorus, European Journal of Agronomy, 183: 2027, 128394. https://doi.org/10.1016/j.eja.2026.128394
3. Gutiérrez, E. E., G.M. Hettiarachchi, & A.D.E. Mudiyanselage. 2026. Long-Term Field-Based Evidence for Chemical Pathways Reducing Lead Bioaccessibility in Phosphorus-Amended Urban Soils. Soil Systems, 10(11), 139. https://doi.org/10.3390/soilsystems10110139
4. Dodampe Mudiyanselage, N., and G.M. Hettiarachchi. 2026. Comparative assessment of mobility, potential availability, and speciation of reclaimed struvite and conventional phosphorus fertilizers in mildly calcareous, neutral, and acidic soils. Journal of Environmental Quality, 55, e70171. https://doi.org/10.1002/jeq2.70171
5. Bourns, M. A., E. Yeager, N.O. Nelson, K.L. Roozeboom, G.J. Kluitenberg, G.M. Hettiarachchi, P.J. Tomlinson, and D. Presley. 2026. Phosphorus drawdown improves net return and water quality in a no-till corn-soybean system. Journal of Soil and Water Conservation. 81, 222–235. https://doi.org/10.1080/00224561.2026.2651052
6. Gamage, K.H.H., G.M. Hettiarachchi, E. Heronemus, and P. Parameswaran. 2026. Recovered calcium-based phosphorus products from synthetic swine wastewater: Fate and behavior in soils. Environ. Sci. Technol. https://doi.org/10.1021/acs.est.5c05565
7. Chahal, S.K., G.M. Hettiarachchi, N.O. Nelson, and M.J. Guttieri. 2026. Chemical speciation of zinc in fertilized neutral soils governs zinc mobility and phytoavailability. Soil Sci. Soc. Am. J. 90: e70176. https://doi.org/10.1002/saj2.70176
8. Corso, M.L., J. Arroyave, J.C. Woodworth, M.D. Tokach, R.D. Goodband, J.M. DeRouchey, J.T. Gebhardt, and G.M Hettiarachchi. 2025. Relationship between water hardness, pH, and organic acid requirement for effective water acidification in swine operations, Translational Animal Science, 9: txaf164, https://doi.org/10.1093/tas/txaf164
9. Gurttieri, M., S.S. Liu, S.A. Dip, G.M. Hettiarachchi, M.M. Derby, and R.R. Hansen. 2025. Impact of soil texture on biosurfactant-mediated soil wetting and water retention. Ag. Environ. Lett. 10: e70043. https://doi.org/10.1002/ael2.70043
10. Almutari, M.M., G.M. Hettiarachchi., D.A. Ruiz Diaz, A. Fritz, J.D. Holman, and Y. Assefa. 2025. Agronomic biofortification of wheat with zinc through co-addition of organic carbon with zinc fertilizers. 8: e70228. https://doi.org/10.1002/agg2.70228
11. Ghaznavi, S.M., M. Choudhary, M. Hannan, G.M. Hettiarachchi, and O.G. Apul. 2025. A critical review of per- and polyfluoroalkyl substances adsorption by soil, J. Haz. Mat: Organics, 1: 100001. https://doi.org/10.1016/j.hazmo.2025.100001

12. Sakib, T.U., N.O. Nelson, G.M. Hettiarachchi, C. Moorberg, J. Nippert, and S. Whittaker. 2025. Soil phosphorus availability as affected by root exudates of cover crop species. Scientific Reports. 15, 33443. https://doi.org/10.1038/s41598-025-19102-7
13. Wekumbura, C., G.M. Hettiarachchi, W. Hargrove, Q. Ma, M. Newville, A. Lanzirotti, and C. Sobin. 2025. Mitigating lead bioaccessibility in metal(loid)s contaminated alkaline soils using soil amendments: Evaluating efficacy using in vitro bioaccessibility, sequential extraction, and synchrotron techniques, Journal of Haz. Mat. 497, 139742, https://doi.org/10.1016/j.jhazmat.2025.139742.
14. Wekumbura, C. G.M. Hettiarachchi, and C. Sobin. 2025. Side by side comparison of micro vacuum dust collection vs dust wipe for Pb determination in household dust samples. J. Environ. Qual. 1–10. https://doi.org/10.1002/jeq2.70052.
15. Hsiao, C.-J., M. Mushtaq, G.F. Sassenrath, L.H. Zeglin, G.M. Hettiarachchi, and C.W. Rice. 2025. Long-Term tillage and compost shape soil microbes under soil organic carbon equilibrium. Eur J Soil Sci, 76: e70125. https://doi.org/10.1111/ejss.70125
16. Byers, E.N., S.L. Hutchinson, E. Schmitz, G. Hettiarachchi, M.M. Almutari, and J. de Oliveira Demarco. 2025. Productive reuse of industrial wastewater for the cultivation of a biofuel feedstock using Salicornia. J. Nat. Resour. Agric. Ecosyst., 3, 69-80. https://10.13031/jnrae.16187.
17. Kannan, A.D., K.H.H. Gamage, G.M. Hettiarachchi, and P. Parameswaran. 2025. Response to comment on 'Recovery of high-quality calcium phosphate fertilizer products from anaerobic bioreactor treated swine wastewater', Chem. Eng. Journal, 510: 61576, https://doi.org/10.1016/j.cej.2025.161576.
18. de Oliveira Demarco, J., S. Hutchinson, P. Parameswaran, G. Hettiarachchi, and Moore, Trisha. 2025. Removal of antibiotics from swine wastewater using an environmentally friendly biochar: performance and mechanisms. ACS Omega. 10: 7711-7721. https://10.1021/acsomega.4c07266.
19. Gamage, K.H.H., G.M. Hettiarachchi, N.O. Nelson, K. Roozeboom, G. Kluitenberg, P. Tomlinson, and D. Presley. 2025. Phosphorus and cover crop management practices affect phosphorus speciation in soils and eroded sediments. Soil Sci. Soc. Am. 54:382-396. https://10.1002/jeq2.20677.
20. de Oliveira Demarco, J., S.L. Hutchinson, P.K. Gupta, P. Parameswaran, G. Hettiarachchi, and T. Moore. 2025. Performance of constructed wetland systems for anaerobic membrane bioreactor effluent polishing. J. Environ. Eng. 151(1). https://doi.org/10.1061/JOEEDU.EEENG-7824
21. Brown, S.L., and G.M. Hettiarachchi. 2025. Risks and benefits associated with urban green space through the lens of environmental justice. Soil & Environmental Health. 3: 100127, https://doi.org/10.1016/j.seh.2024.100127
22. Pitumpe Arachchige, P.S., G.M. Hettiarachchi, C.W. Rice, J. Dynes, L. Maurmann, A.L.D. Kilcoyne, and C.P. Attanayake. 2024. Direct evidence on the impact of organic amendments on carbon stabilization in soil microaggregates. Soil Sc. Soc. of Am. 88: 1529-1544. https://doi.org/10.1002/saj2.20701

23. Attanayake, C. P., G.M. Hettiarachchi, A.I. Dissanayake, & Q. Ma. 2024. Organic amendments temporarily change arsenic speciation and bioaccessibility in a lead and arsenic co-contaminated urban soil. Journal of Environmental Quality, 53: 535-545. https://doi.org/10.1002/jeq2.20575
24. Henshaw, K., G.M. Hettiarachchi, and J.D. Judy. 2024. Phosphorus speciation and elemental associations in well-drained soils of temperate forests. Soil Sc. Soc. of Am. 88: 1127-1136. https://doi.org/10.1002/saj2.20686
25. Kumaragamage D, G.M. Hettiarachchi, I. Amarakoon, D. Goltz, and S. Indraratne. 2024. Phosphorus fractions and speciation in an alkaline, manured soil amended with alum, gypsum, and Epsom salt. J Environ Qual. 53(3):314-326. https://doi.org/10.1002/jeq2.20554.
26. Bourns, M. A., N.O. Nelson, R.E. Carver, K.L. Roozeboom, G.J. Kluitenberg, P.J. Tomlinson, Q. Kang, and G.M. Hettiarachchi. 2023. Cover crops impact phosphorus cycling and environmental efficiency in a corn–soybean system. Agronomy Journal, 116, 109–120. https://doi.org/10.1002/agj2.21498.
27. de Oliveira Demarco, J., S. L. Hutchinson, L. M. Bastos, G. Hettiarachchi, M. Almutari, and E. Nottingham. 2023. Industrial wastewater treatment by plant-based bio-filtration. International Journal of Phytoremediation, 25(14), 1945–1955. https://doi.org/10.1080/15226514.2023.2209191
28. De Sousa, C., A.M.M. Carroll, S. Whitehead, L. Berman, S. Coffin, L. Heberle, G. Hettiarachchi, S. Martin, K. Sullivan, and J. Van Der Kloot. 2023. A review of brownfields revitalisation and reuse research in the US over three decades, Local Environment, https://doi.org/10.1080/13549839.2023.2248625
29. Chahal, S.K., G.M. Hettiarachchi, N.O. Nelson, and M.J. Guttieri. 2023. Fate and plant uptake of different zinc fertilizer sources upon their application to an alkaline calcareous soil. ACS Agric. Sci. & Technol, 3, 725–737, https://doi.org/10.1021/acsagscitech.2c00287
30. Arachchige, V.K., T.M. McBeath, R.J. Smernik, G.M. Hettiarachchi, R. Khalil. 2023. The Effect of Metal Oxide Coating of Urea on Mineralization in Two Contrasting Soils. *Soil Sci. Soc. Am. J.* https://doi.org/10.1002/saj2.20576.
31. Del Rio, M., C. Rodriguez, E. Alvarado Navarro, C. Wekumbura, M.B. Galkaduwa, G.M. Hettiarachchi, C. Sobin. 2023. Stability of blood lead levels in children with low-level lead absorption. PLoS ONE 18(6): e0287406. https://doi.org/10.1371/journal.pone.0287406
32. Kastury, F., H. Li, R. Karna, R., A. Betts, K.G. Scheckel, L. Ma, T.D. Sowers, K.D. Bradham, G.M. Hettiarachchi, and A.L. Juhasz. 2023. Opportunities and Challenges Associated with Bioavailability-Based Remediation Strategies for Lead-Contaminated Soil with Arsenic as a Co-Contaminant—A Critical Review. Curr Pollution Rep. https://doi.org/10.1007/s40726-023-00252-z
33. Hettiarachchi G. M., Lee L., Li H., Brose D., Basta N. 2023. Editorial: Translating soil science to improve human health. Front. Environ. Sci. 11: https://www.frontiersin.org/articles/10.3389/fenvs.2023.1215416.
34. Wekumbura, C., G.M. Hettiarachchi, and C. Sobin. 2023. Estimating the proportion of bioaccessible lead (BaPb) in household dust wipe samples: a comparison of IVBA and PBET methods J. Environ. Sci. Health A. 58(2):127-138. https://doi.org/10.1080/10934529.2023.2178206

35. Del Rio, M., A. Obeng, B. Galkaduwa, C. Rodriguez, C. Costa, C. Chavarria, E.A. Navaro, J. Avila, C. Wekumbura, W.L. Hargrove, G. Hettiarachchi, C. Sobin. 2023. An interdisciplinary team-based approach for significantly reducing lower-level lead poisoning in U.S. children. Toxicology Reports. 10: 76-86. https://doi.org/10.1016/j.toxrep.2022.12.004

36. Kannan, A., J. Dillavou, K.H.H. Gamage, G.M. Hettiarachchi, and P. Parameswaran. 2023. Recovery of high-quality Calcium phosphate fertilizer products from anaerobic membrane bioreactor treated swine wastewater. Chem. Eng. J. 453, 139539. https://doi.org/10.1016/j.cej.2022.139539

37. Sobin C, M. Gutierrez-Vega, G. Flores-Montoya, M. Del Rio, J.M. Alvarez, A. Obeng, J. Avila, and G.M. Hettiarachchi. 2022. Improving equitability and inclusion in testing and detection of lead poisoning in U.S. children. Milbank Quarterly. 2023 Jan 30. https://doi.prg/10.1111/1468-0009

38. Del Rio M, Sobin, C, and G.M. Hettiarachchi. 2022. Biological factors that impact variability of lead absorption and BLL estimation in children: Implications for child blood lead level testing practices. Journal of Environmental Health. 85: 18-26. https://doi.org/10.1371/journal.pone.0287406

39. Gutiérrez, E., E. Chávez, K. H.H. Gamage, D. Argüello, M. B. Galkaduwa, and G.M. Hettiarachchi. 2022. Cadmium fractionation in soils affected by organic matter application: Transfer of cadmium to cacao (Theobroma cacao L.) tissues. Front. Environ. Sci. 19 Sep. 2022. https://doi.org/10.3389/fenvs.2022.954521.

40. Attanayake, C.A., D. Kumaragamage, G. Amarawansha, G. M. Hettiarachchi, S. P. Indraratne, and D. M. Goltz. 2022. Phosphorus release and speciation in manganese(iv) oxide and zeolite-amended flooded soils. Environ. Sci. Technol. 56: 8082-8093. https://doi.org/10.1021/acs.est.2c01185.

41. Obeng, A. B., M. Del Rio, C. Costa, C. Chavarria, C. Rodriguez, M. B. Galkaduwa, C. Wekumbura, K. Gamage, G. M. Hettiarachchi, W. Hargrove, and C. Sobin. 2022. Validity of a portable X-ray fluorescence device for analyzing field dust wipe samples for lead. Int. J. Environ. Sci. Technol. https://doi.org/10.1007/s13762-021-03898-8

42. Strawn, S.G., G.M. Hettiarachchi. 2021. 50 years of articles in JEQ on trace elements in the environment, and future outlook. J. Environ. Qual. 50: 1266-1281. https://doi.org/10.1002/jeq2.20296.

43. Judy, J.D., J. Sarchapone, C. Gravesen, G.M. Hettiarachchi, C. Buchanan, D. LaMontagne, J. Pachon. 2022. Correlating soil nutrient test lead with bioaccessible lead in highly-contaminated soils receiving lead-immobilizing amendments. Sci. Tot. Environ. 807, 150658. https://doi.org/10.1016/j.scitotenv.2021.150658.

44. Alasmary, Z., G.M. Hettiarachchi, K. L. Roozeboom, L.C. Davis, L.E. Erickson, T. Todd, V. Pidlisnyuk, T. Stefanovska, and J. Trogl. 2021. Phytostabilization of a Contaminated Military Site Using Miscanthus and Soil Amendments. J. Environ. Qual. 50: 1220-1232. https://doi.org/10.1002/jeq2.20268.

45. Pitumpe Arachchige, P.S., G.M. Hettiarachchi, C.W. Rice, L. Maurmann, J.J. Dynes, and T. Reiger. 2021. Chemistry and associations of carbon in water-stable soil aggregates from a long-term temperate agroecosystem and implications on soil carbon stabilization. ACS Agric. Sci. Technol. 1, 3, 173–181. https://pubs.acs.org/doi/abs/10.1021/acsagscitech.0c00074.
46. Heronemus, E., K.H.H. Gamage, G.M. Hettiarachchi, and P. Parameswaran. 2021. Efficient recovery of phosphorus and sulfur from Anaerobic Membrane Bioreactor (AnMBR) permeate using chemical addition of iron and evaluation of its nutrient availability for plant uptake, Sci. Total Environ. 146850. https://doi.org/10.1016/j.scitotenv.2021.146850
47. Attanayake, C.P., G.M. Hettiarachchi, M. Palomo, G.M. Pierzynski, and B. Calderon. 2021. Phytoavailability of lead for vegetables in urban garden soils. ACS Agricultural Science & Technology. 1: 173–181. https://doi.org/10.1021/acsagscitech.0c00068
48. Judy, J.D., W. Harris, G. M. Hettiarachchi, A. C. Buchanan, and K. R. Reddy. 2021. Mineralogy of particulate inputs and P-speciation and mineralogy of recently accreted soils within Everglades stormwater treatment wetlands, Science of the Total Environment, 781, 146740, https://doi.org/10.1016/j.scitotenv.2021.146740.
49. Weeks, J.J., Jr., G.M. Hettiarachchi, E. Santos, and J. Tatarko. 2021. Potential human inhalation exposure to soil contaminants in urban gardens on brownfields sites- A breath of fresh air? J. Environ. Qual.50:782-790. https://doi.org/10.1002/jeq2.20208
50. Cheng, Z., G. M. Hettiarachchi, and K-H Kim. 2020. Urban soils research: SUITMA 10. *J. Environ. Qual.* Published online 12/20/2020. https://doi.org/10.1002/jeq2.2019.
51. Alasmary, Z., T. Todd, G.M. Hettiarachchi, T. Stefanovska, V. Pidlisnyuk, K. Roozeboom, L. Erickson, L. Davis, and O. Zhukov. 2020. Effect of soil treatments and amendments on the nematode community under miscanthus growing in a lead contaminated military site. Agronomy 10, 1727. https://doi.org/10.3390/agronomy10111727
52. Hobson, C., H. Kulkarni, K. Johannesson, A. Bednar, R. Tappero, T.J. Mohajerin, P. Sheppard, M. Witten, G.M. Hettiarachchi, and S. Datta. 2020. Origin of tungsten and geochemical controls on its occurrence and mobilization in shallow sediments from Fallon, Nevada, USA, Chemosphere, 260: 127577. https://doi.org/10.1016/j.chemosphere.2020.127577
53. Pidlisnyuk, V., L. Erickson, T. Stefanovska, G. Hettiarachchi, L. Davis, J. Trögl, and P. Shapoval. 2020. Response to Grygar (2020) comments on "Potential phytomanagement of military polluted sites and biomass production using biofuel crop miscanthus x giganteus"- Pidlisnyuk et al. (2019). Environmental pollution, 261: 113038. https://doi.org/10.1016/j.envpol.2020.115037
54. Alghamdi, A., D.R. Presley, M.B. Kirkham, and G. Hettiarachchi. 2020. Efficacy of amendments to improve soil physical properties at an abandoned lead and zinc mine. Agroecosystems, Geosciences & Environment. 3: e20032.
55. Weeks, J.J., Jr. and G.M. Hettiarachchi. 2020. Source and formulation matter: New insights into phosphorus fertilizer fate and transport in mildly calcareous soils. Soil Sci. J. Am. 84:731-746.

56. Tarla, D. N., L.E. Erickson, G.M. Hettiarachchi, S.I. Amadi, M. Galkaduwa, L.C. Davis, A. Nurzhanova, and V. Pidlisnyuk. 2020. Review- Phytoremediation and bioremediation of pesticide-contaminated soil. Appl. Sci.10: 1217.

57. Hsiao, C-J; G.F. Sassenrath; L.H. Zeglin; G.M. Hettiarachchi; C.W. Rice. 2019. Temporal variation of soil microbial properties in a corn-wheat-soybean system. Soil Sci. J. Am. 83: 1696-1711.

58. Weeks, J.J., Jr. and G.M. Hettiarachchi. 2019. A review of the latest in phosphorus fertilizer technology: Possibilities and pragmatism. J. Environ. Qual. 48:1300–1313.

59. Pidlisnyuk V., L. Erickson, T. Stefanovska, J. Popelka, G. Hettiarachchi, L. Davis, J. Trögl. 2019. Potential phytomanagement of military polluted sites and biomass production using biofuel crop miscanthus x giganteus. Environ Pollut. 249:330-337.

60. Coelho, M. J. A., D. R. Diaz, G. M. Hettiarachchi, F. D. Hansel, P. S. Pavinato. 2019. Soil phosphorus fractions and legacy in a corn-soybean rotation on Mollisols in Kansas, USA, Geoderma Regional, 18: e00228

61. Pitumpe Arachchige, P.S., G.M. Hettiarachchi, C.W. Rice, J.J. Dynes, L. Maurmann, J. Wang, C. Karunakaran, A.L.D. Kilcoyne, C.P. Attanayake, T.J. C. Amado & J.E. Fiorin. 2018. Sub-micron level investigation reveals the inaccessibility of stabilized carbon in soil microaggregates. *Scientific Reports.* 8: 16810.

62. Karna, R.R., G.M. Hettiarachchi, J. Van Nostrand, T. Yuan, C.W. Rice, Y. Assefa, and J. Zhou. 2018. Microbial population dynamics and the role of sulfate reducing bacteria genes in stabilizing Pb, Zn, and Cd in the terrestrial subsurface**.** Soil Syst. 2**:** 60.

63. Ohno, T. and G.M. Hettiarachchi. 2018. Soil chemistry and the one health initiative: introduction to the special section. *J. Environ. Qual.* 47(6):1305-1309.

64. Galkaduwa, M.B., G.M. Hettiarachchi, G.J. Kluitenberg, and S.L. Hutchinson. 2018. Iron oxides minimize arsenic mobility in soil material saturated with saline wastewater. *J. Environ. Qual.* 47:873-883.

65. Pierzynski, J. and G.M. Hettiarachchi. 2018. Reactions of Phosphorus Fertilizers with and without a Fertilizer Enhancer in Three Acidic Soils with High Phosphorus Fixing Capacity. *Soil Sci. Soc. Am. J*. 82: 1124-1139.

66. Hsiao, Che-Jen, G. Sassenrath, L. Zeglin, G.M. Hettiarachchi, and C.W. Rice. 2018. Vertical changes of soil microbial properties in claypan soils. *Soil Biology and Biochemistry*, 121: 154-164.

67. Pidlisnyuk, V., L.E Erickson, J. Trögl, P. Y Shapoval, J. Popelka, L.C. Davis, T.R. Stefanovska, G.M. Hettiarachchi. 2018. Metals uptake behaviour in Miscanthus x giganteus plant during growth at the contaminated soil from the military site in Sliač, Slovakia. Polish Journal of Chemical Technology, 20: 1-7.

68. Karna, R.R. and G.M. Hettiarachchi. 2018. Subsurface submergence of mine waste materials as a remediation strategy to reduce metal mobility: An overview. *Current Pollution Rep*. 4:35-48.

69. Hettiarachchi, G.M., E. Donner, and E. Doelsch. 2017. Introduction to special section: Application of synchrotron radiation-based methods for environmental biogeochemistry. J. Environ. Qual. 46:1–7

70. Attanayake, C.P., G.M. Hettiarachchi, Q. Ma, G.M. Pierzynski, M.D. Ransom. 2017. Lead speciation and *in vitro* bioaccessibility of compost-amended urban garden soils. *J. Environ. Qual.* 46:1215-1224.
71. Paredez, J. M, N. Mladenov, M. B. Galkaduwa, G.M. Hettiarachchi, G.J. Kluitenberg, S.L. Hutchinson. 2017. A soil column study to evaluate treatment of trace elements from saline industrial wastewater. Journal of Water Science and Technology. Available Online 31 July 2017, wst2017413.
72. Vega, M. A., H. V. Kulkarni, N. Mladenov, K. Johannesson, G. M. Hettiarachchi, P. Bhattacharya, N. Kumar, J. Weeks, M. Galkaduwa and S. Datta. 2017. Biogeochemical controls on the release and accumulation of Mn and As in shallow aquifers, West Bengal, India. Front. Environ. Sci., 23 June 2017. doi.org/10.3389/fenvs.2017.00029.
73. Galkaduwa, M.B., G.M. Hettiarachchi, G.J. Kluitenberg, S.L. Hutchinson, L. Erickson, L. Davis. 2017. Transport and transformation of selenium and other constituents of flue-gas desulfurization wastewater in water-saturated soil materials. J Environ Qual. 46:384-392.
74. Datta, S, S.E. Vero, G.M. Hettiarachchi, and K. Johannesson. 2017. Tungsten contamination of soils and sediments: Current state of Science. *Current Pollution Rep.* doi:10.1007/s40726-016-0046-0
75. Karna, R., G.M. Hettiarachchi, M. Newville, C-J Sun, and Q. Ma. 2016. Synchrotron-based x-ray spectroscopy studies for redox-based remediation of lead, zinc, and cadmium in mine waste materials. *J. Environ. Qual.* 45:1883-1893.
76. Wijesekara, H., N. S. Bolan, M. Vithanage, Y. Xu, S. Mandal, S. L. Brown, G. M. Hettiarachchi, G. M. Pierzynski, L. Huang, Y. Ok, M. B. Kirkham, C. Saint, and A. Surapaneni. 2016. A review on the utilization of biowastes for mine spoil rehabilitation. *Advances in Agronomy*. 138: 97- 173.
77. Brown, S., R.L. Chaney, and G.M. Hettiarachchi. 2016. Lead in urban soils -- A real or perceived concern for urban agriculture? *J. Environ. Qual.* 45: 26-36.
78. Henry, H., M. F. Naujokas, C. Attanayake N.T. Basta, Z. Cheng, G.M. Hettiarachchi, M. Maddaloni, C. Schadt, and K. G. Scheckel. 2015. Bioavailability-based in situ remediation to meet future lead (Pb) standards in urban soils and gardens. *Environ. Sci. Technol.*, 49:8948-8958.
79. Attanayake, C.P., G.M. Hettiarachchi, S. Martin, and G.M. Pierzynski. 2015. Potential bioavailability of lead, arsenic, and polycyclic aromatic hydrocarbons in compost-amended urban soils. *J. Environ. Qual.* 44:930-944.
80. Milani, N., G.M. Hettiarachchi, D.G. Beak, M. J. McLaughlin, J. K. Kirby, and S. P. Stacey. 2015. Fate of zinc oxide nanoparticles coated onto macronutrient fertilizers in an alkaline calcareous soil. PLoS ONE 10(5): e0126275.
81. Hartley, P.E., D. Presley, M. D. Ransom, G. M. Hettiarachchi, and L. T. West. 2014. Vertisols and vertic properties of soils of the Cherokee prairies of Kansas. Soil Sci. Soc. Am. 78 :556-566.
82. Defoe, P.P, G.M. Hettiarachchi, C. Benedict, and S. Martin. 2014. Safety of Gardening on Lead- and Arsenic-Contaminated Urban Brownfields. J. Environ. Qual. 43:2041- 2078.

83. Khatiwada, R., G.M. Hettiarachchi, D. Mengel, and M. Fei. 2014. Placement and source effects of phosphate fertilizers on phosphorus availability and reaction products in two reduced-till soils: A greenhouse study. Soil Sci. 179: 141-152.
84. Sankar, M. S., M.A. Vega, P. P. Defoe, M. G. Kibria, S. Ford, K. Telfeyan, A. Neal, T.J. Mohajerin, G. M. Hettiarachchi, S. Barua, C. Hobson, K. Johannesson, S. Datta. 2014. Elevated arsenic and manganese in groundwaters of Murshidabad, West Bengal, India. Science of the Total Environ. 488-489: 570-579.
85. Harms, A., D.R. Presley, G.M. Hettiarachchi, C. Attanayake, S. Martin, and S.J. Thien. 2014. Harmony park: A decision case on gardening on a brownfield site. Natural Sciences Education 43: 33-41.
86. Attanayake, C.P., G.M. Hettiarachchi, A. Harms, D. Presley, S. Martin, and G.M. Pierzynski. 2014. Field evaluations on soil plant transfer of lead from an urban garden. Soil. J. Environ. Qual. 43: 475-487.
87. Baker, L., G.M. Pierzynski, G.M. Hettiarachchi, K.G. Scheckel, and M. Newville. 2014. μXRF, μXAS and μXRD investigation of Pb speciation after the addition of different P amendments to a smelter-contaminated soil. J. Environ. Qual. 43: 488-497.
88. Mladenov, N., P. Wolski, G. M Hettiarachchi, M. Murray-Hudson; H. Enriquez; S. Damaraju, M.B. Galkaduwa, D. M McKnight, and W. Masamba. 2014. Abiotic and biotic factors influencing the mobility of arsenic in island groundwater of the Okavango Delta, Botswana. J. of Hydrology. 518: Part C, 326-341.
89. Harms, A., D. Presley, G.M. Hettiarachchi, and S.J. Thien. 2013. Assessing the Needs Urban Gardeners and Farmers: Soil Contamination. Journal of Extension. 51: starting page 1FEA10.
90. Khatiwada, R., G.M. Hettiarachchi, D. Mengel, and M. Fei. 2012. Speciation of phosphorus in a fertilized reduced till soil system: In-field treatment incubation study. Soil Sci. Soc. Am. J. 76: 2006-2018.
91. Baker, L., G.M. Pierzynski, G.M. Hettiarachchi, K.G. Scheckel, and M. Newville. 2012. Speciation of Zn as Influenced by P addition in a Pb/Zn smelter contaminated soil. J. Environ. Qual. 41: 1865-1873.
92. Jassogne, L., G.M. Hettiarachchi, A. McNeill, and D. Chittleborough. 2012. Characterising the chemistry of micropores in a sodic soil with strong texture-contrast using synchrotron X-ray techniques and LA-ICP-MS. Soil Res. 50: 424–435.
93. Premarathna, L., M.J. McLaughlin, J. Kirby, G.M. Hettiarachchi, S. Stacey, and D. Chittleborough. 2012a. Selenate-enriched urea granules are a highly effective fertilizer for selenium biofortification of paddy rice grain. J. Agric. Food Chem. 60: 6037–6044.
94. Premarathna, L., M.J. McLaughlin, J. Kirby, G.M. Hettiarachchi, D. Beak, S. Stacey, and D. Chittleborough. 2012b. Influence of submergence and subsequent drainage on the partitioning and lability of added selenium fertilizers in a Fluvisol. European J Soil Sci. 63:514-522.
95. Milani, N., M.J. McLaughlin, S.P. Stacey, J. K. Kirby, G.M. Hettiarachchi, D.G. Beak and G. Cornelis. 2012. Dissolution kinetics of macronutrient fertilisers coated with manufactured zinc oxide nanoparticles. J. Agric. Food Chem. 60:3991-98.

96. Brown, S.L., I. Clausen, M.A. Chappell, K.G. Scheckel, M. Newville, G.M. Hettiarachchi. 2012. High Fe biosolids compost induced changes in Pb and As speciation and bioaccessibility in contaminated soils. J. Environ. Qual. 41: 1612-22

97. De Livera, D. Beak, M.J. McLaughlin, G.M. Hettiarachchi, and J.K. Kirby. 2011. Release of dissolved cadmium and sulfur nanoparticles from oxidizing sulfide minerals. Soil Sci. Soc. Am. J. 75: 842- 854.

98. Lombi, E., G.M. Hettiarachchi, and K.G. Scheckel. 2011. Advanced in situ spectroscopic techniques and their applications in environmental biogeochemistry: Introduction to the special section. J. Environ. Qual. 40:659-666.

99. Beak, D., J.K. Kirby, G.M. Hettiarachchi, L.A. Wendling, M.J. McLaughlin, and R. Khatiwada. 2011. Cobalt distribution and speciation in spiked soils: Effect of aging, intermittent submergence and in situ rice roots. J. Environ. Qual. 40:679-695.

100. De Livera, M.J. McLaughlin, G.M. Hettiarachchi, J.K. Kirby, and D.G. Beak. 2011. Cadmium solubility in paddy soils: effects of soil oxidation, sulfide equilibria and competitive ions. Sci. Total Environment. 409:1489-1497.

101. Premarathna, H.M.P.L., G.M. Hettiarachchi, and S.P. Indrarathne. 2011. Trace metal concentration in crops and soils collected from intensively cultivated areas of Sri-Lanka. Pedology. 54: 230-240

102. Premarathna, L., M.J. McLaughlin, J. Kirby, G.M. Hettiarachchi, D. Beak, S. Stacey, and D. Chittleborough. 2010. Potential availability of fertilized selenium in field capacity and submerged soils. Soil Sci. Soc. Am. J. 74(5) 1589-1596

103. Biasioli, M., J. Kirby, G.M. Hettiarachchi, F. Ajmone-Marsan, and M.J. McLaughlin. 2010. Copper lability in soils subjected to intermittent submergence. J. Environ. Qual. 39:2047-2053

104. Hettiarachchi, G. M., E. Lombi, M. J. McLaughlin, D. Chittleborough, and C. Johnston. 2010. Chemical behavior of fluid- and granular-Mn and Zn fertilizers in alkaline soils. Aust. J. Soil Res. 48: 238-247.

105. Jassogne, L., G. M. Hettiarachchi, D. Chittleborough, and A. McNeill. 2009. Distribution and speciation of nutrient elements around micropores. Soil Sci. Soc. Am. J. 73:1319 -1326.

106. Stacey, S.P., M.J. McLaughlin, I. Cakmak, G. Hettiarachchi, K. Scheckel, and M. Karkkainen. 2008a. Root uptake of lipophilic zinc-rhamnolipid complexes. J. Agric. Food Chem. 56:2112-2117.

107. Hettiarachchi, G. M., M. J. McLaughlin, K. G. Scheckel, D. J. Chittleborough, M. Newville, S. Sutton, and E. Lombi. 2008b. Evidence for different reaction pathways for liquid- and granular-micronutrients in a calcareous soil. Soil Sci. Soc. Am. J. 72:98-110.

108. Hettiarachchi, G. M., E. Lombi, M. J. McLaughlin, and D. Chittleborough. 2006a. Density changes around phosphorus granules and fluid bands in a calcareous soil. Soil Sci. Soc. Am. J. 70:960- 966.

109. Hettiarachchi, G.M., J. A. Ryan, K. G. Scheckel, S. R. Sutton, and M. Newville. 2006b. μ-XANES and μ-XRF investigations of metal binding mechanisms in biosolids. J. Environ. Qual. 35: 342-351.

110. Premarathna, H.M.P.L., Hettiarachchi, G.M., and Indraratne, S.P. 2005. Accumulation of cadmium in intensive vegetable growing soils in the Up Country. Tropical Agricultural Research 17: 93-103.

111. Hettiarachchi, G. M. and G. M. Pierzynski. 2004. Soil lead bioavailability and *in Situ* remediation of lead- contaminated soils: A review. Environmental Progress 23: 78-93.

112. Hettiarachchi, G. M., J. A. Ryan, R. L. Chaney, and C.M. La Fleur. 2003a. Adsorption of cadmium onto different fractions of biosolids-amended soils. J. Environ. Qual. 32: 1684-1693.

113. Hettiarachchi, G. M., G. M. Pierzynski, F. W. Oehme, O. Sonmez, and J.A. Ryan. 2003b. Treatment of contaminated soil with phosphorus and manganese oxide reduces absorption of lead by Sprague-Dawley rats. J. Environ. Qual. 32: 1335-1345.

114. Zwonitzer, J. C., G. M. Pierzynski, and G. M. Hettiarachchi. 2003. Effects of phosphorus addition on lead, cadmium, and zinc bioavailabilities in a metal-contaminated soil. Water, Air, and Soil Pollution. 143: 193-209.

115. Hettiarachchi, G. M. and G. M. Pierzynski. 2002. *In situ* stabilization of soil lead using phosphorus and manganese oxide: Influence of plant growth. J. Environ. Qual. 31: 564-572.

116. Hettiarachchi, G. M., G. M. Pierzynski, and M. D. Ransom. 2001. *In situ* stabilization of soil lead using phosphorus. J. Environ. Qual. 30, 1214-1221.

117. Hettiarachchi, G. M., G. M. Pierzynski, and M. D. Ransom. 2000. *In situ* stabilization of soil lead using phosphorus and manganese oxide. Environ. Sci. Technol. 34, 4614-4619.

118. Hettiarachchi, G. M., G. M. Pierzynski, and J. L. Havlin. 1997. The effect of time on phosphorus supply characteristics of two Mollisols. Soil Sci. 162: 265-274.

Patents

Pierzynski, G.M., and G.M. Hettiarachchi. 2002. Method for in-situ immobilization and reduction of metal bioavailability in contaminated soils, sediments, and wastes. Granted 05/07/02. U.S. Patent No. 6,383,128.

Book Chapters (9):

1. Wekumbura, C., C. Attanayake, and G.M. Hettiarachchi. 2025. Trace contaminants in agricultural soils: Challenges and solutions In R. Naidu (Ed). Contaminants in Agricultural Soils: Challenges and Solutions, pp. 31–86, Burleigh Dodds Science Publishing, Cambridge, UK.
2. Hettiarachchi, G.M., A. Betts, C. Wekumbura, L. Lake, M. Meyer, K.G. Scheckel, and N.B. Basta. 2023. Lead: the most extensively spread toxic environmental contaminant. Global Compendium of Contaminated Sites. In R. Naidu (Ed). Volume 1: Inorganic contaminants. Elsevier.
3. Pidlisnyuk, V., G. M. Hettiarachchi, Z. Zgorelec, M. Prelac, N. Bilandžija, L. C. Davis, L. E. Erickson. 2021. Phytotechnologies for Site Remediation. *In* Erickson et al. (Eds.) *Phytotechnology with Biomass Production*. 1st Ed. CRC Press. eBook ISBN9781003082613
4. Menefee, D. and G.M. Hettiarachchi. 2017. Contaminants in Urban Soils: Bioavailability and Transfer. *In Advances in Soil Science: Urban Soils* (Lal R. and Stewart, B.A. Eds.) CRC Press.
5. Hettiarachchi, G.M., C. Attanayake, P. Defoe, and S. Martin. 2016. Mechanisms to Reduce Risk Potential (p. 155- 170). *In* E Hodges Snyder, K. McIvor, and S Brown (Eds.) Sowing Seeds in the City: Human Dimensions. Springer.
6. Hettiarachchi, G.M. 2015. Soils and Human Health. In Task Force: Soil Matters- Solutions Under Foot. Stephen Nortcliff (Editor). IUSS Publication: CATENA VERLAG – GeoEcology Essays. ISBN 978-3-923381-63-0, US ISBN 1-59326-268-X.
7. Stacey, S.P., M.J. McLaughlin, and G. M. Hettiarachchi. 2010. Fertilizer-Borne Trace Element Contaminants in Soils. *In* Trace Elements in soils. Hooda P.S. (ed.) p. 135-154. Blackwell Publishing Ltd. Oxford, England.
8. Hettiarachchi, G. M., and U. C. Gupta. 2007. Boron, molybdenum and selenium. *In* M.A. Carter (Ed.) Soil Sampling and Methods of Analysis. CRC Press. Boca Raton, NY.
9. Pierzynski, G. M., G. M. Hettiarachchi, and J. K. Koelliker. 1997. Methods for assessing the impacts of soil degradation on water quality (p. 513- 545). *In* R. Lal, W. H. Blum, and C. Valentin (Eds.) Methodology for Assessment of Soil Degradation. Advances in Soil Science. CRC Press. Boca Raton, NY.

Proceeding Papers (44):

1. Hettiarachchi, G.; S. Martin, and A. Carroll, Ann. 2020. Growing crops on urban brownfields: How safe is it?" Urban Food Systems Symposium. https://newprairiepress.org/ufss/2020/proceedings/18

2. Hettiarachchi, G., and J.J. Weeks, Jr. 2020. Can Humic substances be used as "enhancers" to alter fertilizer-phosphorus reaction pathways in soils? Proceedings of 2020 Fluid Forum, 17-18 February 2020, Scottsdale AZ, USA.
3. Hettiarachchi, G., and J.J. Weeks, Jr. 2019. Can Humic substances be used as "enhancers" to alter fertilizer-phosphorus reaction pathways in soils? Proceedings of 2019 Fluid Forum, 18-19 February 2019, Scottsdale AZ, USA.
4. Weeks J.J. and G.M. Hettiarachchi. 2018. Can humic substances alter fertilizer-phosphorus reaction pathways in soil? Great Plains Soil Fertility Conference. 2018. Vol. 17. Denver, CO, p. 130-137.
5. Hettiarachchi, G.M. and J. Pierzynski. 2016. Does liquid P fertilizer excel in the U.S. calcareous soils? Great Plains Soil Fertility Conference. 2016. Vol. 15. Denver, CO. p. 257-262.
6. Alghamdi, A., M.B. Kirkham, D.R. Presley, G.M. Hettiarachchi, and L. Murray. 2016. mine site rehabilitation with biosolids for sustainable development. ASABE Annual International Meeting. 17-20 July, Orlando, Florida.
7. Chayapan, P., V. Gudichuttu, G.M. Pierzynski, G.M. Hettiarachchi and L.R. Baker. 2015. Long-term effects of compost additions to chemical and biological properties of metal-contaminated soils. Proceedings of the 13th Intern. Conf. on the Biogeochemistry of Trace Elements, 12-16 July. Fukushima, Japan.
8. Datta, S., K. Johannesson, N. Mladenov, M.S. Sankar, S. Ford, M. Vega, A.W. Neal, M.G. Kibria, A. Krehel, G.M. Hettiarachchi. 2014. Groundwater-sediment sorption mechanisms and role of organic matter in controlling arsenic release into aquifer sediments of Murshidabad area (Bengal basin), India: Proceedings of the 5th International Congress on Arsenic in the Environment, May 11-16, 2014, Buenos Aires, Argentina.
9. Karna, R., G.M. Hettiarachchi. 2013. Understanding subsurface transformations and dynamics of trace elements in natural and bio stimulated multi-metal rich soil/geo microcosms. 12th International Conference on Biogeochemistry of Trace Elements. Athens, GA. June 16-20, 2013.
10. Gudichuttu, V., G.M. Pierzynski, G.M. Hettiarachchi and L.R. Baker. 2013. Long-term influence of compost on soil chemical parameters, function of microbes and avoidance response of earthworms when applied to heavy metal contaminated mine wastes. 12th International Conference on Biogeochemistry of Trace Elements. Athens, GA. June 16-20, 2013.
11. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, A. Harms, D. Presley, and G. M. Pierzysnki. 2011. Field based evaluations of trace element transfer from contaminated urban garden soils to plants. Proceedings of the 11th Intern. Conf. on the Biogeochemistry of Trace Elements, 3-7 July. Florence, Italy.
12. Pierzynski, G.M., W. Friesl, W. Hartley, G.M. Hettiarachchi, J. Kumpiene, P. Madejon, and M. Mench. 2011. In situ stabilization/phytostabilization and site revegetation. Proceedings of the 11th Intern. Conf. on the Biogeochemistry of Trace Elements, 3-7 July. Florence, Italy.

13. Hettiarachchi, G.M., R. Khatiwada, and D. Mengel. 2011. Speciation and potential availability of phosphorus in reduced tillage system: Placement and source effect. Proceedings of 2011 Fluid Forum, 16-17 February 2011, Scottsdale AZ, USA.
14. Hettiarachchi, G.M., R. Pannu, G.M. Pierzynski, K.G. Scheckel, C.W. Rice, M. Paloma, and M. Newville. 2009. Subsurface transformations of trace elements in reduced multi metal-rich geo-materials using noninvasive x-ray spectroscopy techniques. Proceedings of the 10th Intern. Conf. on the Biogeochemistry of Trace Elements, 13-16 July. Chihuahua, Mexico.
15. De Livera, J., M. McLaughlin, J. Kirby, and G. Hettiarachchi. 2009. Cadmium solubility in paddy soils: effects of variable redox conditions and competitive ions. Proceedings of the 10th Intern. Conf. on the Biogeochemistry of Trace Elements, 13-16 July. Chihuahua, Mexico.
16. Beak, D., J. Kirby, G. Hettiarachchi, and M. McLaughlin. 2009. Cobalt distribution and speciation in soils exposed to altered redox conditions through submergence. Proceedings of the 10th Intern. Conf. on the Biogeochemistry of Trace Elements, 13-16 July. Chihuahua, Mexico.
17. Baker, L., G.M. Pierzysnki, G. Hettiarachchi, and K. Scheckel. 2009. Influence of P on the speciation of Pb and Zn in a Pb/Zn smeltercontaminated soil. Proceedings of the 10th Intern. Conf. on the Biogeochemistry of Trace Elements, 13-16 July. Chihuahua, Mexico.
18. Hettiarachchi, G., McLaughlin, M., Scheckel, K., Chittleborough, D., and Newville, M. 2009. Reactions of fluid and granular copper and molybdenum-enriched compound fertilisers in acidic and alkaline soils. Proceedings of 2009 Fluid Forum, 16-17 February 2009, Scottsdale AZ, USA.
19. Biasoli, M., Kirby, J., Hettiarachchi, G., Ajmone-Marsan, F., and McLaughlin, M. 2008. Copper and Zn labile pools changes in intermittently flooded soils using isotope dilution techniques. Proceedings of the Eurosoil Conferences, August 2008, Vienna.
20. De Livera, J., M. McLaughlin, J. Kirby, and G. Hettiarachchi. 2008. Limiting Cd accumulation in paddy rice grain: Roles of soil redox and competitive ions. Proceedings of 5th Society of Environmental Toxicology and Chemistry (SETAC) World Congress, 3 - 7 August 2008. Sydney, Australia.
21. Wen, J., M.J. McLaughlin, S.P. Stacey, G.M. Hettiarachchi, and J. Kirby. Improving cadmium phytoextraction using rhamnolipid. Proceedings of 5th Society of Environmental Toxicology and Chemistry (SETAC) World Congress, 3 - 7 August 2008. Sydney, Australia.
22. Premaratna, L., M.J. McLaughlin, G.M. Hettiarachchi, J.K. Kirby, S.P. Stacey, and D. Chittleborough. Effect of moisture, time and form of Selenium on its partitioning in Paddy Soils. Proceedings of 5th Society of Environmental Toxicology and Chemistry (SETAC) World Congress, 3 - 7 August 2008. Sydney, Australia.
23. Hettiarachchi, G.M., McLaughlin, M.J., Scheckel, K.G., Chittleborough, D.J., Newville, M., and Lombi, E. 2007. Spectroscopic investigations of mobility and speciation of fertilizer-derived copper, manganese, and zinc in calcareous soils. Proceedings of the 9th Intern. Conf. on the Biogeochemistry of Trace Elements, 15-19 July. Beijing, China.

24. Lombi, E., G.M. Hettiarachchi, K.G. Scheckel, and R.E. Hamon. 2007. Natural attenuation of copper toxicity in soils and soil constituents: a synchrotron and isotopic investigation. Proceedings of the 9th Intern. Conf. on the Biogeochemistry of Trace Elements, 15-19 July. Beijing, China.
25. Wendling, L. A., G.M. Hettiarachchi, J. K. Kirby, and M. J. McLaughlin. 2007. X-ray absorption spectroscopic investigations on cobalt speciation and aging in soils. Proceedings of the 9th Intern. Conf. on the Biogeochemistry of Trace Elements, 15-19 July. Beijing, China.
26. Hettiarachchi, G., McLaughlin, M., Scheckel, K., Chittleborough, D., and Newville, M. 2007. Why we think fluid trace elements are more effective than granular trace elements. GRDC Eyre Peninsula Farming Systems 2006 Summary.
27. Hettiarachchi, G.M., McLaughlin, M.J., Scheckel, K.G., Chittleborough, D.J., Newville, M., and Lombi, E. 2007. Microscopic and spectroscopic investigations to understand reaction products of fluid and granular micronutrient fertilizers in calcareous soils. Proceedings of 2007 Fluid Forum, Scottsdale AZ, USA, 18-20 February 2007.
28. Holloway, B., Brace, D., Richter, I., McLaughlin, M., Hettiarachchi, G., Armstrong, R. 2006. Improving micronutrient availability with fluids. Proceedings of 2006 Fluid Forum "Fluids: Balancing Fertility and Economics", Scottsdale AZ, USA, 12-14 February 2006.
29. Holloway, B., Brace, D., Richter, I., Hettiarachchi, G., McLaughlin, M. 2006. Improving micronutrient efficiency and availability with fluid fertilizers. GRDC Grains Research Update, Adelaide, February 2006.
30. Hettiarachchi, G., McBeath, T., Lombi, E., McLaughlin, M., Chittleborough, D. 2006. P, Zn and Mn fluid and granular fertilizers: movement and availability. GRDC Eyre Peninsula Farming Systems 2005 Summary.
31. Premarathna, H.M.P.L., G. M. Hettiarachchi, and S.P. Indraratna. 2005. Accumulation of cadmium in vegetables growing in Upcountry soils. Annual Congress of Postgraduate Institute of Agriculture. Tropical Agricultural Research, Vol. 17.
32. Hettiarachchi, G. M., K. G. Scheckel, and J. A. Ryan. 2005. X-ray microprobe and spectroscopic approaches to understand mechanisms of metal binding in biosolids. *In* Proceedings of the 8th Intern. Conf. on the Biogeochemistry of Trace Elements, p. 130. April 3-7. Adelaide, Australia.
33. Hettiarachchi, G. M., J. A. Ryan, and Z. Li. 2001. Adsorption of cadmium onto organic, total inorganic, and metal oxide fractions in biosolids and biosolid-amended soils. *In* Proceedings of the 6th Intern. Conf. on the Biogeochemistry of Trace Elements, p. 165. July 29-August 2. Guelph, Canada.
34. Hettiarachchi, G. M., G. M. Pierzynski, F. W. Oehme, and O. Sonmez. 2001. Absorption of lead from a contaminated soil treated with phosphorus and manganese oxides by Sprague-Dawley rats. *In* Proc. of the 6th Intern. Conf. on the Biogeochemistry of Trace Elements, p.479. July 29-August 2. Guelph, Canada.

35. Hettiarachchi, G.M., and G.M. Pierzynski. 2000. In-situ stabilization of soil lead using phosphorus and other soil amendments. P. 301-304. In Y.M. Luo et al. (eds), Proceedings of SOILREM 2000, Hangzhou, China.
36. Hettiarachchi, G. M. and G. M. Pierzynski. 2000. The use of phosphorus and other soil amendments for *in situ* stabilization of soil lead. In Proc. of the 2000 Conference on Hazardous Waste Research, p. 125-133.
37. Hettiarachchi, G. M. and G. M. Pierzynski. 1999. Effects of phosphorus and other soil amendments on lead, cadmium and zinc bioavailability. *In* W. W. Wenzel, D. C. Adriano, B. Alloway, H. E. Doner, C. Keller, M. Mench, R. Naidu and G. M. Pierzynski (Eds.) Proc. 5th Int. Conf. on the Biogeochemistry of Trace Elements, p. 514-515, July 11-15, Vienna.
38. Lambert, M., Pierzynski, G., Hettiarachchi, G., Erickson, L., and Sweeney, D., Revegetation of heavy metal - contaminated mine tailings (chat), In Proc. of the 1999 Conference on Hazardous Waste Research, p. 114-120.
39. Hettiarachchi, G. M., G. M. Pierzynski, J. Zwonitzer, and M. Lambert. 1997. Phosphorus source and rate effects on cadmium, lead and zinc bioavailabilities in a metal-contaminated soil. *In* I. K. Iskandar, S. E. Hardy, A. C. Chang, and G. M. Pierzynski (Eds) Proc. of the 4th International conference on the Biogeochemistry of Trace Elements. p. 463-464. June 23-26. Clark Kerr Campus. Berkeley, CA.
40. Lambert, M. W., G. M. Pierzynski, and G. M. Hettiarachchi. 1997. Phosphorus remediation of a Lead-zinc smelter slag. In I. K. Iskandar, S. E. Hardy, A. C. Chang, and G. M. Pierzynski (Eds.) Proc. of the 4th International conference on the Biogeochemistry of Trace Elements. p. 465-466. June 23-26. Clark Kerr Campus. Berkeley, CA.
41. Lambert, M. W., G. M. Pierzynski, and G. M. Hettiarachchi. 1997. The use of phosphorus in sequestration of lead and cadmium in a smelter slag. In Proc. of the 12th annual conference on Hazardous Waste Research.
42. Hettiarachchi, G. M. and M. W. Thenabadu. 1992. Phosphorus release efficiency of two indigenous sources of fertilizer materials. *In* Proc. of 48th Annual session, Sri Lanka Assoc. Adv. Sci. Dec. 11, Colombo, Sri Lanka.
43. Hettiarachchi, G. M. and M. W. Thenabadu. 1992. Response of rice (variety BG 34-8) to four phosphate fertilizer materials. In Proc. of 48th Annual session, Sri Lanka Assoc. Adv. Sci. Dec. 11, Colombo, Sri Lanka.
44. Hettiarachchi, G. M. and M. W. Thenabadu. 1992. Release of phosphorus from Eppawala rock phosphate in an acid sulfate soil from Matara. In Proc. of 48th Annual session, Sri Lanka Assoc. Adv. Sci. Dec. 11, Colombo, Sri Lanka.

Paper Presented and Published Abstracts (227)

1. Hettiarachchi, G.M., N.D. Mudiyanselage, K. Gamage, N.O. Nelson, G.J. Kluitenberg, D. Presley, P. Tomlinson, and K. Roozeboom. 2026. Phosphorus and cover crop management practices alter phosphorus speciation in soils and eroded sediments. 23rd World Congress of Soil Science, June 7-12, Nanjing, China.
2. Wekumbura, C., G.M. Hettiarachchi1, E. Gutierrez, and A.D.E. Mudiyanselage. 2026. Stabilizing Urban Soil Lead: Long-Term Effects of Soil Amendments on Bioaccessibility and Speciation. 23rd World Congress of Soil Science, June 7-12, Nanjing, China.
3. Cominelli, S., G.M. Hettiarachchi, R.L. Cott, J. Lacasa, and D.A. Ruiz Diaz. 2025. Evaluating Near-Infrared Models for Predicting Soil Chemical Properties in Kansas. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
4. Gamage, K.H.H., G.M. Hettiarachchi, M.M Gutierrez, N. Widanagamage, G. Jha, R.R. Hansen, M.M. Derby, J. Aguilar, D. Schachtman, and S. Kim. 2025. Impacts of soil wetting bacteria and biochar on phosphorus transformations in a silt loam soil. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
5. Gutierrez, E.E.B., G.M. Hettiarachchi, A.D.E. Mudiyanselage, J. Murphy, and C. Wekumbura. 2025. From Lab to Field: A Comparative Study of Biochar and Phosphorus Amendments for Lead Immobilization in Urban Soils. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
6. Hettiarachchi, G.M. 2025. Reducing the Risk: Strategies for Minimizing Toxic Trace Element Uptake in Vegetables Grown in Contaminated Urban Soils. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
7. Kane, M., N.O. Nelson, G.M. Hettiarachchi, and P.J. Tomlinson. 2025. Phosphorus Fertilization and Cover Crop Effect on Soil Microbial Community Composition Using PLFA Analysis. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
8. Manzar, E.K., B.J. Cade-Menum, N.O. Nelson, G.M. Hettiarachchi, D. Presley, G. Kluitenberg, K/L/ Roozeboom, and P.J. Tomlinson. 2025. Organic phosphorus speciation in agroecosystems: impacts of cover cropping and P fertilization. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
9. Mudiyanselage, S.N.M.D., G.M. Hettiarachchi, M. Del Rio, G. Filippelli. 2025. Lead bioaccessibility in U.S. indoor dust: A neglected indicator of exposure risk. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
10. Mudiyanselage, S.N.M.D., G.M. Hettiarachchi, N.O. Nelson, G.J. Kluitenberg, D.R. Presley, P.J. Tomlinson, and K.L. Roozeboom. 2025. Phosphorus on the Move: Effects of Fertilizer and Cover Crops on Soil and Runoff Phosphorus. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
11. Mudiyanselage, A.D.E., G.M. Hettiarachchi, C. Wekumbura, R. Kumarasinghe, E. Gutierrez Britto, and J. Murphy. 2025. Mitigating lead poisoning in urban residential soils through reducing bioaccessibility. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.

12. Mushtaq, M., C.W. Rice, G.M. Hettiarachchi, and P.V.V. Prasad. 2025. Evolution of C and N in the soil profile after 34 years of no-till and organic fertilizer amendment. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
13. Mushtaq, M., C.W. Rice, G.M. Hettiarachchi, and P.V.V. Prasad. 2025. Soil enzyme activity as a biological indicator under long-term tillage and fertilization practices. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
14. Nelson, N.O., S. Raugewitz, G.J. Kluitenberg, A. Sheshukov, K. Bigham, G.M. Hettiarachchi, P.J. Tomlinson, D.R. Presley and K.L. Roozeboom. 2025. Conservation Under Pressure: Evaluating Cover Crop Effectiveness in a Changing Climate. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
15. Poudel, S., E.A. Santos, L.A. Haag, P.J. Tomlinson, J. Lacasa, D.A. Ruiz Diaz, and G.M. Hettiarachchi. 2025. Quantification of Ammonia Volatilization Losses Following Nitrogen Fertilizer Application. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
16. Sakib, T.U., N.O. Nelson, S. Raugewitz, G.M. Hettiarachchi, G.J. Kluitenberg, K.L. Roozeboom, P.J. Tomlinson, and D.R. Presley. 2025. Balancing yield and water quality: Phosphorus management in cover cropping systems. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
17. Sakib, T.U., N.O. Nelson, G.M. Hettiarachchi, C.J. Moorberg, and J. Nippert. 2025. Soil phosphorus dynamics mediated by root exudation of cover crops species. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
18. Wekumbura, C., G.M. Hettiarachchi, E.E. Gutierrez Brito, and A.D.E. Mudiyanselage. 2025. Efficacy of phosphorus amendments on reducing soil lead risk: A comparison of routine vs. bioaccessibility assays. CANVAS 2025. Salt Lake City, UT. Nov. 9-11.
19. Hettiarachchi, G.M., N. Basta, and J. Ippolito. 2025. Mitigation of human health risk in urban neighborhoods through bioavailability-based approaches. International Conference on Biogeochemistry of Trace Elements/ International Conference on Heavy Metals in the Environment. Busan, South Korea, Sep. 22-26.
20. Hettiarachchi, G.M. 2025. Reducing bioaccessibility of lead in residential soils for minimizing childhood lead poisoning. 2025 National Home Performance Conference, New Orleans, LA, April 7-10.
21. Mudiyanselage, A.D.E. and G.M. Hettiarachchi. 2024. Can reclaimed and manufactured struvite be used as slow-releasing phosphorus (P) fertilizers to enhance P use efficiency? ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
22. Gutierrez, E.B., G.M. Hettiarachchi, A.D.E. Mudiyanselage, C. Wekumbura and J. Murphy. 2024. Evaluation of different phosphorous amendments on bioaccessible soil lead and soil enzyme activities in urban soils contaminated with lead: A comprehensive long-term field study. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
23. Gamage, K.H.H., G.M. Hettiarachchi, M.M Gutierrez, R. Hanson, M. Derby, J. Aguilar, G. Jha, D. Schachtman and S. Kim. 2024. Impacts of wood based and oat hull biochar on phosphorus transformations in a silt loam soil. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.

24. Manzar, E.K., N.O. Nelson and G.M. Hettiarachchi. 2024. A need for advanced analytical techniques for understanding P and Fe speciation in integrated cover cropping and P fertilization management system. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
25. Sakib, T.U., N.O. Nelson, S. Raugewitz, G.M. Hettiarachchi, G.J. Kluitenberg, D.R. Presley, K.L. Roozeboom and P.J. Tomlinson, 2024. Improving Surface Water Quality in Cover Cropping Systems through Sufficiency Phosphorus Management. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
26. Murphy, J. and G.M. Hettiarachchi. 2024. Lead isotope tracing in residential and vacant lots of Kansas City urban soils. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
27. Bourns, M.A., E. Yeager, N.O. Nelson, G.M. Hettiarachchi, G.J. Kluitenberg, K.L. Roozeboom, D.R. Presley and P.J. Tomlinson. 2024. Phosphorus Drawdown: A Benefit or Detriment to Farmers? ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
28. Mudiyanselage, A.D. E., G.M. Hettiarachchi, C. Wekumbura, R. Kumarasinghe, E.B. Gutierrez and J. Murphy. 2024. Reducing bioaccessibility of lead (Pb) in urban residential soils to mitigate Pb poisoning. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
29. Widanagamage, N., K.H.H. Gamage, G.M. Hettiarachchi and G. Jha. 2024. Soil inoculation with *Bacillus subtilis* and biochar alters soil moisture retention. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
30. Pasket, A., N.O. Nelson, G.M. Hettiarachchi, G.J. Kluitenberg, K.L. Roozeboom, D.R. Presley and P.J. Tomlinson. 2024. Effect of sampling depth on dynamic biological soil health indicators in a three-year no-till corn-soybean rotation. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX. Nov. 10-13.
31. Datta, R., D. Saker, G.M. Hettiarachchi, D. Lueckenhoff, and B. Buckley. 2024. Sustainable Technologies to Mitigate Health Risk from Lead-Contaminated Residential Soils. National Home Performance Conference. Minneapolis, MN. April 8-11.
32. Hettiarachchi, G.M., C. Wekumbura, R. Kumarasinghe, E. Gutierrez, A. Mudiyanselage, K.G. Scheckel, A. Roberts, A. Bracker, E. Friedman, and C. Sobin. 2024. Reducing bioaccessibility of lead in urban residential soils for minimizing childhood lead poisoning. Soil Science Society of America Summer Meeting. San Juan, Puerto Rico, June 9-13.
33. Dodampe, N.M. and G.M. Hettiarachchi. 2023. Potential Use of Reclaimed Struvite as a Phosphorus Fertilizer in the Presence of Low Molecular Weight Organic Acids in Two Contrasting Soils. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
34. Gutierrez, E.B., G.M. Hettiarachchi, R. Kumarasinghe, K.H.H. Gamage, C. Wekumbura, and A.D.E. Mudiyanselage. 2023. Effect of Organic and Inorganic Phosphorus Amendments on the Bioaccessible Soil Lead (Pb) Concentration in Contaminated Urban Areas: A Long-Term Incubation Study. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.

35. Kumaragamage, D., N.O. Nelson, and G.M. Hettiarachchi. Cover Crops and Phosphorus Fertilizer Management Practices Influences Phosphorus Fractions in Soils. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
36. Lake, L. N.T. Basta, and G.M. Hettiarachchi, and K.H. Gamage. 2023. Use of Potassium Permanganate to Remediate Co-Contaminated Urban Soils. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
37. Sakib, T. Us, N.O. Nelson, G.M. Hettiarachchi and C. Moorberg. 2023. Phosphorus Sorption Dynamics in Soil As Influenced By Cover Crops Species and Phosphorus Input. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
38. Mudiyanselage, A.D.E. and G.M. Hettiarachchi. 2023. Can Reclaimed and Manufactured Struvite be Used As Slow-Releasing P Fertilizers to Enhance Phosphorus Use Efficiency in Acid Soils? ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
39. Nelson, N.O. A. Kortokrax, P.J. Tomlinson, A. Sheshukov, K.L. Roozeboom, G.J. Kluitenberg, G.M. Hettiarachchi, D.R. Presley, D.W. Sweeney, G.M. Pierzynski and A. Bhandari, 2023. Development and Evaluation of a Component Phosphorus Index for the State of Kansas. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
40. Pasket, A. N.O. Nelson, G.M. Hettiarachchi, and P.J. Tomlinson. 2023. Seasonal Dynamics and Impact of Phosphorus Fertilizer Treatments and Cover Crops on Soil Health Indicators in a No-till Corn-Soybean Rotation. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
41. Raugewitz, S., N.O. Nelson, G.J. Kluitenberg, K. Bigham, A. Sheshukov, K.L. Roozeboom, P.J. Tomlinson, G.M. Hettiarachchi and D.R. Presley. 2023. Cover Crop Effects on Peak Flow and Total Volume for Edge-of-Field Runoff. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
42. Wekumbura, C., G.M. Hettiarachchi, C. Sobin, and W.L. Hargrove. 2023. Impact of Soil Amendments on Reduction of Bioaccessible Lead in a Co-Contaminated Soil with Arsenic and Cadmium: A Pb-Speciation Perspective. ASA-CSSA-SSSA International Annual Meeting, St. Louis, MO. Oct. 29-Nov. 1.
43. Hettiarachchi, G.M., C. Wekumbura, R. Kumarasinghe, E. Gutierrez, A. Mudiyanselage, K.G. Scheckel, A. Roberts, A. Bracker, E. Friedman, and C. Sobin. 2023. Reducing bioavailability of lead in urban residential neighborhood soils. 1st Joint International Conference on Biogeochemistry of Trace Elements/International Conference of Heavy Metals, Wuppertal, Germany, Sep 6- 10.
44. Martin, S., G.M. Hettiarachchi, and A. Carrol. 2023. Growing Resilience: What to Know Before You Grow Food on Brownfields. National Brownfields Training Conference, Detroit, MI, Aug. 10-14.
45. Hettiarachchi, G.M., Alasmary, Z., K. L. Roozeboom, L.C. Davis, L.E. Erickson. 2023. Field- to micro-scale investigations to evaluate phytostabilization of lead-contaminated military site. International Phytotechnologies Conference, Chicago, IL. May 23-26.
46. Del Rio, M., A. Obeng, C. Rodriguez, C. Chavarria, E. Alvarado-Navarro, C. Costa, J. Avila, D. Moreno, A. Mendez-Contreras, C. Wekumbure Gedara, M. Galkaduwa, G.

Hettiarachchi, W. Hargrove, C. Campbell, C. Sobin. 2022. Stability of blood lead levels in children with chronic low-level lead absorption. American Public Health Association Annual Meeting, Boston, MA. Nov. 12-15.

47. Dodampe Mudiyanselage, S.N. and G.M. Hettiarachchi. 2022. Enhancing granular struvite solubility in soil with co-addition of low molecular weight organic acids (LMWOAs). ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
48. Gutierrez, E.B., G.M. Hettiarachchi, M.K. Rekhi, B. Evers, R. Kumarasinghe, and S. Welch. 2022. Predictability of soil physical and chemical properties using soil sensor data: a first approach using Veris P4000 Sensor. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
49. Gutierrez, E.B., G.M. Hettiarachchi, E. Chavez, K.H.H. Gamage, M.B. Galkaduwa, and D. Arguello. 2022. Cadmium (Cd) fractionation in soils affected by organic matter application: Transfer of cadmium to cacao (Theobroma cacao L.) Tissues. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
50. Gamage, K.H.H., G. M. Hettiarachchi, N.O. Nelson, K.L. Roozeboom, G.J. Kluitenberg and P.J. Tomlinson. 2022. Implications of management practices on sediment and soil phosphorus speciation in no-till corn and soybean rotation. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
51. Gamage, K.H.H., G. M. Hettiarachchi, A.D. Kannan, and P. Parameswaran. 2022. “Green” P-based recovered nutrient products from swine wastewater: Fate and behavior in soils. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
52. Kathri Arachchige, V., T.M. McBeath, R.J. Smernik, G.M. Hettiarachchi, and R. Khalil. 2022. The effect of metal oxide coated urea on urea mineralization in two contrasting soils. CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
53. Kumaragamage, D., G.M. Hettiarachchi, I. Amarakoon, and D. Goltz. 2022. Phosphorus speciation changes in an alkaline soil amended with gypsum, alum, and magnesium sulfate. CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
54. Kumarasinghe, R., K. Shunje, C. Aackeröy, and G.M. Hettiarachchi. 2022. Exploring behavior of urea co-crystals for efficient and sustainable nitrogen management in alkaline and neutral soil. CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
55. Mudiyanselage, A.D.E. and G.M. Hettiarachchi. 2022. Can Struvite and Struvite Mixed-Products be Used As Slow-Releasing P Fertilizers to Enhance Phosphorus Use Efficiency? CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
56. Nelson, N.O., E.K. Manzar, P.J. Tomlinson, G.M. Hettiarachchi, G.J. Kluitenberg, D. Presley and K.L. Roozeboom. 2022. The effect of winter cover crops and phosphorus fertilizer management on organic and inorganic P pools in a no-till corn-soybean system. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
57. Pandey, A, E. Rampe, D. W. Ming, G.M. Hettiarachchi, P.S.P. Arachchige and A.P. Schwab. 2022. Synchrotron spectromicroscopic analyses of amorphous phases in palagonitic soil and rock samples. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
58. Sakib, T.U., N.O. Nelson, S. Raugewitz, D.R. Presley, G.M. Hettiarachchi, K.L. Roozeboom, G.J. Kluitenberg and P.J. Tomlinson. 2022. Runoff water quality as influenced by cover crop

use and sufficiency phosphorus fertilization strategy in a no-tilled corn-soybean rotation. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.

59. Stahl, K., D.R. Presley, G.J. Kluitenberg, K.L. Roozeboom, P.J. Tomlinson, G.M. Hettiarachchi and N.O. Nelson. 2022. Evaluating cover crops effect on soil physical properties in a long-term cover crop study in Kansas. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
60. Wekumbura, C., G.M. Hettiarachchi, and C. Sobin. 2022. Impact of organic and inorganic phosphorus sources on reduction of soil lead bioavailability: Pb-speciation perspective. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD. Nov. 6-9.
61. Hettiarachchi, G.M., S. Martin, and B. Leven. 2022. Growing resilient communities via local food production on vacant urban lots. Urban Food Systems Symposium, Kansas City, MO, Sep. 26-28.
62. Davis, L., L. Stevens, C. Wekumbura, Z. Alasmary, G.M. Hettiarachchi. 2022. Rapid reliable economical Pb determination using portable X-ray fluorescence (XRF). Urban Food Systems Symposium, Kansas City, MO, Sep. 26-28.
63. Hettiarachchi, G.M., A. Roberts, and A. Bracker. 2022. Kansas City Soil Lead Study. Kansas Housing Conference, Wichita, KS, Aug. 30-Sep. 1.
64. Hettiarachchi, G.M., C. Wekumbura, K.G. Scheckel, A. Roberts, A. Bracker, E. Friedman, and C. Sobin. 2022. Reducing bioavailability of lead in urban residential neighborhood soils. 22nd World Congress of Soil Science, Glasgow, U.K., July 31- Aug. 5.
65. Akley, E., N. Adotey, P.A.Y. Ampim, G.M. Hettiarachchi, E. Obeng, V. Prasad, and C.W. Rice. 2021. Impact of tillage and cover cropping systems on sorghum production and soil quality in northern Ghana. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
66. Carver, E., N.O. Nelson, G.M. Hettiarachchi, J.M. Blair, and P. Tomlinson. 2021. Selecting winter cover crops to promote soil health and improve water quality. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
67. Gamage, K.H.H., G. M. Hettiarachchi, N.O. Nelson, K.L. Roozeboom, G.J. Kluitenberg and P.J. Tomlinson. 2021. Phosphorus fertilizer and cover crop management affect sediment phosphorus speciation in no-till corn and soybean rotation. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
68. Gamage, K.H.H., G. M. Hettiarachchi, P. Parameswaran, and S. Hutchinson. 2021. Recovered calcium based-phosphorus products from animal wastewater: Fate and behavior in soils. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
69. Kumarasinghe, R., K. Shunje, C. Aakeroy, and G.M. Hettiarachchi. 2021. Exploring behavior of urea co-crystals for efficient and sustainable nitrogen management. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
70. Kaur, S. and G.M. Hettiarachchi. 2021. Zinc source drives soil Zn diffusion, extractability, and uptake by wheat plants. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.

71. Kaur, S. and G.M. Hettiarachchi. 2021. Tracking diffusion and extractability of different Zn fertilizer sources in soil. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
72. Rekhi, M., G.M. Hettiarachchi, R. Kumarasinghe, P. Parameswaran, and C.W. Rice. 2021. Effects of biofilm and nutrient dynamics on electricity generation in soil-based microbial fuel cells. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
73. Rekhi, M., G.M. Hettiarachchi, R. Kumarasinghe, P. Parameswaran, and C.W. Rice. 2021. Biofilm and nutrient dynamics affect soil-based microbial fuel cell performance. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
74. Schwab, A.P., G.M. Hettiarachchi, A. Pandey, and D. Ming. 2021. Synchrotron spectromicroscopy analyses of amorphous phases in Hawaiian palagonitic tephra. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
75. Wekumbura, C., G.M. Hettiarachchi, C. Sobin, and W. Hargrove. 2021. Enhanced reduction of lead bioaccesssibility via phosphorus source and rate selection. 2021. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
76. Wekumbura, C., G.M. Hettiarachchi, and C. Sobin. 2021. Side by side comparison of dust wipe vs micro vacuum dust collection for lead determination. 2021. ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah. Nov. 7-10.
77. Hettiarachchi, G.M., J. Weeks, and J. Pierzynski. 2021. Responsible fertilizer phosphorus management through mechanistic understanding of phosphorus reaction pathways in soils. American Chemical Society Fall Meeting, Hybrid, Atlanta, Georgia, Aug. 22-26.
78. Galkaduwa, B. and G.M. Hettiarachchi. 2020. Does inclusion of copolymers alter phosphorus-fertilizer reaction pathways in soils? ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
79. Gamage, K.H.H., G. M. Hettiarachchi, P. Parameswaran, and S. Hutchinson. 2020. “Green” fertilizers from wastewaters: transformation and reaction pathways of phosphorus in recovered nutrient products in soils. ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
80. Hettiarachchi, G.M. 2020. Improving human nutrition though manipulating nutrient reaction pathways in soils. ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
81. Hettiarachchi, G.M., Alasmary, Z., K. L. Roozeboom, L.C. Davis, L.E. Erickson. 2020. From field- to micro-scale investigations to evaluate phytostabilization of lead-contaminated military sites. ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
82. Kaur, S., G.M. Hettiarachchi, and D. Adhikari. 2020. How do shuttle and slow-release effects of Zn fertilizers alter Zn diffusion in soil and its uptake by wheat plants? ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
83. Rekhi, M.K., R. Kumarasighe, G.M. Hettiarachchi, and P. Parameswaran. 2020. Can a soil-based microbial fuel cell track nutrient dynamics? ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
84. Wekumbura, C. G.M. Hettiarachchi, W.L. Hargrove, and C. Sobin. 2020. Source and rate of inorganic and organic P on bioaccessible Pb over time in alkaline soils from El-Paso, Texas. ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.

85. Hettiarachchi, G.M., S. Martin, and A. Carroll. 2020. Growing crops on urban brownfields: How safe is it? Urban Food Systems Symposium, Virtual, Oct. 7-28.
86. Alasmary, Z., G.M. Hettiarachchi, K. L. Roozeboom, L.C. Davis, L.E. Erickson. 2019. Phytostabilization of a contaminated shooting range soil using biofuel crop and soil amendments. ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
87. Galkaduwa, M.B. and G.M. Hettiarachchi. 2019. Diffusion, extractability, and reaction products of zinc fertilizers in a mildly calcareous soil. ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
88. Gamage, K.H.H., G.M. Hettiarachchi, P. Parameswaran, and S. Hutchinson. 2019. Characterization, transformations and reaction pathways of phosphorus based recovered nutrient products from wastewaters in soils. ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
89. Hettiarachchi, G.M. 2019. Sensors in soil chemistry: opportunities and challenges. ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
90. Weeks, J.J. and G.M. Hettiarachchi. 2019. Should greater emphasis be placed on phosphorus fertilizer source selection to build better p management systems? ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
91. Welch, S., G.M. Hettiarachchi, N. Bello, and P.D. Alderman. 2019. Current needs and transitional concepts related to soil sensors. ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
92. Del Rio, M., J. Placenci, C. Tamez, M. Galkaduwa, E.A. Navarro, C. Chavarria, C. Costa, A. Obeng, C. Rodriguez, G. Hettiarachchi, W. L. Hargrove, C. Campbell, and C. Sobin. 2019. Soil lead (Pb) concentration in historically contaminated Latino neighborhoods. American Public Health Association Annual Meeting and Expo. Nov. 2-6, Philadelphia, PA.
93. Costa, C., M. Del Rio, E.A. Navarro, A. Obeng, C. Rodriguez, C. Chavarria, G. Hettiarachchi, C. Campbell, W.L. Hargrove, and C. Sobin. 2019. Child lead exposure in high-risk Latino neighborhoods on the U.S.-Mexico border. American Public Health Association Annual Meeting and Expo. Nov. 2-6, Philadelphia, PA.
94. Pidlisnyuk V., G. Hettiarachchi., T. Stefanovska, P. Shapoval. 2019. Miscanthus x giganteus phytotechnology application at the military sites. RemTech Europe 2019, Sep.18-20, Ferrara, Italy.
95. Stefanovska T., V. Pidlisnyuk. G. Hettiarachchi., T. Todd., Z, Alasmary. 2019. Impact of phytotechnologies with cultivation of Miscanthus x giganteus to nematode community in metals' contaminated sites. 2019. 2nd International meeting on New Strategies in Bioremediation process, October 24-25, Porto, Portugal.
96. Alasmary, Z., G.M. Hettiarachchi, K. L. Roozeboom, L.C. Davis, L.E. Erickson, T. Todd, V. Pidlisnyuk, T. Stefanovska, and J. Trogl. 2019. Field-based investigations on phytostabilization of a contaminated military site using biofuel crop and soil amendments. International Conference of Biogeochemistry Trace Elements. May 5-9, Nanjing, China.
97. Hettiarachchi, G.M., C. P. Attanayake, P. P. Defoe, J. Weeks, S. Martin, W.L. Hargrove, and C. Sobin. 2019. Manipulation of bioavailability of contaminants in urban garden and yard

soils. International Conference of Biogeochemistry Trace Elements. May 5-9, Nanjing, China.

98. Almutari, M., G.M. Hettiarachchi, Mary B Kirkham, A. Fritz, D.M. Daiz, S.L. Hutchinson, and L. Erickson. 2019. Agronomic biofortification of wheat with Zn through co-addition of organic C with Zn fertilizers. SSSA International Annual Soils Meeting. Jan 6-9, San Diego, CA.

99. Coelho, M.J.A., D.A. Ruiz Diaz, G.M. Hettiarachchi and P.S. Pavinato. 2019. Changes in soil phosphorus lability promoted by fertilizer placement after a 10-year corn-soybean rotation. SSSA International Annual Soils Meeting. Jan 6-9, San Diego, CA.

100. Hettiarachchi, G.M. and J.J. Weeks. 2019. Manipulating reaction pathways to optimize fertilizer p availability. SSSA International Annual Soils Meeting. Jan 6-9, San Diego, CA.

101. Hettiarachchi, G.M., J. Weeks, and J. Pierzynski. 2018. Can co-additives alter the phosphorus fertilizer reaction pathways in P-fixing soils? 38th North central Extension-Industry Soil fertility Conference, Nov. 12-13, Des Moines, IA.

102. Hettiarachchi, G.M. et al. 2018. Minimizing human exposure to contaminants in urban soils. Oct. 4-5. Three Rivers Urban Soil Symposium, Pittsburg, Philadelphia.

103. Hettiarachchi, G.M., J. Pierzynski, and J.J. Weeks. 2018. Using current knowledge of phosphorus fertilizer reaction pathways to improve P use efficiency. 2018. 21st World Congress of Soil Science, Aug. 12-17, Rio de Janeiro, Brazil.

104. Weeks, J.J. and G. M. Hettiarachchi. 2018. Do content, concentration and co-applicants spatially impact liquid phosphorus fertilizer fixation in a brazilian oxisol? 21st World Congress of Soil Science, Aug. 12-17, Rio de Janeiro, Brazil.

105. Alasmary, Z., G.M. Hettiarachchi, K. L. Roozeboom, L.C. Davis, L.E. Erickson, V. Pidlisnyuk, T. Stefanovska, A. Nurzanova, and J. Trogl. 2017. Field-based investigations on stabilization of a contaminated military site via combined use of soil amendments and biofuel crop growth. ASA/SSSA/CSA Annual Meetings, Oct. 2017, Tampa, FL.

106. Almutari, M., G.M. Hettiarachchi, S. Hutchinson, E. Schmitz, M. B. Kirkham, L. Erickson. 2017. Soil- and plant-based treatment options for marginal waters. ASA/SSSA/CSA Annual Meetings, Oct. 2017, Tampa, FL.

107. Hettiarachchi, G.M., C.P. Attanayake, P. Defoe, S. Martin, and G.M. Pierzynski. 2017. Food safety in Pb-enriched garden soils. ASA/SSSA/CSA Annual Meetings, Oct. 2017, Tampa, FL.

108. Weeks, J.J. and G. M. Hettiarachchi. 2017. Fixing phosphorus: Considering cation complexing co-applicants to maintain phosphorus lability in an acid soil. ASA/SSSA/CSA Annual Meetings, Oct. 2017, Tampa, FL.

109. Weeks, J.J. and G. M. Hettiarachchi. 2017. In Search of a solution to pollution: Improving phosphorus fertilizer use efficiency through simple formulation alterations. ASA/SSSA/CSA Annual Meetings, Oct. 2017, Tampa, FL.

110. Galinskaya, K., S. Williams, J. Wang, G.M. Hettiarachchi, P. Kempton, S. Vero, S. Datta. 2017. Geospatial analysis of risk components for elevated blood lead levels: geologic and anthropogenic factors. Geological Society of America Meeting, Seattle, WA, Oct. 2017.

111. Hettiarachchi, G.M. Z. Almasary, K. L. Roozeboom, L.C. Davis, L.E. Erickson, V. Pidlisnyuk, T. Stefanovska, A. Nurzanova, and J. Trogl. 2017. Field-based investigations on phytostabilization of a contaminated military site using biofuel crop growth assisted with soil amendments. International Phytotechnolgy Conference, Sep. 2017, Montreal, Canada.

112. Pidlisnyuk V., Stefanovska T., Erickson L., Hettiarachichi G., Davis L., Shapoval P., Nurzhanova A. Using Miscantus x giganteus for restoration of former military sites.14th International Phytotehnologies Conference. Phytotechnologies: new sustainable solution for environmental challenges, IPC 2017, September 25-29, 2017, Montreal, Canada.

113. Pidlisnyuk V., Trogl J., Stefanovska T., Shapoval P., Nurzhanova A., Erickson L., Davis L., Hettiarachchi G. Phytotechnology with Miscanthus x giganteus biomass production for sustainable management of military sites. RemTech Europe conference on remediation market and technologies, Ferrara, Italy, September 20-22, 2017

114. Hettiarachchi, G.M., M.B. Galkaduwa, G. Kluitenberg, and S. Hutchinson. 2017. Poorly crystalline iron oxide minimize arsenic mobility in a water-saturated soil column system designed for FGD wastewater treatment. International Conference on Biogeochemistry of Trace elements. July 2017, Zurich, Switzerland.

115. Erickson L., Pidlisnyuk V., Trögl J., Shapoval P., Popelka J., Davis L., Stefanovska T., Hettiarachchi G. Perennial phytotechnology with biomass production for abandoned military site in Sliač, Slovakia. International conference on Chemical technology and engineering, Lviv, Ukraine, June 26-30, 2017.

116. Davis L. C., Alasmary Z., Erickson L. E., Hettiarachchi G., Nurzanova A., Pidlisnyuk V., Roozeboom K., Stefanovska T., Trogl J. Using a second generation biofuel crop for phytostabilization of contaminated military lands. 17 Annual Meeting of the American Ecological Engineering Society, May 23-25, 2017, UGA, Athens, Georgia.

117. Weeks, J.J. and G. M. Hettiarachchi. 2016. Fixing phosphorus: considering cation complexing co-applicants to maintain phosphorus lability in calcareous soils. ASA/SSSA/CSA Annual Meetings, Nov. 2016, Phoenix, AZ.

118. Hsiao, C-J, G.F. Sassenrath, C. W. Rice, L.H. Zeglin and G. M. Hettiarachchi. 2016. Soil microbial communities in claypan soils. ASA/SSSA/CSA Annual Meetings, Nov. 2016, Phoenix, AZ.

119. Alghamdi, A., M.B. Kirkham, D.R. Presley, G.M. Hettiarachchi and B. Paul.2016. Heavy metal uptake from abandoned mine waste materials amended with biosolids. ASA/SSSA/CSA Annual Meetings, Nov. 2016, Phoenix, AZ.

120. Alghamdi, A., M.B. Kirkham, D.R. Presley, G.M. Hettiarachchi, and L. Murray. 2016. Mine site rehabilitation with biosolids for sustainable development. ASABE Annual International Meeting. 17-20 July, Orlando, Florida.

121. Hettiarachchi, G.M. and J. Pierzynski. 2016. Does liquid P fertilizer excel in the U.S. calcareous soils? Great Plains Soil Fertility Conference, March 2016, Denver, CO.

122. Vega, M., H. Kulkarni, S. Barua. N, Kumar, K. Johannesson, G.M. Hettiarachchi, P. Bhattacharya, P. Kempton, and S. Datta. 2016. Linking geochemistry and dissolved organic matter quality to Mn and As release in groundwater, Murshidabad, West Bengal, India. January 2016, GSA Annual Meeting in Denver, CO.

123. Weeks, J. and G.M. Hettiarachchi. 2015. Taking the next step: Exploration of naturally produced, organic compounds to alter the mobility and lability of soil elements. ASA/SSSA/CSA Annual Meetings, Nov. 2015, Minneapolis, MN.

124. Hettiarachchi, G.M. 2015. Embedding soils in the general education undergraduate curriculum. ASA/SSSA/CSA Annual Meetings, Nov. 2015, Minneapolis, MN.

125. Hettiarachchi, G.M. and S. Martin. 2015. Growing safely to produce healthy crops-community gardens on previously used sites. American Community Gardening Association, August 15, Denver, CO.

126. Hettiarachchi, G.M., C. Attanayake, P. Defoe, and S. martin. 2015. Gardening on contaminated urban soils: Mechanisms to reduce risk potential. The 12th International Phytotechnologies Conference, Sep. 2015, Manhattan, KS.

127. Weeks, J., G.M. Hettiarachchi, E. Santos, and J. Tatarko. 2015. An assessment of the trace element exposure risk to urban brownfields gardeners via inhalation. The 12th International Phytotechnologies Conference, Sep. 2015, Manhattan, KS.

128. Hettiarachchi, G.M. 2015. Promising opportunities to use biosolids in revitalizing urban brownfields. International Water Association/Water Environment Federation/ Residuals and Biosolids Conference. June 2015. Washington, DC.

129. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, and G. M. Pierzynski. 2014. Minimizing human exposure to contaminants in urban soils. ASA/SSSA/CSA Annual Meetings, Nov. 2013, Long Beach, CA.

130. Hettiarachchi, G.M., C. Attanayake, P. Defoe, and S. Martin. 2014. Growing food crops on urban soils. ASA/SSSA/CSA Annual Meetings, Nov. 2013, Long Beach, CA.

131. Weeks, J., G.M. Hettiarachchi, E. Santos, and J. Tatarko. 2014. Assessment of potential human inhalation exposure to soil trace elements resulting from agricultural activity on urban brownfield sites. ASA/SSSA/CSA Annual Meetings, Nov. 2013, Long Beach, CA.

132. Martin, S. and G. M. Hettiarachchi. 2014. Risky business? Growing crops on brownfields. The Ohio Brownfields conference, 24 April 2014, Columbus, OH.

133. Galkaduwa, M. B., G.M. Hettiarachchi, G. Kluitenberg, and S. Hutchinson. 2014. Minimizing arsenic mobility using ferrihydrite in a small-scale constructed wetland treatment system designed for removal of selenium in FGD wastewater. ASA/SSSA/CSA Annual Meetings, Nov. 2014. Long Beach, CA.

134. Pitumpe Arachchige, P., G.M. Hettiarachchi, L. Maurmann, C.W. Rice, J. Dynes and T. Regier. 2014. Characterization of organic carbon in soil aggregates from temperate continuous corn system with contrasting management practices using NEXAFS and 13C-NMR spectroscopy. ASA/SSSA/CSA Annual Meetings, Nov. 2014. Long Beach, CA.

135. Pierzynski, J., G.M. Hettiarachchi, and J. Blair. 2014. Soil phosphorus cycling in a non-agricultural grassland ecosystem: Influence of fertilization. ASA/SSSA/CSA Annual Meetings, Nov. 2014. Long Beach, CA.

136. Krehel, A.W., A. Bednar, M. Vega, K. Pandiya, M.M. Rahman, G. Hettiarachchi., R. Tappero, K. Johannesson, and S. Datta. 2014. Sorption of arsenic within aquifer sediment and processes of bioaccumulation and localization of arsenic within rice grown in the sediment from Bangladesh and India. Oct. 2014, GSA Annual Meeting, Vancouver, BC.

137. Galkaduwa, M.B., J. Peredez, N. Mladenov, G. M. Hettiarachchi., G. Klutenberg, and S. Hutchinson. 2014. Arsenic mobilization in the treatment of flue gas desulfurization using constructed wetland treatment systems. Sep. 2014, Electrical Power Affiliate Program Meeting, Manhattan, KS.

138. Karna, R., G. M. Hettiarachchi. 2014. Mechanistic Understanding of Biogeochemical Transformations of Trace Elements in Contaminated Minewaste Materials under Reduced Conditions. U.S. EPA National Conference on Mining-Influenced Waters. Aug. 2014. Albuquerque, NM.

139. Weeks, J. and G.M. Hettiarachchi. 2014. Increased Urban Agriculture in the United States – A Breath of Fresh Air? The Soils in the City mini-Conference. June 30-July 2. Chicago, IL.

140. Hettiarachchi, G.M. 2014. Managing Urban Pollutants to Minimize Human Exposure. The Soils in the City mini-Conference. June 30-July 2. Chicago, IL.

141. Hettiarachchi, G.M., J. Pierzynski, and R. Khatiwada. 2014. Mobility, availability and reaction products of different phosphorus fertilizer sources in high P-fixing soil types. March 2014, Great Plains Soil Fertility Conference, Denver, CO.

142. Hettiarachchi, G.M. 2013. Growing crops on Brownfields Sites- How safe is it? National Brownfields Conference. May 15-17. Athens, GA.

143. Hettiarachchi G.M. C. Attanayake, P. Defoe, S. Martin, and G. M. Pierzynski. 2013. Field Based Evaluations of Trace Element Transfer from Contaminated Urban Garden Soils to Vegetables. American Society of Horticultural Science Annual Conference, 22-25 July 2013, Palm Desert, CA.

144. Davis, L., K. Roozeboom, V. Pidlisnyuk, M. Bel, I. Nagyova, Z. Melichova, L. Erikson, and G.M. Hettiarachchi. 2013. Perennial Grass Miscanthus for biomass Production and Phytoremediation of Slightly Contaminated Land. America's Grasslands Conference, Aug 12-14, 2013, Manhattan, KS.

145. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, and G. M. Pierzynski. 2013. Potential for Transfer of Lead, Arsenic and Polycyclic Aromatic Hydrocarbons from Amended Urban Soils to Vegetables and Humans. American Chemical Society Fall 2013 National Meeting. September 8-12, Indianapolis, IN.

146. Martin, S. and G.M. Hettiarachchi. 2013. Community Gardens on Brownfields –Should you be Scared? Society of Environmental Chemistry and Toxicology North America 34th Annual Meeting. November 2013. Nashville, TN.

147. Enriquez, H.J., N. Mladenov, G. Hettiarachchi., M. Kirk, S. Damaraju, K. Biver, M. Galkaduwa, M. Murray-Hudson, M. Gondwe, and P. Wolski. Evaporative concentration, dissolved organic matter degradation and sulfate reduction as controls on arsenic mobility in groundwater of a pristine wetland. 2013 GSA Annual Meeting & Exposition, October 27-30, Denver, CO.

148. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, and G. M. Pierzynski. 2013. Contaminant transfer from urban garden soils to plants-Do we need to worry? ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

149. Galkaduwa, B., G.M. Hettiarachchi, G. Kluitenberg, and S. Hutchinson. 2013. Sequestration of selenium in flue gas desulfurization wastewater using constructed wetlands: A synchrotron based investigation. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

150. Attanayake, C., G.M. Hettiarachchi, D. Van der Merwe, and G.M. Pierzynski. 2013. Transfer of Polycyclic Aromatic Hydrocarbons from Urban Soils to Humans via Dermal Absorption. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

151. Defoe, P., G. M. Hettiarachchi and C. Benedict**.** 2013. Reducing Bioaccessibility of Lead and Arsenic in a Contaminated Urban Garden Soil. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

152. Pitumpe Arachchige, P., G.M. Hettiarachchi, L. Maurmann, D. Menefee, C.W. Rice and T. Amado. 2013. Effects of Agricultural Management Practices on carbon sequestration in soils from two different agroecosystems: Understanding the contribution of soil organic carbon protection mechanisms. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

153. Pitumpe Arachchige, P., G.M. Hettiarachchi, C. Attanayake, and C.W. Rice. 2013. STXM-NEXAFS Spectromicroscopy Studies of Intact Soil Microaggregates from a Tropical Agroecosystem. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

154. Pierzynski, J., and G.M. Hettiarachchi. 2013. Effects of Phosphorus Source on Fate and Transformation of Phosphorus in High P-Fixing soils. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

155. Weeks, J. and G.M. Hettiarachchi. 2013. Assessing Soil Preparation Techniques to Improve Portable XRF Precision and Recovery Efficiency of Lead in Urban Soils As Compared to the EPA 3051 Total Soil Digestion Method. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

156. Menefee, D., P. Pitumpe Arachchige, G.M. Hettiarachchi, C.W. Rice, and T.J.C. Amado. 2013. Mechanisms of soil carbon protection in a Tropical Agroecosystem under Differing Management Practices. ASA/SSSA/CSA Annual Meetings, Oct. 2013, Tampa, FL.

157. Attanayake, C., G.M. Hettiarachchi, S. Martin, P. Defoe, and G.M. Pierzynski. Potential for Transfer of Lead, Arsenic and Polycyclic Aromatic Hydrocarbons from Compost Added Urban Soils to Vegetables and Humans. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

158. Brown, S. and G.M. Hettiarachchi. Use of Urban Residuals to Reduce Pb and As Bioaccessibility. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

159. Defoe, P. and G. M. Hettiarachchi. 2012. Reducing Bioaccessibility of Lead and Arsenic in a Contaminated Urban Garden Soil. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

160. Enriquez, H.J., N. Mladenov, G. Hettiarachchi., M. Kirk, S. Damaraju, K. Biver, B. Galkaduwa, M. Murray-Hudson, M. Gondwe, and P. Wolski. Influence of abiotic and biotic processes on the mobilization of arsenic in groundwater of the Okavango delta, Botswana. 2012 GSA Annual Meeting & Exposition, Nov. 2012, Charlotte, NC.

161. Galkaduwa, B., G.M. Hettiarachchi, G. Kluitenberg, and S. Hutchinson. Understanding transport and transformations of selenium in flue-gas desulfurization waste water using continuous flow column systems. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

162. Hettiarachchi, G.M. contaminants in urban gardens- lessons learned in the past. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

163. Karna, R. and G.M. Hettiarachchi. Understanding subsurface transformations and dynamics of trace elements in multi-metal contaminated mine waste materials in southeast Kansas. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

164. Pierzynski, J., G.M. Hettiarachchi, and R. Khatiwada. Mobility, availability and reaction products of MAP, DAP and APP fertilizers. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

165. Pitumpe Arachchige, P., D. Menefee, G.M. Hettiarachchi, L. Maurmann, C.W. Rice, and A. Edgerley. Chemistry and mineralogy of soil aggregates in soils from temperate continuous corn system- effects of different management practices. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

166. Price, J. and G.M. Hettiarachchi. Trace metal concentration and partitioning among vegetable varieties. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

167. Silva, R.C., G.M. Hettiarachchi, T. Muraoka, and S.H. Chien. Diffusion, Fate and reaction products of phosphate fertilizers with varying solubility applied to a tropical soil. ASA/SSSA/CSA Annual Meetings, Oct. 2012, Cincinnati, OH.

168. Crawford, M., L. Kelly, S. Ford, G. Hettiarachchi, D. van der Merwe, R. Karna, M. Tuttle, and S. Datta. 2011. Selenium speciation and mobilization in a controlled wetland system: Pariette wetlands, UT. American Geophysical Union Meeting, Dec. 2011, San Francisco, CA.

169. Neal, A., J. Mohajerin, K. Johannesson, G. Hettiarachchi, and S. Datta. 2011. Linking sediment geochemistry to arsenic and manganese mobility in aquifers in Murshidabad, West Bengal, India. Geological Society of America Annual Meeting, Oct. 2011, Minneapolis, MN.

170. Defoe, P., G. M. Hettiarachchi**,** C. Benedict, C. Attanayake, and S. Martin. 2011. Gardening on arsenic and lead-contaminated brownfields: Is it safe? ASA/SSSA/CSA Annual Meetings, Oct. 2011, San Antonio, TX.

171. Harms, A., S. Thien, D. Presley, and G. Hettiarachchi. 2011. Meeting the educational needs of today's agronomy students at Kansas State University. ASA/SSSA/CSA Annual Meetings, Oct. 2011, San Antonio, TX.

172. Harms, A., D. Presley, G. Hettiarachchi, and S. Thien. 2011. Needs assessment survey of urban gardeners and farmers on soil contamination. ASA/SSSA/CSA Annual Meetings, Oct. 2011, San Antonio, TX.

173. Premarathna, H., M. McLaughlin, J. Kirby, G. Hettiarachchi, S. Stacey, and D. Chittleborough. 2011. Highly effective fertiliser formulations to enhance selenium biofortification in rice grain. ASA/SSSA/CSA Annual Meetings, Oct. 2011, San Antonio, TX.

174. Attanayake, C., G. Hettiarachchi, P. Defoe, S. Martin, and G. Pierzynski. 2011. A field evaluation of lead transfer from urban soils to vegetables. ASA/SSSA/CSA Annual Meetings, Oct. 2011, San Antonio, TX.

175. Khatiwada, R. and G.M. Hettiarachchi. 2011. Mobility, availability and reaction products of MAP, DAP, and APP fertilizers in acid and calcareous soils. ASA/SSSA/CSA Annual Meetings, Oct. 2011, San Antonio, TX.

176. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, C. Benedict, and A. Harms. 2011. Evaluating lead and arsenic transfer from contaminated urban garden soils to vegetable plants. 8th International Conference on Phytotechnologies. Sep. 2011, Portland, Oregon.

177. Hettiarachchi, G.M., D. Van der Merwe, S. Datta, L. Erickson, L. Davis, and S. Martin. 2011. Soil arsenic and potential risk pathways of arsenic in urban garden soils. 8th International Conference on Phytotechnologies. Sep. 2011, Portland, Oregon.

178. Martin, S. and G.M. Hettiarachchi. 2010. Community gardens on brownfields – Safe or risky? Society of Environmental Chemistry and Toxicology North America 31st Annual Meeting. Nov. 2010. Portland, Oregon.

179. Khatiwada, R., G.M. Hettiarachchi, and D. Mengel. 2010. XANES speciation of phosphorus in reduced-till system: placement and source effect. ASA/SSSA/CSA Annual Meetings, Nov. 2010, Long Beach, CA.

180. Gudichuttu, V., G.M. Hettiarachchi, and G.M. Pierzynski. 2010. Long term monitoring of vegetative response and microbial activity upon the addition of amendments to a metal contaminated mine waste. ASA/SSSA/CSA Annual Meetings, Nov. 2010, Long Beach, CA.

181. Premarathna, L., S. P. Indraratne, and G.M. Hettiarachchi. 2010. Heavy metal concentration in crops and soils collected from intensively cultivated areas of Sri Lanka. 19th World Congress of Soil Science. Aug. 2010. Brisbane, Australia.

182. Nelson, N.O., G.M. Hettiarachchi, S. Agudelo-Arbelae, J. Henso, J. Lemunyon, P. Kulako, and S. Andrews Phytoremediation database project. ASA/SSSA/CSA Annual Meetings, Nov. 2010, Long Beach, CA.

183. Tran A., G.M. Hettiarachchi, M. Ransom, D. Mengel, and J. Matz. 2010. Extractable K in Kansas soils: Effects of soil moisture and drying conditions. ASA/SSSA/CSA Annual Meetings, Nov. 2010, Long Beach, CA.

184. Hettiarachchi, G.M., S. Martin, A. Raes, P. Defoe, D. Presley, and G.M. Pierzynski. 2010. Gardening on brownfields sites: Evaluating trace element transfer from soil to plants and their transformations in soils. 19th World Congress of Soil Science. Aug. 2010. Brisbane, Australia.

185. Pierzynski, G.M., L. Baker, G.M. Hettiarachchi, K.G. Scheckel, V. Gudichuttu, and R. Pannu. 2010. The Tri-State Mining Region USA: Twenty years of trace element research. 19th World Congress of Soil Science. Aug. 2010. Brisbane, Australia.

186. Milani, N., M.J. McLaughlin, G.M. Hettiarachchi, D.G. Beak, J.K. Kirby, and S. Stacey. Fate of nanoparticulate zinc oxide fertilisers in soil: Solubility, diffusion and solid phase speciation. 19th World Congress of Soil Science. Aug. 2010. Brisbane, Australia.

187. Premarathna, L. M.J. McLaughlin, J.K. Kirby, G.M. Hettiarachchi, S.P. Stacey, and D. Chittleborough. 2010. Availability of fertiliser selenium in soils during flooding and subsequent aeration. 19th World Congress of Soil Science. Aug. 2010. Brisbane, Australia.

188. Hettiarachchi, G.M., S. Martin, and B. Leven. 2009. Brownfields to community gardens - Can it be done? 6th International Conference on Phytotechnologies. Dec. 2009. St. Louis, MO.

189. Hettiarachchi, G.M., R. Pannu, G.M. Pierzynski, K. Scheckel, and C.W. Rice. 2009. Understanding biogeochemical transformations of trace elements in multi metal-rich geomaterials under stimulated redox conditions. ASA/SSSA/CSA Annual Meetings, Nov. 2009, Pittsburgh, PA.

190. Premarathna, L. M.J. McLaughlin, J.K. Kirby, G.M. Hettiarachchi, S.P. Stacey, and D. Chittleborough. 2009. Potential availability of fertilized selenium in field capacity and submerged soils as measured by isotopic dilution technique. ASA/SSSA/CSA Annual Meetings, Nov. 2009, Pittsburgh, PA.

191. Martin, S., and G.M. Hettiarachchi. 2009. Healthy Foods from Brownfields? Brownfields Conference. Nov. 2009. New Orleans, LA.

192. Milani, N., M.J. McLaughlin, J.K. Kirby, G.M. Hettiarachchi, D. Beak, and S.P. Stacey 2009. Zinc diffusion and speciation in an alkaline calcareous soil treated with fertilizers coated with bulk and nanoparticulate zinc. 13th Australasian Society for Ecotoxicology Conference**,** Sep. 20-23, Adelaide, Australia.

193. De Livera, J., D. Beak, M. McLaughlin, J. Kirby, and G. Hettiarachchi. 2009. Cadmium solubility in paddy soils: Effects of variable redox conditions and competitive ions. 13th Australasian Society for Ecotoxicology Conference**,** Sep. 20-23, Adelaide, Australia.

194. Pierzynski, G.M., B. Leven, G. Hettiarachchi, and s. Martin. 2009. Brownfield sites assessment and remediation in the United States: Successes and Challenges. Cleanup 09 Conference, Adelaide, Australia.

195. Pierzynski, G.M., L. Baker, and G.M. Hettiarachchi. 2009. The use of soil amendments for the remediation of heavy metal contaminated sites. Cleanup 09 Conference, Adelaide, Australia.

196. Martin, S. and G. Hettiarachchi. 2009. Healthy foods from brownfields? American Society for horticultural Science. ASHS Annual Conference. 25-28 July, 2009. St. Louis, MO.

197. McLaughlin, M.J., G. M. Hettiarachchi, S. Stacey, T. McBeath, R. Holloway, and J. Kirby. 2008. Improving phosphorus and trace element fertilizer efficiency in Australia: Achievements and prospects. International Fertilizer Industry Associations Crossroads Asia-Pacific 2008 Conference. Dec. 16-18. Melbourne, Australia.

198. Hettiarachchi, G.M., McLaughlin, M.J., Scheckel, K.G., Chittleborough, D., and Newville, M. 2008. Speciation of fluid- and granular-fertilizer derived Cu and Mo in a calcareous and an acid soil using micro- X-ray -fluorescence, and –absorption. ASA/SSSA/CSA Annual Meetings, Oct. 2008, Houston, TX.

199. Baker, L., G.M. Pierzynski, G.M. Hettiarachchi, K.G. Scheckel, and M. Newville. 2008. Speciation of Pb and Zn after the addition of different p amendments to a smelter-contaminated soil. ASA/SSSA/CSA Annual Meetings, Oct. 2008, Houston, TX.

200. Nicoloso, R., C. Costa, C.W. Rice, T. Amado, G. Hettiarachchi., M. Arango. 2008. Carbon stabilization in Oxisol and Mollisol under long-term no-till. ASA/SSSA/CSA Annual Meetings, Oct. 2008, Houston, TX.

201. Pierzynski, G.M., L. Baker, G.M. Hettiarachchi, and K.G. Scheckel. 2008. The use of soil amendments for the remediation of heavy metal-contaminated sites. 14th International Conference on Heavy metals in the Environment. Taipei, Taiwan. Nov. 16-23, 2008.

202. Hettiarachchi, G. M., E. Lombi, M. J. McLaughlin, and D. Chittleborough. 2006. Spectroscopic investigations towards understanding fluid and granular fertilizer-derived micronutrients in soils. Australian Soil Science Society meeting, December 4-8, Adelaide. Australia.

203. Jassogne, L., G. M. Hettiarachchi, M. Newville, D. Chittleborough, and H. Lambers. 2006. Understanding distribution and speciation of Mn, Fe, Cu, and Zn surrounding old root channels in a duplex soil. Australian Soil Science Society meeting, December 4-8, Adelaide. Australia.

204. Hettiarachchi, G. M., E. Lombi, M. J. McLaughlin, and D. Chittleborough. 2006. Isotopic and spectroscopic investigations toward understanding differential behaviour of fluid and granular micronutrient fertilizers in soils. 18th World Congress of Soil Science, July 9-15, Philadelphia, U.S.A.

205. Hettiarachchi, G. M., E. Lombi, M. J. McLaughlin, and D. Chittleborough. 2005. Lability and mobility of zinc and manganese fertilizers in soil. ASA/SSSA/CSA Annual Meetings, Nov. 2005, Salt Lake City, UT.

206. Hettiarachchi, G.M., K. Scheckel, J. Ryan. 2005. Micro scale investigations to understand binding mechanisms in bioslids using synchrotron based X-ray fluorescence and X-ray absorption. ASA/SSSA/CSA Annual Meetings, Nov. 2005, Salt Lake City, UT.

207. Scheckel, K.G., G.M. Hettiarachchi, and J.A. Ryan. 2004. Spectroscopic approaches to defining the inorganic and organic constituents of biosolids. Sustainable Land Application Conference. Lake Buena Vista, FL.

208. Ryan, J.A., G.M. Hettiarachchi, K.G. Scheckel, and R.L. Chaney. 2004. Effect of biosolids application on soil metal chemistry and phytoavailability. Sustainable Land Application Conference. Lake Buena Vista, FL.

209. Ryan, J.A., and G.M. Hettiarachchi. 2003. Effects of biosolids on sorption and desorption behavior of cadmium in biosolids-amended soils. ASA/SSSA/CSA Annual Meetings, Nov. 2003, Boulder, CO.

210. Hettiarachchi, G. M. and J. A. Ryan. 2002. X-ray microscopy and spectroscopy studies on metal binding in biosolids. ASA/SSSA/CSA Annual Meetings, Nov. 2002, Indianapolis, IN.

211. Impellitteri, C.A., K.G. Scheckel, G.M. Hettiarachchi, J.A. Ryan, and P.M. Randall. Sorption of arsenate and arsenite on a ruthenium compound: A macroscopic and microscopic study. ASA/SSSA/CSSA Annual Meetings, Nov. 2002. Indianapolis, IN.

212. La-Fluer, C.M., G.M. Hettiarachchi, and J.A. Ryan. 2002. Sorption of cadmium onto different fractions of biosolids and cadmium salt-amended soils. ASA/SSSA/CSA Annual Meetings, Nov. 2002, Indianapolis, IN.

213. Ryan, J.A., G.M. Hettiarachchi, and K.G. Scheckel. 2002. Alterations of soil metal chemistry and phytoavailability associated with biosolids application. Annual Meetings of the Society of Environmental Toxicology and Chemistry, Nov. 2002. Salt Lake City, UT.

214. Xia, K. and G.M. Hettiarachchi. 2002. Bioaccessibility evaluation of 2, 4-D in soils using a gastro-intestinal digestive tract model. Annual Meetings of the Society of Environmental Toxicology and Chemistry, Nov. 2002. Salt Lake City, UT.

215. Impellitteri, C.A., K.G. Scheckel, G.M. Hettiarachchi, J.A. Ryan, and P.M. Randall. 2002. Sorption of arsenate and arsenite on a ruthenium compound: A macroscopic and microscopic study. Annual meetings of the American Institute of Chemical Engineers, Nov. 2002. Indianapolis, IN.

216. Hettiarachchi, G. M., J. A. Ryan, and K. G. Scheckel. 2002. Applications of synchrotron radiation to environmental studies: Role of iron and manganese oxides in biosolids and biosolids-amended soils on metal binding. 223rd ACS National Meeting. April 2002, Orlando, FL.

217. Hettiarachchi, G. M. and J. A. Ryan. 2001. Adsorption of cadmium onto different fractions of biosolid-amended soils. In Agron. Abstracts, Am. Soc. of Agronomy, Madison, WI.

218. Pierzynski, G.M., G.M. Hettiarachchi, F. Oehme, and O. Sonmez. 2001. In-situ stabilization of soil lead using phosphorus and other soil amendments. 222nd ACS National Meeting, August 26-30, Chicago, IL.

219. Hettiarachchi, G. M. and G. M. Pierzynski. 2000. A novel method for *in situ* stabilization of soil lead. In Agron. Abstracts, p. 401, Am. Soc. of Agronomy, Madison, WI.

220. Pierzynski, G. M. and G. M. Hettiarachchi. 1999. *In situ* stabilization of soil lead: Effects on plant metal uptake. In Agron. Abstracts, p. 338, Am. Soc. of Agronomy, Madison, WI.

221. Hettiarachchi, G. M. and G. M. Pierzynski. 1999. Use of phosphorus and other soil amendments on *in situ* stabilization of soil lead. In Agron. Abstracts, p. 338, Am. Soc. of Agronomy, Madison, WI.

222. Lambert, M. W., Hettiarachchi, G. M. and G. M. Pierzynski. 1998. Chemistry and mineralogy of heavy metals in a smelter slag. In Agron. Abstracts, p. 333, Am. Soc. of Agronomy, Madison, WI.

223. Hettiarachchi, G. M. and G. M. Pierzynski. 1998. Effects of phosphorus and other soil amendments on lead bioavailability. In Agron. Abstracts, p. 333, Am. Soc. of Agronomy, Madison, WI.

224. Hettiarachchi, G. M. and G. M. Pierzynski. 1997. Soil amendments effects on heavy-metal bioavailability. In Agron. Abstracts. p. 330, Am. Soc. of Agronomy, Madison, WI.

225. Lambert, M. W., G. M. Pierzynski, and G. M. Hettiarachchi. 1996.The influence of phosphorus on chemical and mineralogical properties of zinc/lead smelter slag. HSRC WERC 1st Joint Conference on the Environment Abs., p. 107.

226. Hettiarachchi, G. M. and G. M. Pierzynski. 1996. The influence of phosphorus source and rate on soil solution cadmium, lead and zinc activities. In Agron. Abs., p. 333, Am. Soc. of Agronomy, Madison, WI.

227. Hettiarachchi, G. M., G. M. Pierzynski, and J. L. Havlin. 1995. The effect of time on phosphorus supply characteristics of two Kansas soils. In Agron. Abs., p.275, Am. Soc. of Agronomy, Madison, WI.

Reports

1. Hettiarachchi, G. M., E. Lombi, and R. E. Hamon S. Zrna, J. Lee, Y. Tai, and D. Liu. 2006. Natural attenuation of copper in soils. National Synchrotron Radiation Research Center. 2005 Annual Activity Report.
2. Scheckel, K.G., G. M. Hettiarachchi, and J. A. Ryan. 2004. Cadmium speciation associated with ironoxides and bioslids. Argonne National Laboratory-Advanced Photon Source 2003 Annual Activity Report.
3. Hettiarachchi, G.M., K. G. Scheckel, J. A. Ryan, S. R. Sutton, and M. Newville. 2003. Role of Iron and Manganese Oxides in Biosolids-amended Soils on Metal Binding. Argonne National Laboratory-Advanced Photon Source 2002 Annual Activity Report.
4. Hettiarachchi, G.M., K. G. Scheckel, J. A. Ryan, S. R. Sutton, and M. Newelle. 2002. X-ray microscopy and spectroscopy studies on metal binding in biosolids. Argonne National Laboratory-Advanced Photon Source 2001 Annual Activity Report.
5. Scheckel, K.G., G. M. Hettiarachchi, and J. A. Ryan. 2001. Kinetics of Pyromorphite Formation as Influenced by Aging. Brookhaven National Laboratory-National Synchrotron Light Source Annual Activity Report.
6. Hettiarachchi, G.M., K. G. Scheckel, J. A. Ryan, and G. M. Pierzynski. 2001. In Situ Stabilization of Soil Lead Using Phosphorus and Manganese Oxide: An EXAFS Study. Brookhaven National Laboratory-National Synchrotron Light Source Annual Activity Report.
7. Hettiarachchi, G.M., S. Martin, et al. 2009. KSU Gardening Project Quality Assurance Project Plan. Revision Number: 0, Revision Date: 03/01/2009. Submitted to EPA and Approved. p.35.
8. Kirby, J., M.J. McLaughlin, and G. Hettiarachchi. 2008. Toxicity and Bioavailability of Cobalt in Terrestrial Environments: Fate of Cobalt Precipitates Under Reducing Conditions. Progress Report for the Cobalt Development Institute. p.23.

Internal industry/agency reports (confidential/public documents/consultancies)

9. McLaughlin, M., Chittleborough, D., Lombi, E., and Hettiarachchi, G. 2007. Understanding reaction products of granular and fluid P fertilisers in Australian soils: a way to enhance fertiliser efficiency. Final report of Australian Research Council Linkage Grant L0454086.
10. McLaughlin, M., Ma, Y., Zhu, Y., Hettiarachchi, G., and Chen, S. 2007. Metals in Asia: Progress Report 31st March 2007 [commercial-in-confidence]. Progress report for Rio Tinto, International Copper Association and Nickel Producers Environmental Research Association, March 2007.
11. McLaughlin, M., Ma, Y., Zhu, Y., Hettiarachchi, G., Kirby, J., and Chen, S. 2007. Metals in Asia: Progress Report 31st December 2007 [commercial-in-confidence]. Progress report for Rio Tinto, International Copper Association and Nickel Producers Environmental Research Association, December 2007.
12. McLaughlin, M., Ma, Y., Zhu, Y., Hettiarachchi, G., and Chen, S. 2007. Metals in Asia: Progress Report 30th September 2007 [commercial-in-confidence]. Progress report for Rio Tinto, International Copper Association and Nickel Producers Environmental Research Association, September 2007.

13. McLaughlin, M., Ma, Y., Zhu, Y., Hettiarachchi, G., and Chen, S. 2007. Metals in Asia: Progress Report 30th June 2007 [commercial-in-confidence]. Progress report for Rio Tinto, International Copper Association and Nickel Producers Environmental Research Association, June 2007.
14. Zrna, S., McLaughlin, M., Kirby, J., and Hettiarachchi, G. 2007. Assessing risks from metals in contaminated soils- application of an isotopic characterisation procedure (Risk Potential Index RPI). Progress report to International Zinc Association.
15. Stacey, S., G. Hettiarachchi, and M. McLaughlin. 2006. Fluxes of calcium and phosphorus from 10-50-0 and 11-52-0 granules incubated in acidic and alkaline soils. Final report Prepared for the Mosaic Company. p. 36.
16. Lombi, E., G. Hettiarachchi, S. Stacey, C. Johnston, M. McLaughlin, and B. Skinner. 2006. Testing diffusion and plant availability of phosphorus and zinc from different fertilizer formulations. Final report Prepared for the Mosaic Company. p. 23.

Competitive and Industry Research Grants

Funded

Parameswaran, P., G.M. Hettiarachchi, and P. Tomlinson. 2026. Recovering Fertilizers, Biogas, and Water from Dairy Wastes with Anaerobic Membrane Bioreactors (AnMBRs) with mutual crop-animal system benefits. Foundation for Food and Agriculture Research (FFAR). $986,954. 12/1/2026 - 11/30/2030.

Hettiarachchi, G.M. 2025. *Bioavailability-based Strategies for Risk Reduction of Lead in Residential Neighborhood Soils*. Department of Housing and Urban Development. $799,969. 01/15/2025-01/14/2028.

Hettiarachchi, G.M. 2024. *Understanding liquid phosphoric acid (PeKacid, 0-60-20) with and without fulvic and amino acids in phosphorus-fixing acid and calcareous soils*. ICL. $139,777 01/01/2025-12/31/2026.

Das, S., B. Natarajan, J. Im, G.M. Hettiarachchi, and R. Khosla. 2024. *Global Centers: Leveraging Bio-Chemical and Greenhouse Gas Sensors for Sustainable Agriculture Innovations (BioSenseInnovations)*, National Science Foundation. 01/01/2025-12/31/2028. $2,000,000.

Li, J., T. Gadzikva, J. Edgar, G.M. Hettiarachchi, and D. Higgins. 2023. *MRI: Track 1 Acquisition of an Advanced X-ray Diffraction System for Cross-Disciplinary Research at Kansas State University and Beyond*. National Science Foundation. $781,231. 7/30/2024-6/31/2027.

Featherstone, A. et al. 2024. Harvest Project. Chemonics (flow down USAiD). $10,462,908. (05/2024-03/2029)

Hettiarachchi, G.M. 2024. *Estimating lead absorption in children from household dust.* Sub Award- Indiana University. Department of Housing and Urban Development. $249,791. 09/2024-08/2027.

Hitzler, P., G.M. Hettiarachchi, and H. McGinty. 2023. *Proto-OKN Theme 1: Safe Agricultural Products and Water Graph (SAWGraph): An Open Knowledge Network (OKN) to Monitor and Trace PFAS and Other Contaminants in the Nation's Food and Water Systems*. National Science Foundation. 10/01/2023-9/30/2026. $639,999.

Derby, M., R. Hansel, G.M. Hettiarachchi, G. Sampson, G. Jha, and D. Bolton. 2023. *Collaborative Research: RII Track-2 FEC: Supporting rural livelihoods in the water-stressed Central High Plains: Microbial innovations for climate-resilient agriculture (MICRA)*. National Science Foundation. 8/31/2023-7/30/2027. $1,418,382.

Pliakoni, E., L. Britton, S. Hadavi, G.M. Hettiarachchi, C. Rivard, J. Cowan, P. Parameswaran, et al. 2023. *Development of resilient urban food systems that ensure food security in the face of climate change*, Game-changing Research Initiative Program, Kansas State University. 9/1/2023-8/31/2026. $282,000.

Hettiarachchi, G.M., K.G. Scheckel. E. Friedman, A. Roberts, and A. Bracker. 2021. Reducing Bioavailability of Lead in Urban Residential Neighborhood Soils in Kansas City, Missouri. Department of Housing and Urban Development. 01/2022-12/2025. $700,000.

Parameswaran, P. and G. Hettiarachchi. *Leveraging the circular bioeconomy: Sustainable recovery and optimization of slow-release biofertilizers from livestock wastewater*. Kansas State University-Global Food Systems Seed grant. 7/1/2021- 6/31/2022. Total $70,192.

Nelson et al. *Sustainable phosphorus management with enhanced soil health.* Kansas Department of Agriculture. Support grant. 7/01/2020 - 6/30/2025. Total $150,000.

Nelson et al. *Sustainable phosphorus management with enhanced soil health.* Kansas Soybean Commission. Support grant. 7/01/2020 - 6/30/2025. Total $150,000.

Aakeroy, C. and G.M. Hettiarachchi. Exploring co-crystal technologies for efficient and sustainable nutrient management. Global Food Systems Seed Grant 04/2020 to 08/2021. Total $ 55,348.

Nelson et al. *Sustainable phosphorus management with enhanced soil health.* Foundation for Food and Agriculture Research. 7/01/2020 - 6/30/2025. Total $490,541.

Hettiarachchi, G. *The Borlaug International Agricultural Science and Technology Fellowship Program Research on Soil Cd contamination in Ecuadorian Cacao Production Systems.* USDA Foreign Agricultural Affairs-Foreign Agricultural Services. 9/2/2019-8/20/2021. Total $49,825.

Parameswaran, P. and G. Hettiarachchi. *Closing the loop: Sustainable food production through integrated recovery of biofertilizers and water for reuse from animal waste operations*. Kansas State University-Global Food Systems Seed grant. 10/1/2019- 9/30/2020. Total $67,462.

Hettiarachchi, G. *Explaining the Interactions and Potential Availability of Different Micronutrient Fertilizers in Soils Using Wet Chemical, Visual and Spectroscopic Techniques.* Compass Minerals USA, Inc. 1/1/2019 – 12/31/2021. Total $253,080.

Welch et al. 2018. *RII Track-2 FEC: Building Field-Based Ecophysiological Genome-to-Phenome Prediction*. National Science Foundation. 09/01/2018 – 08/31/2022. Total $3,982,202

Welch, S., G.M. Hettiarachchi, S. Kuleza, P. Parameswaran, and R. Hansen. 2018. *EAGER Sits: Sustainable biosensor integration for precision management of agricultural soils*. National Science Foundation. 01/01/2019 – 12/31/2021. Total $300,000.

Hettiarachchi, G.M. 2018. *Reducing children's blood lead levels by mitigating household lead paint in central El Paso, TX.* Sub award University of Texas, El Paso. $236,409. 1/1/2019-12/31/2022.

Hettiarachchi, G.M. 2018. *Explaining the Interactions and Potential Availability of Different Micronutrient Fertilizers in Soils Using Wet Chemical, Visual and Spectroscopic Techniques.* Compass Minerals USA Inc., $253,080 (Dec. 2018-Dec. 2021).

Parameswaran, P., G.M. Hettiarachchi and S. Hutchinson. 2018. *Novel Platform For Channelized Nutrient Product Sequestration From Agricultural Wastewaters Through Optimized Anaerobic Bioprocess.* USDA-NIFA. $99,985 (May 2018- May 2020).

Hettiarachchi, G. 2018. *Altering Phosphorus Fertilizer Reaction Pathways in P-Fixing Soils. Bio Huma Netics. $15,750 (April 2018-April 2019).*

Pidlisnyuk, V., L. Erickson, T. Stefanovska, P. Shapoval, L. Davis, A. Nurzhanova, G.M. Hettiarachchi. 2016. *Phytotechnology with Biomass Production for Cleaning up Former Military Sites*. NATO. $329,664. (October 2016- September 2019).

Dille, A., A. Asebedo, G. Kluitenberg, G.M. Hettiarachchi, J. Du. 2016. *Precision Crop Protection: Soil Management Zones for Optimizing Weed Control Efficacy*. USDA-NIFA. $100,000 (April 2016-March 2018).

Hettiarachchi, G.M. 2015. Nutrient Technologies, L.L.C. *Understanding Role of P fertilizer Enhancement Products and Their Effects on Phosphorus Fertilizer Reaction Products in Soils*." $89,699 (December 2015-November 2018).

Hettiarachchi, G.M. 2014. National Science Foundation. *"Understanding Process-level Physico and Biogeochemical Mechanisms Controlling Soil Carbon."* $79,250 (October 2014-September 2015).

Ruiz-Diaz, D, Hettiarachchi, G.M., and D. Mengel. *Iogen Energy Corporation, Evaluation of Fertilizer Equivalent Value of Cellulosic Ethanol Waste Stream at Field Conditions."* $59,804 (April 2012-December 2012)

Hettiarachchi, Ganga M., Mengel, David B., and Ruiz Diaz Suarez, Dorivar A., Iogen Energy Corporation, *Greenhouse and Laboratory Evaluations on use of Iogen Celulosic Ethanol-Waste Stream as a Fertilizer Substitute and/or Soil Amendment.* (November 2011-June 2011). $46,725.

Hutchinson, S. (PI), Hettiarachchi, G.M. (PI), L. Erickson (PI), and L. Davis (PI). *Westar Wetland Project.* Awarded in Jan. 2011. Two year total $347,552. 2011-2013

Hettiarachchi, G.M., and N.O. Nelson. Phytoremediation information through a cooperative effort with Kansas State University-Department of Agronomy and the USDA NRCS National Plant Data Center (NPDC). USDA-NRCS. $25,000. 2009-2011.

Hettiarachchi, G.M., S. Martin, B. Leven, T. Carey, D. Presley, L. Erickson, and G.M. Pierzynski. *Sustainable gardening initiatives at Brownfields sites*. USEPA Brownfields Training, Research and Technical Assistance Grants**.** Awarded on 2008. Total Award $900,000. 2008-2015.

McLaughlin, M.J., D. J. Chittleborough, G. M. Hettiarachchi, and J. K. Kirby. *Explaining the interactions between drought and fertilizer use efficiency using tracing and imaging techniques.* Australian Research Council Linkage Grant. Submitted in April 2007. Total Grant Amount Aus $ 256,000

McLaughlin, M.J., D. J. Chittleborough, J.K. Kirby, and G. M. Hettiarachchi. *The fate and toxicity of nanoparticles in the terrestrial environment.* Australian Research Council Discovery Grant. Submitted in March 2007. M.J. McLaughlin (Chief Investigator), D. J. Chittleborough (Chief Investigator), J. K. Kirby (Principal Investigator), and G. M. Hettiarachchi (Principal Investigator). Total Grant Amount Aus $ 410,000

Hettiarachchi, Ariyaratne, H. Wijewardena, and K.G. Scheckel. S*oil and crop contamination by toxic trace elements and risk for human health due to their transfer through food chain***-** Two year research project (2003 December-2005 December) worth Sri Lankan Rs. 1.47 Million funded by Sri Lanka- Council for Agricultural Research Policy (SL-CARP)

Pending

Britton, L, P. Parameswaran, S. Kashem, M. Bhullar, G.M. Hettiarachchi, C. Rivard, and E. Pliakoni. 2026. *Collaborative Research: FEC: Integrating Municipal Wastewater Reclamation, Controlled Environment Agriculture, and Resource Recovery from Crop-Harvest and Food Waste*. National Science Foundation. 07/01/2026-07/30/2030. $2,168,064.

Hansen, R., D.B. Pourkargar, G.M. Hettiarachchi. 2025. *Rhizosphere-triggered release of plant growth promoting bacteria using scalable hydrogel encapsulation*. USDA - Research Education and Economics - National Institute of Food and Agriculture, $$646,194. 8/1/2026 - 7/31/2030.

Nelson, N.O., G.M. Hettiarachchi, E. Yeager, D. Presley, P. Tomlinson. 2025. Improving Water Quality Through Phosphorus Biogeochemistry, Cover Crops, and Education. USDA - Research Education and Economics - National Institute of Food and Agriculture. $750,000, 4/1/2026 - 3/31/2030.

Not Funded

Nelson et al., 2024. Enabling Climate-Smart Agriculture through Increased Adoption of Sustainable Nutrient Management Practices in Kansas. USDA NRCS. 12/2024- 12/2027. $199,524.

Min, D., G. Jha, J. Dille, S. Metzger, G.M. Hettiarachchi, L. Thompson, X. Xu, A. Aguilar, B. Golden, and D. Rudnick. 2024. *Circular Forage Production Systems for Sustainability.* USDA-REE National Institute of Food and Agriculture. $9,999,963, 12/01/2024- 11/30/2029.

Parameswaran, P. and G.M. Hettiarachchi. 2023. *Circular bioeconomy: Recovering efficient fertilizers, biogas, and water from animal waste slurry with Anaerobic Membrane Bioreactors.* USDA - National Institute of Food and Agriculture. $649,375. 07/01/2024 - 06/30/2027.

Hettiarachchi, G.M., C.W. Rice, and N.O. Nelson. 2023. *Urea Cocrystal Technologies for Supporting Climate Change Mitigation, Agricultural Sustainability, and Healthy Soils.* USDA - National Institute of Food and Agriculture. $748,833. 09/01/2024 - 08/31/2028.

Hettiarachchi, G.M. 2023. Safeguarding health and harvests: *Assessing the use of mineral nutrients in rice production to prevent cadmium contamination, increase production and improve nutritional value*. Australian Research Council (Collaborative proposal with University of New Castle, Australia). $40,572. 10/01/2023-9/30/2026.

Ruiz-Diaz, D., N, Nelson, L. Hagg, A. Obour, J. Holman, P. Tomlinson, C.W. Rice, G.M. Hettiarachchi, and D. O'Brien. 2023. Enabling Climate-Smart Agriculture through Increased Adoption of Sustainable Nutrient Management Practices in Kansas, USDA Farm Production and Conservation - Natural Resources Conservation Service (NRCS). $3,999,050. 5/31/2024 - 5/30/2027.

Li, J., D. Higgins, J. Edgar, G.M. Hettiarachchi, and Y.C. Shi. 2023. *MRI: Track 1 Acquisition of an Advanced X-ray Diffraction System for Cross-Disciplinary Research at Kansas State University and Beyond*. National Science Foundation. $ $781,231. 7/30/2024-6/31/2027.

Hansen, R. Hettiarachchi, G.M., M. Derby, G. Sampson, and V. Sharda. 2023. *ECO-CBET: Building resilience for climate change: Microbial soil amendments for promoting high water and*

fertilizer use efficiency under drought stress. National Science Foundation. $1,698,378. 9/01/2023 - 8/31/2027.

Parameswaran, P. and G.M. Hettiarachchi. 2022. *Circular Bioeconomy: Recovering Efficient Fertilizers, Biogas, and Water from Animal Waste Slurry with Anaerobic Membrane Bioreactors.* USDA - Research Education and Economics - National Institute of Food and Agriculture. $649,949. 5/01/2023 - 4/30/2026.

Li, J., D. Higgins, J. Edgar, G.M. Hettiarachchi, and Y.C. Shi. 2022. *MRI: Track 1 Acquisition of an Advanced X-ray Diffraction System for Cross-Disciplinary Research at Kansas State University and Beyond*. National Science Foundation. $761,307. 7/30/2023-6/31/2026.

Hettiarachchi, G.M. *Soil-Carbon and GHG Benefits by Compost Application.* 2022. USDA - Farm Production and Conservation - Natural Resources Conservation Service. $639.088. 10/1/2022-9/30/2027.

Xiaomao et al. Theme 3: *The Dorothy AI Institute: Climate-Smart Winter Wheat Production Systems.* 2022. National Science Foundation. $20,000,000. 6/1/2023 - 5/31/2028.

Hettiarachchi, G.M. DOI - US Fish and Wildlife Service. *Quapaw Compost for Conservation Project in Tar Creek, Oklahoma.* 2022. $115,096. 12/2/2022 - 12/1/2024.

Hettiarachchi, G.M. *Assessing the Occurrence, Fate, and Transport of Persistent and Bioaccumulative Chemicals of Emerging Concern (CECs) in Land-Applied Biosolids through Integration of Machine Learning and Experimental Data*. 2021. US Environmental Protection Agency. $264,305. 7/1/2021 - 6/30/2024.

Amachawadi, R., P. Parameswaran, G.M. Hettiarachchi, J. DeRouchey, T. Lee, T. Nagaraja, C. Kang, A. Tarpoff. 2021. *The circular economy paradigm towards sustainability of livestock waste: Bridging environmental synergies and precision animal management*. US Department of Agriculture, $1,000,000. 9/7/2021 - 8/31/2024.

Hutchinson, S., K. Bigham, M. Derby, W. Dodds, G.M. Hettiarachchi, J. M. S. Hutchinson, T. Moore. 2021. EWN: Great plains/Inland Demonstrations and Solutions (GRIDS). Army Corps of Engineer Research and Development Center (ERDC). $2,249,708. 8/16/2021- 8/15/2024.

Culbertson, C., X. Lin, M.B. Kirkham, G. Kluitenberg, D. Grieger, U. Yucel, A. Mathews, G.M. Hettiarachchi. 2021. *Acquisition of an imaging FTIR microscope to enhance understanding of microplastic sources and transport through agricultural systems.* USDA-Research Education and Economics - National Institute of Food and Agriculture. $150,41. 10/1/2021 - 9/30/2023.

Parameswaran, P., G.M. Hettiarachchi, V. Khanna, D. Jassby. 2021. NSF ECO-CBET Preliminary Proposal: *Sustainable wastewater resource recovery and beneficial reuse using electro-assisted anti-fouling Anaerobic Membrane Bioreactors*. National Science Foundation, $1,500,000. 01/2022-12/2025.

Hutchinson, S., K. Bigham, M. Derby, W. Dodds, G. Hettiarachchi, J.M.S. Hutchinson, T. Moore. 2020. *EWN: Great plains/Inland Demonstrations and Solutions (GRIDS)*. DOD - Army - Army Corps of Engineer Research and Development Center (ERDC), $2,249,708. 8/16/2021 - 8/15/2024.

Parameswaran, P., C. Aakeroy, G.M. Hettiarachchi, C. Duan. 2020. *ECO-CBET: A Sustainable Nitrogen Cycle through Recovered and New Ammonia from Animal Wastewater to Achieve Controlled Release of Urea*, National Science Foundation, 1,699,873. 10/01/2020-9/30/2023.

Xia, K., G.M. Hettiarachchi, G. Biswas, T. Drape, L. Githinji, and Z. Wang. 2020. *Assessing the Occurrence, Fate, and Transport of Persistent and Bioaccumulative Chemicals of Emerging Concerns in Land-Applied Biosolids through Integration of Machine Learning & Experimental Data.* US Environmental Protection Agency, $ 1,497,998, Cost share: $374,451. 8/1/2021-7/31/2024.

Prabhakar, P., M. Derby, G.M. Hettiarachchi, et. al. 2020. RII Track-1 *Integrated data sciences to build resilient rural agricultural systems*. National Science Foundation, $5,000,638. 08/2022-07/2027.

Bhatt, A., G.M. Hettiarachchi, M. Melanie Sattler, V. Chen. 2020. *A Feasibility Study of Transforming Abandoned Mine Sites into Bioenergy Crop Sites via Phyto-restoration*. US Department of Agriculture-NIFA. $ $173,926 (KSU) 02/2021- 02/2024.

Shoemaker, C. et al. 2020. *Interdisciplinary Graduate Training in Urban Food Systems*. National Science Foundation, $499,782. 04/2021-04/2024.

Parameswaran, P., G.M. Hettiarachchi, and L. Zeglin. 2019. *Pilot scale Anaerobic Membrane Bioreactor treating non-point wastes for onsite nutrient recovery and targeted residual nutrient transformations to mitigate Harmful Algal Blooms***.** Environmental Protection Agency, $999,452. 9/1/2020-8/31/2023.

Parameswaran, P., G.M. Hettiarachchi, and K. Xia. 2019. *Sustainable agroecosystem nutrient management of wastewater derived Recovered Nutrient Products (RNP) by soil - RNP microbiome interactions.* US Department of Agriculture NIFA AFRI, $500,000. 7/1/2020-6/30/2025.

Aakeroy, Christer and G. Hettiarachchi. 2019. *Exploring co-crystal technologies for responsible and efficient nutrient management*. Kansas State University-Global Food Systems Seed grant. 10/1/2019- 9/30/2020. Total $70,648.

Hettiarachchi, G.M. KU lead 2018. INFEWS/T3: *Recovery of Energy and Nutrient Resources from Wastewater and Food Waste to Improve Water Quality.* NSF, $285,854 (KSU sub award), 7/1/2019- 6/30/2024.

Hettiarachchi, G. 2018. *A Neighborhood Level Strategy for Reducing Child Lead Exposure*. NIH/NIEHS, Sub award University of Texas, El Paso. $45,448. 9/1/2018- 8/31/2020.

Hutchinson, S., Derby, M., Hettiarachchi, G., Hohn, K. Sun, X. S., and Wang, Donghai. 2018. *Biofuels and Biobased Products from Salicornia Grown with Marginal Waters.* DOE/USDA. $1,549,720, 1/1/18-12/31/20

Hettiarachchi, G., Alvarez Santos, E., Bergtold, J., Hutchinson, S., Parameswaran, P., Presley, D. and Yeager, E. *Recovered Resources from Wastewater for Sustainable Agriculture: Exploiting Opportunities, Protecting the Environment and Overcoming Barriers.* USDA. $5,199,665. 3/1/2018-2/28/2023.

Hettiarachchi, G.M., K.G. Scheckel (EPA-ORD), S. Martin, and J. Kirby (CSIRO, Australia). *Minimizing Soil Contaminant Exposure to Communities Gardening on Brownfields Sites.* NIH/NIEHS. $ 1,115,530. 05/2017- 04/2021.

Hettiarachchi, G.M., S. Hutchinson, J. Bergtold, D. Bremer, J. Fry, S. Keeley, P. Parameswaran, E. Santos and E. Yeager. *Resource Recovery from Wastewater: Exploiting Opportunities, Overcoming Barriers, and Protecting the Environment.* US Department of Agriculture. $4,999,588 (03/01/2017 –02/28/2022).

Hettiarachchi, G.M. KU led INEWS/T3: food, Energy, and Water. Recovery of Resources from Wastewater. NSF. $274,591 (K-State) (01/01/17 – 12/1/20)

Hettiarachchi, G.M. and P. Parameswaran. 2016. RII Track-2 FEC: Rethinking Waste: Renewable Nutrients and Energy for Sustainable Food Production. NSF. $985,065 (K-State) (01/01/17 – 12/1/20)

NSF EPSCoR. RII Track I: System responses to variable water and nutrient availability: from microbial to societal scales. NSF. $ 20,000,000. 08/01/2016 – 07/31/2021.

Hettiarachchi, G.M., K.G. Scheckel (EPA-ORD), S. Martin, and J. Kirby (CSIRO, Australia). Minimizing Soil Contaminant Exposure to Communities Gardening on Brownfields Sites. NIH/NIEHS. $972,152. 04/2016- 04/2020.

Hettiarachchi, G.M., L. Erickson, L. Davis, G.M. Pierzynski, K. Roozeboom, G. Sassenrath, and D. Min. Assisted-phytostabilization of lead-zinc chat tailings near Galena, Kansas. $359,733. EPA R7/KDHE. 2015-2017.

Hettiarachchi, G.M., N. Basta (OSU), K.G. Scheckel (EPA-ORD), D. Van Der Merwe, G.M. Pierzynski, L. Davis, S. Martin. In-situ Remediation of Lead for Protection of Human Health and Risk Assessment: Evaluating Soil Biogeochemical Processes Influencing Lead Bioavailability by In-Vivo and In-Vitro Models, and Spectroscopy. NIEHS. $993,431. 2014- 2018.

Mladenov, N., G.M. Hettiarachchi, and M. Kirk. Effects of Global Change on the Cycling of Carbon in Seasonal Tropical Wetlands. NASA. $330,054. 2014-2017.

Mladenov, N., G.M. Hettiarachchi, and M. Kirk. Collaborative Research: Coupling of Carbon and Sulfur Cycling along Groundwater Flowpaths in a Freshwater Wetland. NSF. $ 116,000. 2014-2017.

Hettiarachchi, G.M., C.W. Rice, A. Swamy, and T. Amado. Understanding of Coupled Bio-physicochemical Mechanisms Controlling Soil Carbon Storage and Long-term Stabilization. NASA. $ 400,000. 2014-2017.

Hettiarachchi, G.M., C.W. Rice, and T. Amado. Interdependency of Phosphorus on Biogeochemical Processes of Soil Aggregation and Carbon Sequestration. NIFA. $491,157. 2013-2017.

Hettiarachchi, G.M., S. Datta, C.W. Rice, and G.M. Pierzynski. Biogeochemical dynamics of lead and selenium in fluctuating redox and organic carbon environments. NSF Geobiology and Low Temperature Geochemistry Research Program. $694,365. 2011-2014.

Rice, C.W., G.M. Hettiarachchi, G. Wilson, and T. Amado. Biological and Physico-chemical Approaches to Understand Mechanisms of Soil Carbon Stability and Storage. United State Department of Agriculture. $ 3,426,277. 2011-2015.

Nelson, N., G.M. Hettiarachchi, H. Blanco, W. Yuan, and S. Staggenborg. Enhancing the Value of Biochar for Sustainable Bioenergy Production Systems United State Department of Agriculture. $ 1,000,000. 2011-2015.

Hettiarachchi, G.M., C.W. Rice, and G.M. Pierzynski. Fluctuating redox conditions and trace metal biogeochemistry in low-carbon environment. NSF Geobiology and Low Temperature Geochemistry Research Program. $404,825. 2010-2013.

McNeill, A., D. Chittleborough, S.J. Mooney, and G.M. Hettiarachchi. Non-Invasive Measurements of Plant Root Plasticity and Resource Exploitation in the Undisturbed Soil Environment. Australian Research Council. Aus. $489,338. 2010-2013.

Xia, K., G. Hettiarachchi, M. Williams, and Svein Saebo. Investigation of Soluble Organic Nitrogen (SON)-Mineral Surface Interactions Using Phage Display Technology Coupled with Synchrotron-Based Spectroscopy. USDA- USDA-AFRI Program. $16,666 (KSU Portion). 2009-2012.

Hettiarachchi, G.M., C.W. Rice, and G.M. Pierzynski. Fluctuating redox conditions and trace metal biogeochemistry in low-carbon environments. NSF Low Temperature Geochemistry Research Program. $387,700. 2009-2012.

Rice C. W., Hettiarachchi, G.M., and T. Amado. Integrated bio-physico-chemical approaches to understand the primary and secondary mechanisms controlling storage capacity and stability of soil C. USDA- USDA-AFRI Program. $350,358. 2009-2012.

Rice C. W., Hettiarachchi, G.M., and T. Amado. Integrated bio-physico-chemical approaches to understand the primary and secondary mechanisms controlling storage capacity and stability of soil C. USDA- USDA-AFRI Program. $387,700. 2008-2012.

Other Awards (Industry)

Hettiarachchi, G.M. (PI). $100,890 in 2024-2026 from ICL to support understanding liquid phosphoric acid (Nova PeKacid LQ, 0-27-9) with and without fulvic and amino acids (BIOZ Diamond) in phosphorus-fixing acid and calcareous soils.

Hettiarachchi, G.M. (PI). $58,140 in 2022-2023 from Ostara to support mechanistic understanding of struvite phosphorus reaction pathways in two contrasting soils.

Hettiarachchi, G.M. (PI). $30,000 Awarded in 2020 from Verdesian for 2020-2021 in support of Zn fertilizer reaction studies.

Hettiarachchi, G.M. (PI) Can Humic Substances be Used as ‘Enhancers’ to Alter Fertilizer Reaction Pathways in Soils? Fluid Fertilizer Foundation. $30,000. 2018-2020.

Hettiarachchi, G.M. (PI) $120,000 Awarded in 2011 from JR Simplot and SFP for 2011-2015- additional support for a graduate student doing soil chemistry work on the interaction of P fertilizers and soils *($120,000)

Hettiarachchi, G.M. Mobility, Availability and Reaction Products of Different Phosphorus Fertilizer Sources in Various Soils Types. Fluid Fertilizer Foundation. $30,000. 2010-2012.

$50,000 Awarded in 2008 from the P Fellowship Consortium of Mossaic, Agrium, Potash Corp and JR Simplot for 2008/9 and 2009/10 academic years to support a graduate student doing soil chemistry work on the interaction of P fertilizers and soils.

$98,000 Awarded in 2010 from the P Fellowship Consortium of Mossaic, Agrium, Potash Corp and JR Simplot for 2010-2014, 2015 to support a graduate student doing soil chemistry work on the interaction of P fertilizers and soils.

Travel Grants

06/07-AB32 - Dr. G. Hettiarachchi, value Aus $ 4,280 (Fully Funded by Australian Synchrotron Research Program)
05/06-AB02 & AB03 - Dr. G. Hettiarachchi, value Aus $ 6,610 (Fully Funded by Australian Synchrotron Research Program)
05/06-AB 51 - Dr. G. Hettiarachchi, value Aus $ 4,280 (Fully Funded by Australian Synchrotron Research Program)
05/06-S-36 - Dr. G. Hettiarachchi, value Aus $ 6,470 (Fully Funded by Access to Major Research Facilities Program)
06/07-GSE-01- Dr. G. Hettiarachchi, value Aus $ 10,845 (Fully Funded by Australian Synchrotron Research Program)
06/07-AB-02- Dr. G. Hettiarachchi, value Aus $ 2,230 (Fully Funded by Australian Synchrotron Research Program)
06/07-AB-02- Dr. G. Hettiarachchi, value Aus $ 4,380 (Fully Funded by Australian Synchrotron Research Program)
06/07-GSE-02- Dr. G. Hettiarachchi, value Aus $ 3,045 (Fully Funded by Australian Synchrotron Research Program)
06/07-SRI-136- Dr. G. Hettiarachchi, value Aus $ 9,540 (Fully Funded by Australian Synchrotron Research Program)
09- Dr. G. Hettiarachchi, value $ 1,500 (Funded travel to 10th ICOBTE held in Mexico by ADVANCE Program, KSU)

Contract Research Grants

1. Examination of elemental S oxidation within MES15/MESZ granules as a function of ionic strength and microbial activity
2. Examination of granulated Zn-polyethylenimine (PEI), structural conditions that optimize complex formation, the absorption of PEI and rhamnolipid by plants and their biodegradation in soil
3. Chemical composition and P lability from 10-50-0 fertilizer granules and elemental analysis of MEM0.5, MEMZ, MESZ and Aussie Gold fertilizers
4. Chemical composition and elemental analysis of fertilizer granules
6 months to 2 year research projects worth more than Aus $ 300, 000 funded by Mosaic Fertilizer Company, USA. 2006/2008
Investigators: M. J. McLaughlin, S. Stacey, G. M. Hettiarachchi

Synchrotron Research Awards (92):

Research access awards are through merit-based access, where users from any research institution can submit proposals which are assessed on a competitive basis according to established criteria focusing on scientific purpose and significance of the experiment.

1. *Translating molecular insights to field application of soil amendments for lead stabilization in urban soils*. G.M. Hettiarachchi and E. Gutierrez. Advanced Photon Source. Sector 13 ID-E, 3 days (09/18/2026-09/21/2026)
2. *Deciphering Pb Bioaccessibility in Indoor Dust via Spatially Resolved Elemental Associations and Pb Speciation Analysis*. G.M. Hettiarachchi and N. Dodampe. Advanced Photon Source. Sector 13 ID-E, 3 days (7/17/2026-7/20/2026)
3. *Mitigating lead toxicity through bioaccessibility reduction: A Path to Safer Environments.* G.M. Hettiarachchi, C. Wekumbura, A. Mudiyanselage, and E. Gutierrez. Advanced Photon Source. Sector 5 BM-B, 5 days (7/15.2026- 7/20/2026)
4. *Impact of fertilizer management strategy and cover crops on phosphorus loss, bioavailability, and sediment speciation in no-till agricultural watersheds*. G.M. Hettiarachchi and N. Dodampe. Advanced Photon Source. Sector 9 BM-B, 6 days (4/8/2026 -4/12/2026; 9/23/2026-9/25/2026)
5. *Translating molecular insights to field application of soil amendments for lead stabilization in urban soils*. G.M. Hettiarachchi and E. Gutierrez. Advanced Photon Source. Sector 13 ID-E, 3 days (02/17/2026-02/20/2026)
6. *Mitigating lead toxicity through bioaccessibility reduction: A Path to Safer Environments.* G.M. Hettiarachchi, C. Wekumbura, A. Mudiyanselage, and E. Gutierrez. Advanced Photon Source. Sector 5 BM-B, 3 days (2/11/2026- 2/13/2026)
7. *Assessment of total concentration, bioaccessibility, and speciation of lead in household dust across different locations in the United States*. G.M. Hettiarachchi, N. Dodampe, M. Del Rio, and G. Filippelli. Advanced Photon Source. Sector 5 BM-B. 3 days (10/3/2025-10/6/2025)
8. *Application of cryo-STXM analyses for Mars relevant sulfates: implications for preserving hydrated sulfates in samples returned from Mars.* G.M. Hettiarachchi, A. Pandey, and E. Rampe. SM Beamline, Canadian Light Source, 4 days (4/16/2025-4/20/2025- rescheduled)
9. *Near-Surface P speciation to Elucidate Processes Causing Increased Phosphorus Loss from Soils with Cover Crops*. E.K. Manzar, G.M. Hettiarachchi, and N.O. Nelson. National Synchrotron Light Source-II, Beamline 7-ID-2, 3 days (4/4/2025- 4/7/2025)
10. *Reducing Bioavailability of Lead in Urban Residential Neighborhood Soils for the Protection of Children's Health*. G.M. Hettiarachchi, C. Wekumbura, A. Mudiyanselage, and E. Gutierrez. Stanford Synchrotron Radiation Lightsource. Beamline 11-2. 4 days (12/5/2024-12/9/2024)
11. *Towards sustainable nutrient management: Phosphorus speciation in soils upon addition of struvite and struvite mixed-products with and without low molecular weight organic acids (LMWOAs).* G.M. Hettiarachchi, A.D. Mudiyanselage, and N. Dodampe. NSLS II. Beamline SST-2, 3 days (7/22/2024-7/25/2024)

12. *Towards sustainable nutrient management: Phosphorus speciation in soils upon addition of struvite and struvite mixed-products with and without low molecular weight organic acids (LMWOAs)*. G.M. Hettiarachchi, A.D. Mudiyanselage, and N. Dodampe. Canadian Light Source. Beamline VLS-PGM. 2 days, May 2025 (postponed).
13. *Reducing Bioavailability of Lead in Urban Residential Neighborhood Soils for the Protection of Children's Health*. G.M. Hettiarachchi, C. Wekumbura, A, Mudiyanselage, and E. Gutierrez. Stanford Synchrotron Radiation Light source. Beamline 11-2. 3 days (3/29/2024-4/1/2024)
14. *Towards sustainable nutrient management: Phosphorus speciation in soils upon addition of struvite and struvite mixed-products with and without low molecular weight organic acids (LMWOAs).* G.M. Hettiarachchi, A.D. Mudiyanselage, and N. Dodampe. NSLS II. Beamline SST-2, 4 days (2/8/2024-2/12/2024)
15. *Towards sustainable nutrient management: Phosphorus speciation in soils upon addition of struvite and struvite mixed-products with and without low molecular weight organic acids (LMWOAs).* G.M. Hettiarachchi, A.D. Mudiyanselage, and N. Dodampe. National Synchrotron Light Source II, Beamline 8-BM, 3 days (11/17/2023-11/20/2023).
16. *Elemental mapping in halophytic saltmarsh (Suaeda australis) roots: a spatially resolved μ-XRF-XANES study.* G.M. Hettiarachchi, M. Rahman, G. R. MacFarlane, and Md R. Alam.2022. Advanced Photon Source, Sector 13, 2 days (04/11/2023-04/13/2023).
17. *Elemental mapping in halophytic saltmarsh (Suaeda australis) roots: a spatially resolved μ-XRF-XANES study.* G.M. Hettiarachchi, M. Rahman, G. R. MacFarlane, and Md R. Alam.2022. Advanced Photon Source, Sector 13, 3 days (10/07/2022-10/10/2022).
18. *Phosphorus fertilizer and cover crop management affect sediment phosphorus speciation in no-till corn and soybean rotation.* G.M. Hettiarachchi and K. Gamage. Sector 9 BM-B beamline, Advanced Photon Source, Argonne National Laboratory, 3 days (9/20/2022-9/23/2022).
19. *Analysis of amorphous phase abundance and composition in new Martian soil analogues.* G.M. Hettiarachchi, A. Pandey, Douglas W. Ming, Paul Schwab. 2021. Canadian Light Source, 3.0 days (plus break), Remote operation (05/19/2022-05/26/2022).
20. *Analysis of amorphous phase abundance and composition in new Martian soil analogues.* G.M. Hettiarachchi, A. Pandey, Douglas W. Ming, Paul Schwab. 2021. Canadian Light Source, 1.5 days, Remote operation (12/19/2021-12/20/2021).
21. *Analysis of amorphous phase abundance and composition in new Martian soil analogues.* G.M. Hettiarachchi, A. Pandey, Douglas W. Ming, Paul Schwab. 2021. Canadian Light Source, 1.5 days, Remote operation (8/13/2021-8/14/2021)
22. *Fertilizer source determines their availability: Understanding reaction pathways and reaction products of various Zn sources in soils via X-ray Absorption Spectroscopy.* G.M. Hettiarachchi and S. Kaur. Sector 5 BM-D beamline, Advanced Photon Source, Argonne National Laboratory, 3 days (7/20/2021-7/22/2021).
23. *Impact of phosphorus fertilizer and cover crop management in no-till corn and soybean rotation on loss-sediment phosphorus speciation.* G.M. Hettiarachchi and K. Gamage. 2021. Sector 9 BM-B, APS, ANL. 5 days, Mail-in operation (06/29/2021-7/4/2021)

24. *Explaining interactions and availability of zinc-coated macronutrient fertilizers in soil using micro X-ray spectroscopy study.* M.B. Galkaduwa and G.M. Hettiarachchi. 2020. Sector 13 ID-E APS, ANL. 4 days, Remote operation (11/5/2020-11/9/2020)
25. *Use of Different Organic Polymers in Macronutrient Fertilizers to Alter Phosphorus-Fertilizer Reaction Pathways in Soil: Bulk XAS study.* M.B. Galkaduwa and G.M. Hettiarachchi. 2020. Sector 9 BM-B, APS, ANL. 6 days (10/6/2020-10/12/2020)
26. *Use of Different Organic Polymers in Macronutrient Fertilizers to Alter Phosphorus-Fertilizer Reaction Pathways in Soil: Bulk XAS study.* M.B. Galkaduwa and G.M. Hettiarachchi. 2020. Sector 9 BM-B, APS, ANL. 6 days (10/6/2020-10/12/2020)
27. *Understanding fundamental transformation processes of phosphorus in recovered nutrient products from wastewaters in soils.* G.M. Hettiarachchi and K.H. Gamage, 2020 Sector 9 BM-B, APS, ANL. 6 days. Remote access (8/4/2020-8/10/2020)
28. *Effect of phosphorus amendments and Miscanthus growth on speciation and bioaccessibility of lead in a contaminated military soil*. G.M. Hettiarachchi and Zafer Alasmary. 2020. Sector 5 BM-D beamline, Advanced Photon Source, Argonne National Laboratory, 4 days (3/11/2020-3/15/2020).
29. *The Role of Organo-Mineral Interactions in Carbon Stabilization of Biosolids*. M. Badzmierowski, G.M. Hettiarachchi and Greg Evanylo. 2019. STXM-NEXAFS 5.3.2.2 beamline, Advanced Light Source, Lawrence Berkeley National Laboratory, 3 days (10/3/2019-10/6/2019).
30. *The role of organo-mineral interactions in carbon stabilization of biosolids.* Badzmierowski, Mike, G.M. Hettiarachchi, G. Evanylo. SM Beamline, Canadian Light Source, 3 days (9/27/2019-9/30/2019)
31. *Use of Different Zinc Formulations in Macronutrient Fertilizers to Alter Zinc-Fertilizer Reaction Pathways in Soil: Micro X-ray spectroscopy study.* G.M. Hettiarachchi and M.B. Galkaduwa, 2018. Sector 13 ID-E APS, ANL. 3 days (3/15/2019-3/18/2019)
32. *Liquid phosphorus, organic compounds, and a calcareous soil: Have the effects always been there, we just didn't know to look for them?* G.M. Hettiarachchi and J. Weeks. 2018. Sector 9 BM, APS, ANL. 2 days (3/26/2019-3/27/2019 and 4/7/2019-4/8/2019)
33. *Use of Different Zinc Formulations in Macronutrient Fertilizers to Alter Zinc-Fertilizer Reaction Pathways in Soil: Bulk XAS study.* G.M. Hettiarachchi and M.B. Galkaduwa, 2017. Sector 9 BM APS, ANL. 3 days (4/13/2018-4/16/2018)
34. *Use of Different Zinc Formulations in Macronutrient Fertilizers to Alter Zinc-Fertilizer Reaction Pathways in Soil: Bulk XAS study.* G.M. Hettiarachchi and M.B. Galkaduwa, 2017. Sector 9 BM APS, ANL. 3 days (4/13/2018-4/16/2018)

35. *In Search of a Solution to Pollution: Improving Phosphorus Fertilizer Use Efficiency through Simple Formulation Alterations.* G.M. Hettiarachchi and J. Weeks. 2017. Sector 9 BM, APS, ANL. 3 days (4/6/2018-4/9/2018)
36. *Set P Free: Synchrotron-Based, Real-Time Observation of a Unique Protein Derivative Liberating Phosphorus Fixed to Iron in Soil.* G.M. Hettiarachchi and J. Weeks. 2016. Sector 9 BM, APS, ANL. 5 days (4/11/2017-4/16/2017)
37. *Synchrotron based micro scale speciation of Arsenic in smelter contaminated soil*. G. M. Hettiarachchi, S. Rathnayake, P. Schwab, and D. Deng. 2016. Sector 13 ID-E, APS, ANL. 4 days (11/04/2016-11/07/2016)
38. *Fate and reaction products of phosphate fertilizers with elemental sulfur in the composition applied to tropical soils*. G. M. Hettiarachchi, Fabio Coutinho Cesar, and J. Pierzynski. 2016. Sector 9 BM, APS, ANL. 4 days (4/6/2016- 4/10/2016)
39. *Fate and reaction products of phosphate fertilizers with elemental sulfur in the composition applied to tropical soils*. G. M. Hettiarachchi, Fabio Coutinho Cesar, and J. Pierzynski. 2016. Sector 9 BM, APS, ANL. 4 days (4/6/2016- 4/10/2016)
40. *Fixing Phosphorus: Spatially Resolved Investigation of Carbon-Based Chemical Mechanisms Capable of Improving Phosphorus Fertilizer Use Efficiency in Acid and Calcareous soils.* G.M. Hettiarachchi and J. Weeks. 2015. Beamline SXRMB, CLS. 3 days (02/12/2016 02/16/2016)
41. *Soil phosphorus cycling in a non-agriculture grassland ecosystem: Influence of fertilization.* G.M. Hettiarachchi and J. Pierzynski. 2015. Beamline SXRMB, CLS. 4 days (07/08/2015-07/13/2015)
42. *Chemistry and distribution of organic carbon within soil aggregates in soils from different agroecosystems using SXTM-NEXAFS spectroscopy.* 2015. G.M. Hettiarachchi, P. Pitumpe Arachchige, and C.W. Rice. 2013. Beamline SM, CLS. 4 days (07/09/2015- 07/13/2015)
43. *Mobility, availability and reaction products of MAP, DAP, and APP fertilizers.* G.M. Hettiarachchi and J. Pierzynski. 2015. Sector 9 BM, APS, ANL. 4 days (8/17/2015-8/22/2015)
44. *Is the speciation and stability of silver sulfide nanoparticles in soil affected by agricultural practices?* C. Doolette, G.M. Hettiarachchi, J. Kirby, M. McLaughlin, and H. Harris. 2014. Sector. Sector 5-BM-D, APS, ANL, 4 days (08/15/2014- 08/18/2014)
45. *Coupling of arsenic, iron and sulfur cycling of a freshwater wetland using X-ray spectroscopic techniques.* G.M. Hettiarachchi and M.B. Galkaduwa. 2014. Sector 13-IDE, APS, ANL. 2 days (07/14/2014- 07/16/2014)
46. *Understanding subsurface transformations and dynamics of trace elements in natural and bio-stimulated multi-metal rich soil microcosms using noninvasive x-ray spectroscopy techniques.* G.M. Hettiarachchi and Ranju Karna. 2014. Sector 13-IDE, APS, ANL. 2 days (07/10/2014 – 07/12/2014)

47. *Understanding subsurface transformations of trace elements in natural and bio-stimulated multi-metal rich soil microcosms using bulk x-ray absorption spectroscopy.* G.M. Hettiarachchi and Ranju Karna. 2014. Sector 5-BM-D, APS, ANL, 4 days (04/04/2014-04/08/2014)

48. *Effect of P Fertilizer Source on Mobility and Transformations of P in High P-Fixing Soils.* G.M. Hettiarachchi (PI) and J. Pierzynski. 2014. Sector 9 BM, APS, ANL. 4 days (04/02/2014- 04/06/2014)

49. *Chemistry and Distribution of Organic Carbon within Aggregates in Soil from Different Agroecosystems.* G.M. Hettiarachchi (PI), P. Pitumpe Arachchige, and C.W. Rice. 2013. Sector BLS 5.3.2, ALS, LBNL. 3 days (02/12/2014- 02/15/2014)

50. Chemistry of Organic Carbon (C) in Soil Aggregates from Temperate and Tropical Agroecosystems using Bulk C K-NEXAFS Spectroscopy. G.M. Hettiarachchi (PI), P. Pitumpe Arachchige, and C.W. Rice. 2013. Beamline 11-ID-1 (SGM), CLS. 3 days (12/15/2013-12/18/2013)

51. *Understanding subsurface transformations and dynamics of trace elements in natural and bio-stimulated multi-metal rich soil microcosms using noninvasive x-ray spectroscopy techniques.* G.M. Hettiarachchi and Ranju Karna. 2013. Sector 13-IDE, APS, ANL. 3 days (10/4/2013 – 10/7/2013)

52. *Chemistry and Distribution of Organic Carbon within Aggregates in Soil from Different Agroecosystems.* G.M. Hettiarachchi (PI), P. Pitumpe Arachchige, and C.W. Rice. 2013. Sector BLS 5.3.2, ALS, LBNL. 3 days (08/15/2013- 08/18/2013)

53. *Transport and transformations of selenium in flue-gas desulfurization wastewater using continuous flow column systems and x-ray spectroscopic techniques.* G.M. Hettiarachchi and M.B. Galkaduwa. 2013. Sector 13-IDE, APS, ANL. 3 days (07/12/2013- 07/16/2013)

54. *Examining lead and arsenic speciation in a contaminated urban soil amended with biosolids and an iron oxyhydroxide using x-ray absorption spectroscopic techniques.* G.M. Hettiarachchi (PI), P. Defoe. 2013. Sector 5 BM. APS, ANL. 4 days (07/11/2013-07/15/2013)

55. *Chemistry and Distribution of Organic Carbon within Aggregates in Soil from Different Agroecosystems.* G.M. Hettiarachchi, P. Pitumpe Arachchige, and C.W. Rice. 2013. Sector BLS 5.3.2, ALS, LBNL. 3 days (05/16/2013- 05/16/2013)

56. *Mobility, availability and reaction products of MAP, DAP, and APP fertilizers.* G.M. Hettiarachchi (PI) and J. Pierzynski. 2013. Sector 9 BM, APS, ANL. 4 days (04/17/2013-04/21/2013)

57. *Lead and Arsenic speciation and bioavailability in urban soils.* G.M. Hettiarachchi and C, Attanayake. 2013. Sector 5 BM. APS, ANL. 4 days (03/29/2013-04/02/2013)

58. *Understanding subsurface transformations and dynamics of trace elements in natural and biostimulated multi-metal rich soil/geo microcosms using noninvasive x-ray spectroscopy*

techniques. G.M. Hettiarachchi and Ranju Karna. 2012. Sector 20-ID, APS, ANL. 4 days (12/13/2012 – 12/17/2012)

59. *Understanding transport and transformations of selenium in flue-gas desulfurization waste water using continuous flow column systems and x-ray spectroscopic techniques.* G.M. Hettiarachchi and Buddhika Galkaduwa. 2012. Sector 10-ID, APS, ANL. 4 days (12/7/2012- 12/11/2012)
60. *Diffusion, fate and reaction products of phosphate fertilizers with varying solubility applied to tropical soils.* G.M. Hettiarachchi (PI) and Rodrigo C. da Silva. 2012. Sector 9 BM, APS, ANL. 5 days (10/25/2012- 10/30/2012)
61. *Chemistry and Distribution of Organic Carbon within Aggregates in Soil from Different Agroecosystems.* G.M. Hettiarachchi (PI), P. Pitumpe Arachchige, and C.W. Rice. 2012. Sector BLS 5.3.2, ALS, LBNL. 3 days (10/20/2012- 10-23/2012)
62. *Lead and Arsenic speciation and bioavailability in urban soils.* G.M. Hettiarachchi (PI), C. Attanayake. 2012. Sector 5 BM. APS, ANL. 5 days (06/14/2012-06/19/2012)
63. *Lead speciation and bioavailability in urban soils.* G.M. Hettiarachchi (PI), C. Attanayake. 2011. APS, ANL. (Awarded 3 days of beamtime, Research will be conducted in Fall 2011)
64. *Investigations on Mobility, Availability and Reaction Products of P from Granular and Fluid P Fertilizers in Soils, Influenced by P Management Practices-II.* G.M. Hettiarachchi (PI), R. Khatiwada. APS, ANL (Awarded 3 days of beamtime, Research was conducted in August 2011)
65. *Investigations on Mobility, Availability and Reaction Products of P from Granular and Fluid P Fertilizers in Soils, Influenced by P Management Practices-I.* G.M. Hettiarachchi (PI), R. Khatiwada. APS, ANL. (Awarded 3 days of beamtime, Research was conducted in April 2011)
66. *Laboratory Investigations on Mobility, Availability and Reaction Products of P from Granular and Fluid P Fertilizers in Soils: Influenced by P Management Practices.* G.M. Hettiarachchi (PI), R. Khatiwada. APS, ANL (Awarded 3 days of beamtime, Research was conducted in October 2010).
67. *Selenium speciation in organic-rich sediments and wetland systems: Assessing bioavailability and mobilization.* G.M. Hettiarachchi, S. Datta, and M. Crawford. 2010. (Awarded 6 days of beamtime, 3 days of research was conducted in July 2010, 3 days was conducted in December 2010)

68. *Laboratory Investigations on Mobility, Availability and Reaction Products of P from Granular and Fluid P Fertilizers in Soils: Influenced by P Management Practices.* G.M. Hettiarachchi (PI), R. Khatiwada. APS, ANL (Awarded 6 days of beamtime, Research was conducted in April 2010).
69. *Laboratory Investigations on Mobility, Availability and Reaction Products of P from Granular and Fluid P Fertilizers in Soils: Influenced by P Management Practices.* G.M. Hettiarachchi (PI), R. Khatiwada. APS, ANL (Awarded 3 days of beamtime, Research was conducted in December 2009).
70. *Understanding subsurface transformations of trace elements in reduced multi metal-rich geo-materials using noninvasive x-ray spectroscopy techniques-II.* G.M. Hettiarachchi (PI), R. Pannu, M. Newville, G.M. Pierzynski, K. Scheckel, and C.W. Rice. 2009. APS, ANL (Research was conducted in December 2009).
71. *Deconstructing Soil C and N sequestration: Importance of Mineral Surface Reaction of Amino Acids and Peptides at environmentally relevant conditions.* K. Xia (PI) and G.M. Hettiarachchi. National Light Source, Brookhaven National Laboratory (Research was conducted in July 2009).
72. *Copper distribution and speciation at the soil-root interface following submergence.* D. Beak (PI), J. Kirby, M. McLaughlin, and G.M. Hettiarachchi. 2009. APS, ANL (Research was conducted in April 2009).
73. *Understanding subsurface transformations of trace elements in reduced multi metal-rich geomaterials using noninvasive x-ray spectroscopy techniques.* G.M. Hettiarachchi (PI), R. Pannu, M. Newville, G.M. Pierzynski, K. Scheckel, and C.W. Rice. 2008. APS, ANL (Research was conducted in April 2009).
74. *Cobalt distribution and speciation in soils exposed to altered redox conditions through submergence.* G.M. Hettiarachchi (PI), J. Kirby, M. J. McLaughlin, and D. Beak. 2008. APS, ANL (Research was conducted in December 2008).
75. *Understanding the effect of seasonal wetting-drying on the speciation of Pb, Cd and Zn of a mine waste material from the Tri-State (Kansas-Missouri-Oklahoma) mining area.* G.M. Hettiarachchi (PI), M. Palomo, M. Newville, G. Pierzynski, and K. Scheckel. APS, ANL (Research was conducted in June 2008).
76. *Zinc speciation in soils as a function of distance of application from nanoparticulate zinc fertilizer products.* G.M. Hettiarachchi (PI), N. Milani, M. J. McLaughlin, and J. Kirby. Advanced Photon Source (APS), Argonne National Laboratory (ANL) (Research was conducted in April 2008).
77. *Speciation of Pb and Zn in a smelter contaminated soil treated with various P amendments using micro- X-ray –fluorescence, –diffraction, and -absorption.* G. M. Pierzynski (Principal Investigator), L. Baker, K. G. Scheckel, G. M. Hettiarachchi, and M. Newville. Advanced Photon Source, Argonne National Laboratory (research conducted in April 2007).
78. *Chemical changes induced by root growth.* L. Jassogne (Principal Investigator/Ph.D. student). G. M. Hettiarachchi, and D. Chittleborough (Co-investigatros/Co-supervisors). Applied through Australian Synchrotron Research Program to APS Sector 20-ID. Advanced Photon Source, Argonne National Laboratory (research conducted in April 2007).

79. *Speciation and distribution of Zn in canola roots following root exposure to novel chelated fertilizers*. G.M. Hettiarachchi (Principal Investigator), S. Stacey, K. G. Scheckel, and M. J. McLaughlin. Advanced Photon Source, Argonne National Laboratory (research conducted in April 2007).
80. *Speciation of cobalt in soil and the effects of ageing.* G. M. Hettiarachchi (Principal Investigator), L. Wendling, J. Kirby, and M. McLaughlin (Co-investigators). Applied through Australian Synchrotron Research Program (research conducted at ANBF, Photon Factory, Japan in October 2006 and February 2007).
81. *Synchrotron based x-ray diffraction and absorption for manganese speciation in fertilized alkaline calcareous soil.* G. M. Hettiarachchi (Principal Investigator). M. McLaughlin, and D. Chittleborough (Co-investigators). Applied through Australian Synchrotron Research Program (research conducted at ANBF, Photon Factory, Japan in October 2006).
82. *High iron compost for remediation of lead and arsenic contaminated soils.* Sally Brown (Principal Investigator). G. M. Hettiarachchi, and K. Scheckel (Co-investigators). Advanced Photon Source, Argonne National Laboratory (research conducted in August 2006).
83. *Revealing the chemistry of soil pores.* L. Jassogne (Principal Investigator/Ph.D. student). G. M. Hettiarachchi, and D. Chittleborough (Co-investigatros/Co-supervisors). Applied as a General user through APS for Sector 13-BM. Advanced Photon Source, Argonne National Laboratory (research conducted in August 2006 and April 2007).
84. *Speciation of fluid- and granular-fertilizer derived Cu and Zn in a calcareous soil using micro- X-ray -fluorescence, -diffraction, and –absorption.* G. M. Hettiarachchi (Principal Investigator). M. McLaughlin, D. Chittleborough, K. Scheckel, and M. Newville (Co-investigators). Applied as a General user through APS for Sector 13-ID. Advanced Photon Source, Argonne National Laboratory (research conducted in August 2006).
85. *Bulk speciation of zinc and manganese in zinc- and manganese-granular and -fluid fertilizer enriched soil.* G. M. Hettiarachchi (Principal Investigator). E. Lombi, M. McLaughlin, and D. Chittleborough (Co-investigators). Applied through Australian Synchrotron Research Program (research conducted at ANBF, Photon Factory, Japan in May 2006).
86. *Reaction products of zinc- and manganese-granular and fluid fertilizers in soil as a function of distance of application.* G. M. Hettiarachchi (Principal Investigator). E. Lombi, M. McLaughlin, D. Chittleborough, K. Scheckel, and M. Newville (Co-investigators). Applied as a General user through APS for Sector 13-ID. Advanced Photon Source, Argonne National Laboratory (research conducted in March 2006)
87. *Natural attenuation of copper toxicity in soils.* E. Lombi (Principal Investigator), R. Hamon (Co-investigator), G.M. Hettiarachchi (Co-investigator, Conducted Research at NSSRC), K.G. Scheckel (Co-investigator). Applied through Australian Synchrotron Research Program (research conducted at NSSRC, Taiwan in August 2005).
88. *Cd speciation associated with iron oxides and biosolids.* K.G. Scheckel, G.M. Hettiarachchi, and J.A. Ryan (Co-investigators). Conducted research at APS, Argonne National Laboratory, December 2003.
89. *Role of iron and manganese oxides in biosolids-amended soils on metal binding.* G.M. Hettiarachchi (Principal Investigator), K.G. Scheckel, and J.A. Ryan (Co-investigators). Conducted research at APS, Argonne National Laboratory, July 2003.

90. *In situ stabilization of soil lead using phosphorus and manganese oxide.* G. M. Hettiarachchi, K.G. Scheckel, J.A. Ryan, and G. M. Pierzynski. Conducted Research at NSLS, Brookhaven National Laboratory, January 2002.
91. *Role of inorganic fractions in biosolids and biosolids amended soils on metal binding mechanisms.* G.M. Hettiarachchi (Principal Investigator), J.A. Ryan, K.G. Scheckel, and C.A. Impellitteri (Co-investigators). Conducted research at APS, Argonne National Laboratory, December 2001.

Graduate Students and Research Scholars: Mentoring, Advising, and Training

Major Advisor:

Current Visiting Faculty/ Postdoctoral Associates / Research Associates/ Research Aid (1):

1. Chandima Wekumbura, Postdoctoral Research Associate, Kansas State University (Aug. 2024-current)

Current Ph.D. (5) :

1. Lakma Upendri Hewa Fonseka (current, KSU). Major supervisor, started in May 2024.
2. Anuj Poudel (Current, KSU), Ph.D. Major supervisor, started in Jan. 2025.
3. Nishadi Dodampe (Current, KSU), Ph.D. Major supervisor, started in Aug. 2024.
4. Amila Mudiyanselage (Current, KSU), Ph.D. Major supervisor, graduating in May 2026
5. Elly Khosh Manzar (Current, KSU). Co-major supervisor, graduating in May 2026.

Current M.S. (3) :

1. Nuwan Amarasinghe (Current, KSU). Major supervisor, started in Jan. 2026.
2. Rebecca Johnson (Current, KSU). Major supervisor, started in Jan. 2025
3. Janani Madanayaka (Current, KSU). Major supervisor, started in Jan. 2025

Graduated Ph.D. Students (Major Advisor/Co-major Advisor) (16):

1. Eduardo Gutiérrez Brito (2026), Ph.D., Kansas State University. Major supervisor, Thesis Title: *Geochemical mechanisms of lead stabilization in phosphate-amended urban soils and prediction of physicochemical properties using proximal soil sensors* (Current position: Research Fellow, Escuela Superior Politécnica del Litoral (ESPOL), Ecuador
2. Chandima Wekumbura (2024), Ph.D., Kansas State University. Major supervisor, Thesis Title: *Understanding mechanisms of changes in lead bioaccessibility in amended alkaline soils through integration of multiple techniques and evaluating methods for house dust collection and assessing dust lead bioaccessibility.* (Current position: Postdoctoral Research Fellow, Kansas State University)
3. Kasuni Gamage (2023), Ph.D., Kansas State University. Major supervisor, Thesis Title: *Sustainable phosphorus management: Reuse of recovered phosphorous in agriculture and Impact of agricultural management practices on phosphorus speciation*. (Current position: Assistant Professor, Cameron University, OK)
4. Zafer Alasmary (2020) Ph.D., Kansas State University. Major supervisor, Thesis Title: *Laboratory-to field-scale investigations to evaluate phosphate amendments and Miscanthus for phytostabilization of lead-contaminated military sites* (Current position: Assistant Professor, King Saudi University, Saudi Arabia)
5. Joseph Weeks (2019). Ph.D., Kansas State University. Major supervisor. Thesis Title: *Improving environmental health: Investigations into soil lead and phosphorus fate and transport* (Current position: Soil Scientist/ Data Manager, Indigo Ag)

Graduated Ph.D. Students (Major Advisor/Co-major Advisor) (16):

6. Mohammad Almutari (2019) Ph.D., Kansas State University. Major supervisor. Thesis Title: *Improving crop quality: Investigations on soil selenium and zinc transfer and bioavailability* (Deputy director of plant resources and Director of Management of Plant Production, Ministry of Environment, Water and Agriculture, Saudi Arabia).

7. Joy Pierzynski (2016). Ph.D., Kansas State University. Major supervisor. Thesis Title: *The effects of P fertilizer addition on P transformations on high-P fixing and grassland soils* (Current position: Program Director, Plant and Pest Diagnostic Clinic, The Ohio State University).

8. Pavithra Pitumpe Arachchige (2016). Ph.D., Kansas State University. Major supervisor. Thesis Title: *Understanding of coupled physicochemical and mineralogical mechanisms controlling soil carbon storage and preservation* (Current position: Research Lead, Ecoresolve).

9. Buddhika Galkaduwa (2015). Ph.D., Kansas State University. Major supervisor. Thesis Title: *Mechanistic understanding of fate and transport of selenium, arsenic, and sulfur in a pilot-scale constructed wetland treatment system designed for flue-gas desulfurization wastewater* (Chemistry Supervisor at Kansas Department of Agriculture)

10. Ranju Karna (2014), Ph.D., Kansas State University. Major supervisor. Thesis Title: *Mechanistic understanding of biogeochemical transformations of trace elements in contaminated minewaste materials under reduced conditions* (Research Scientist, Bennett Aerospace Inc., US Army Corp of Engineers)

11. Chammi Attanayake (2014). Ph.D., Kansas State University. Major supervisor. Thesis Title: *Bioavailability of contaminants in urban soils* (Senior Lecturer, University of Peradeniya, Sri Lanka).

12. Phillip Defoe (2014). Ph.D., Kansas State University. Major supervisor. Thesis Title: *Urban brownfields to gardens: minimizing human exposure to lead and arsenic* (Current position: Environmental Science Professor, Broward College)

13. Narges Milani (2012). The University of Adelaide, Australia. Co-supervisor. Thesis Title: *Fate of nanoparticulate micronutrient fertilizers in soil* (Current position: Environmental Chemist, The University of Melbourne)

14. Jennifer De Livera (2011). The University of Adelaide, Australia. Co-supervisor. Thesis Title: *Fate and behavior of cadmium in paddy soils* (Current position: Senior environmental specialist, Renewal, South Australia)

15. H. M. P. Lakmalie Premarathna (2011). The University of Adelaide, Australia. Co-supervisor. Thesis Title: *Chemistry and fertilizer efficiency of selenium in paddy soils* (Unemployed by choice)

16. Laurence Jassogne. (2008) The University of Adelaide, Australia. Co-supervisor. Thesis Title: *Understanding growth and distribution of roots and root pore chemistry in soils with strong texture contrast* (Current position: Consultant in Food Systems/Sustainable supply chains/ Climate Smart Agriculture).

Graduated M.S. Students (Major Advisor) (8):

1. Jack Murphy (2025, KSU). Major supervisor, M.S. Thesis title: *Lead in Kansas City soils: Lead source tracking and assessment of wastewater-derived phosphate for fertilization and lead remediation* (Current position: Industrial Hygienist, Maryland)
2. Nishadi Dodampe Mudiyanselage (2024, KSU), Major supervisor, M.S. Thesis title: *Potential use of reclaimed struvite as a phosphorus fertilizer source and effects of low molecular weight organic acids (LMWOAs) in the rhizosphere on its performance in three contrasting soils* (Current position: Ph.D. Student/Graduate Research Assistant).
3. Manjot Kaur Rekhi (2022, KSU), Major supervisor, M.S. Thesis title: *Exploring potential of sensing nutrient dynamics using soil-based microbial fuel cells* (Current position: Ph.D. Student/Graduate Research Assistant, University of New Hampshire).
4. Sevendeep Kaur (2021, KSU), Major supervisor, M.S. Thesis title: *How do shuttle and slow-release effects of zinc fertilizers alter zinc diffusion in soil and its uptake by wheat plants?* (Current position: Ph.D. Student/Graduate Research Assistant, University of Guelph).
5. Dorothy Menefee (2016, KSU), Major supervisor, M.S., Thesis Title: *Anthropogenic influences on soil microbial properties* (Ph.D., Texas A&M, Current position: Postdoctoral Fellow, Grassland Soil and Water Research Laboratory, USDA-ARS).
6. Vindhya Gudichuttu (2014) Kansas State University (Major supervisor), M.S., Thesis Title: *Phytostabilization of multi-metal contaminated mine waste materials: Long-term monitoring of influence of soil amendments on soil properties, plants, and biota and the avoidance response of earthworms* (Unemployed by choice).
7. Raju Khatiwada (2011) Kansas State University (Major supervisor), M.S., Thesis Title: *Speciation of phosphorus in reduced tillage systems: placement and source effect* (Ph.D., Arizona State University, Current position: Sr. Scientist (Agriculture) at Specialty Granules LLC)
8. H. M. P. L. Premarathna (2005) University of Peradeniya, Sri Lanka (Major supervisor), M.S. Thesis Title: *Soil and Crop Contamination by Toxic and Trace Elements* (Ph.D. University of Adelaide, Current Position: (Unemployed by choice)

Visiting Faculty/ Postdoctoral Associates/ Research Associates/Students (28):

1. Rebecca Maxon, Research Aid, Kansas State University *(2020- March 2026)*. (Current Position: Lab Technician, Kansas Department of Agriculture)
2. Kasuni Gamage, Postdoctoral Associate, *Project: Impacts of biochar and soil-wetting bacteria on phosphorus transformations.* (2024-2025). (Current Position: Assistant Professor of Soil Science, Cameron University, OK)
3. Ruwandi Kumarasinghe, Postdoctoral Associate, *Project: Reducing Bioavailability of Lead in Urban Residential Neighborhood Soils; Exploring co-crystal technologies for efficient and sustainable nutrient management. (2020-2023).* (Current Position: Professor of Chemistry, Saint Peter's University, NY).
4. Darshani Kumaragamage, Visiting Professor, University of Winnipeg, Canada. Project: *Cover crops and phosphorus fertilizer management practices influences phosphorus fractions in soils* (2022-2023)
5. ANG Moeurb (Research mentor), Visiting Undergraduate Student Royal University of Agriculture, Cambodia. Project: *Comparing phosphorus from swine bio slurry and chemical fertilizers on corn production (Zea mays L.)* (2022 fall)
6. Khyber Bhatt (Research mentor), Visiting Undergraduate Student (India). Project: *Reduction of bioavailability of lead in contaminated soils using phosphorus and Class A biosolids* (2022 summer)
7. Buddhika Galkaduwa (Postdoctoral Advisor), Kansas State University. Project: *Understanding reaction products of P and Zn in P-Zn fertilizers applied soils* (2016-2021) (Current position: Chemistry Supervisor, Kansas Department of Agriculture)
8. Thaís de Marchi Soares (Advisor, Ad), Visiting Ph.D. Student (Brazil). Project: Availability and efficiency of phosphorus acquisition from filter cake and mineral fertilizers by sugar cane (2021 Oct.- 2022 June).
9. Olfa Said Ben (Ad), Senior Fulbright Fellow (Tunisia), Kansas State University. Project: *Minimizing Ecosystem Damage and Human Impacts of Persistent Pollutants* (2019 Nov.-2020 Dec.).
10. Ahana Dey (Ad.), Visiting Ph.D. Research Fellow (India). Project: *Zinc availability in soils and its nutrition of crops grown under Conservation Agricultural practices* (March-Sep. 2020)
11. Eduardo Gutiérrez (Ad.), Borlaug Fellow (Ecuador). Project: *Cadmium fractionation in soils affected by organic matter application: Transfer of cadmium to cacao (Theobroma cacao L.) tissues* (Sep. 2019- Dec. 2020).
12. Basha Malik (Research mentor), Visiting Student (India). Project: *Various projects in Soil and Environmental Chemistry* (summer 2019).
13. Vaishnavi Varikuti (Research mentor), Visiting Student (India). Project: *Various projects in Soil and Environmental Chemistry* (summer 2019).
14. Dayong Xu (Ad.) Visiting Faculty Fellow (China), Project: *Monitoring Cu contaminated soil with Microbial Fuel (electrolysis) Cell* (Aug. 2018- May 2019)

Visiting Faculty/ Postdoctoral Associates/ Research Associates/Students (28) (cont.):

15. Marta Arruda Coelho (Co. Ad.), Visiting Ph.D. Scholar (Brazil). Project: *Long-term fertilizer placement in a corn-soybean rotation affect soil phosphorus fractions and legacy* (2017-2018)
16. Fabio Cesar (Ad.) Visiting Ph.D. Scholar (Brazil). Project: *Diffusion, fate and reaction products of phosphate fertilizers with varying solubility applied to tropical soil* (Sep. 2015-March 2016)
17. Parichat Chayapan (Ad.), Visiting Ph.D. Scholar (Thailand). Project: *Long-term effects of compost additions to metal contaminated soils: Soil chemical parameters and function of microbes* (March- October 2014)
18. Rodrigo Coqui da Silva (Ad.), Visiting Ph.D. Scholar (Brazil). Project: *Diffusion, fate and reaction products of phosphate fertilizers with varying solubility applied to tropical soil* (Sep. 2011- March 2012)
19. Cui Xiumin (Ad.), Visiting Faculty Fellow (China). Project: *Combined effects of apatite and brassinosteroid on lettuce and carrot grown in Cd-contaminated soils* (July-Dec. 2011)
20. Selim Eker (Ad.) Visiting Faculty Fellow (Turkey). Project: *Techniques use for understanding reaction products of phosphorus fertilizers in soils* (May-August 2011)
21. Weeradej Meeinkuri (Ad), Visiting Ph.D. Scholar (Thailand). Project: *Speciation and distribution of cadmium and zinc in zinc-mineralized soils from Mae Sot district, Tak Province: Effect of sulfur application and oxygenation by rice (Oryza sativa) roots* (Aug. 2010-May 2011)
22. Xiaobin Gu (Co-ad.) Kansas State University. Project: *Investigations on manganese chemistry in rhizosphere soils of glyphosate resistant soybeans* (July 2008- June 2009)
23. Sarvana Pandian (Co-ad.) Kansas State University. Project: *Investigations on soil solutions collected from nano particles applied to soils* (2008)
24. P. Udayasoorian (Co-ad.) Kansas State University. Project: Investigations on nano particles applied to soils on metal uptake (2008)
25. James Pitchai (Co-ad.) Kansas State University. Project: *Investigations on nano particles applied to soils on metal uptake* (2008)
26. Claudia Costa (Co-ad.) Kansas State University. Project: Chemical approaches to understand mechanisms controlling capacity and stability of soil C (2008)
27. Monica Palomo, Kansas State University (2008). Project: *Speciation of trace elements in mine waste materials* (Current position: Professor, California State Polytechnic State University)
28. Kylie Dodd, University of Adelaide, Australia. (2007) Project: *Understanding reaction products of granular and fluid P fertilizers in Australian soils: a way to enhance fertilizer efficiency* (Current position: Unknown)

Member of Advisory Committee of Graduate Students:

Current Ph.D. Graduate Students (11):

1. Arti Pujari, Chemistry, Kansas State University, Started in 2025
2. Parnian Mohammadiansemnani, Civil Engineering, Kansas State University, Started in 2024
3. Asadbin Zaman, Dep. Chemical Eng., Kansas State University, Started in 2024.
4. Sabina Poudel, Dep. of Agronomy, Kansas State University, Started in 2024.
5. Sofia Cominelli, Dep. of Agronomy, Kansas State University, Started in 2024.
6. Courtney Woodworth/Becker, Dep. Horticulture and Natural Resources, Started in 2024
7. Nishadini Widanagamage, Department of Agronomy, Started in 2024
8. Tamjid Us Sakib, Dep. of Agronomy, Kansas State University, Graduating in 2025.
9. Endy Lopes Kailer, Dep. of Agronomy, Kansas State University, Graduating in 2026.
10. Gustavo Roa, Dep. of Agronomy, Kansas State University, Graduating in 2026.
11. Brian Rutter, Dep. of Agronomy, Kansas State University, Graduating in 2026.

Current M.S. Graduate Students (1):

1. Isaac Nelson, Dep. of Agronomy, Kansas State University, Started in 2024.

Graduated Ph.D. Students (16):

1. Moises Gutierrez, Dep. Chemical Eng., Kansas State University, Graduated in 2025.
2. Viran Siriwaradane, Dep. of Agronomy, University of Adelaide. Graduated in 2025.
3. Amber Pasket, Dep. of Agronomy, Kansas State University, Graduated in 2024.
4. Jessica de Oliveira Demarco, Ag. Bio Eng., Kansas State University, Graduated 2023.
5. Arvind Kannan, Civil Engineering, Kansas State University, Graduated in 2022.
6. Sasha Johnson, Environ. Engineering, University of Texas, Arlington, Graduated in 2022.
7. Elliot Carver, Agronomy, Kansas State University, Graduated in 2021.
8. Kahao Lim, Civil Engineering, Kansas State University, Graduated in 2021.
9. Michelle Del Rio, Public Health, University of Texas, El Paso, Graduated in 2021.
10. Edwin Akley, Agronomy, Kansas State University, Graduated in 2019.
11. Johanie Rivera-Zayas, Agronomy, Kansas State University, Graduated in 2019.
12. Tiffany Carter, Agronomy, Kansas State University, Graduated in 2019.
13. Che-Jen Hsiao, Agronomy, Kansas State University, Graduated in 2018.
14. Christie Edwards, Agronomy, Kansas State University, Graduated in 2017.
15. Abdulaziz Alghamdi, Agronomy, Kansas State University, Graduated in 2016.

Graduated Ph.D. Students (16) (cont.):

16. Robert Florence, Agronomy, Kansas State University, Graduated in 2015.
17. Habib Diop, Agronomy, Kansas State University, Graduated in 2013.
18. Priscilla Mfombep, Agronomy, Kansas State University, Graduated in 2013.

Graduated M.S. Students (36):

1. Thisura Illukgoda Gedara, Geology, Kansas State University, Graduated in Summer 2025.
2. Chamine Mudalige, Statistics, Kansas State University, Graduated in 2025 (served as co-major professor)
3. Muazzama Mushtaq, Agronomy, Agronomy, Graduated in 2025.
4. Nick McKee-Rist, Civil Engineering, Graduated in 2025.
5. Joana Schroederdesouza, Agronomy, Graduated in 2025.
6. Gustavo Roa, Agronomy, Graduated in 2024.
7. Jaime Herrera, Civil Engineering, Graduated in 2024.
8. Tiffany Poydras, Agronomy, Graduated in 2024.
9. Xandria Korn, Chemical Engineering, Graduated in 2022.
10. Diego Charbonnier, Agronomy, Kansas State University, Graduated in 2021.
11. Maheen Mahmood, Civil Engineering, Kansas State University, Graduated in 2021.
12. James Lin, Agronomy, Kansas State University, Graduated in 2021.
13. Kathryn Douglas, Civil Engineering, Kansas State University, Graduated in 2021.
14. Evan Heronemus, Civil Engineering, Kansas State University, Graduated in 2021.
15. Stephan Koenigsberger, Geology, Kansas State University, Graduated in 2020.
16. Alex Obeng, Public Health, University of Texas, El Paso, Graduated in 2020.
17. Irosha Wanithunga, Agronomy, Kansas State University, Graduated in 2019.
18. Stuart Watts, Agronomy, Kansas State University, Graduated in 2019.
19. Nusrat Shobnam, Civil Engineering, Kansas State University, Graduated in 2019.
20. Christina Richardson, Geology, Kansas State University, Graduated in 2019.
21. Forest Shepherd, Geology, Kansas State University, Graduated in 2019.
22. Karina Galinskaya, Geology, Kansas State University, Graduated in 2018.
23. Alexandria Richards, Geology, Kansas State University, Graduated in 2018.
24. Colleen Gura, Geology, Kansas State University, Graduated in 2017.
25. Erica, Schmitz, Bio. Ag. Engineering, Kansas State University, Graduated in 2017.
26. Miriam Gutierrez Rodriguez, Agronomy, Kansas State University, Graduated in 2016.

Graduated M.S. Students (36) (cont.):

27. James Coover, Agronomy, Kansas State University, Graduated in 2014.
28. Hersy Enriquez, Civil Engineering, Kansas State University, Graduated in 2014.
29. Jose Paredez, Civil Engineering, Kansas State University, Graduated in 2014.
30. MD. Golam Kibria, Geology, Kansas State University, Graduated in 2014.
31. Ricardo de Jesus, Chemical Engineering, Kansas State University, graduated in 2014.
32. Chad Hobson, Geology, Kansas State University, Graduated in 2013.
33. Sankar Sasidharan, Geology, Kansas State University, Graduated in 2013.
34. Katherine Talley, Bio. Ag. Engineering, Kansas State University, Graduated in 2012.
35. Ashley Raes Harms, Agronomy, Kansas State University, Graduated in 2011.
36. Paul Hartley, Agronomy, Kansas State University, Graduated in 2010.

Undergraduate Honors/Special Research Projects (Advisor or co-advisor) (14)

1. Holly Lane. 2025- Current (University Developing Scholar KSU). Project Title: *Efficient N fertilizer from livestock wastewater*
2. T. Lee (2018). Kansas State University. Project Title: *Soil Water Stable Aggregate Testing for Fort Riley Miscanthus Project*
3. M. Vaga (2017). Kansas State University. Project Title: Biogeochemical controls on the release and accumulation of Mn and As in shallow aquifers, West Bengal, India
4. C. Graversen (2015). Kansas State University. Project Title: *Comparison of sequentially fractionated- and bioaccessible-lead and arsenic in an urban soil amended with two different compost types.*
5. A. Marshal (2014). University of Florida. Project Title: *Effect of flow rate on transport and retention of sulfur in flue-gas desulfurization (FGD) wastewater using continuous flow column system.*
6. A. Krehel (2014). Co-supervisor. Kansas State University. Project Title: *Sorption mechanisms of arsenic within aquifer sediments, and bioaccumulation of As in rice from West Bengal, India.*
7. S. Ford (2014). Kansas State University. Project Title: *Community garden development and youth education, Wilson, Kansas.*
8. D. Fine (2013). Tuskegee University. Project Title: *Dermal transfer of polycyclic aromatic hydrocarbons (PAHs) in a contaminated urban soil.*
9. D. Menefee (2013). Kansas State University. Project Title: *Mechanisms of soil carbon protection in a tropical agroecosystem under differing management practices*.
10. A. Tran (2010). Kansas State University. Project Title: *Effects of soil moisture and drying conditions on extractable K in Kansas soils.*
11. N. Wiseman (2007). The University of Adelaide, Australia. Project Title: *Molybdenum: Phytotoxicity and the role of phosphate competition in plant uptake*

12. J. Erskine (2007). The University of Adelaide, Australia. Project Title: *Using isotopic exchange to evaluate and compare the soil and plant availability of zinc fertilizers in alkaline soils*
13. R.M.P.S. Rathnayake (2005). University of Peradeniya, Sri Lanka. Thesis Title: *Heavy Metal Accumulation by Some Selected Leafy Vegetables Grown in Wellampitiya Area.*

Undergraduate Advisees/Mentees (31):

1. Chase Bouy 2025-current, Department Agronomy, KSU
2. Easton Robert Ford 2025-current, Department Agronomy, KSU
3. Kenzie Lee 2024-current, Department Agronomy, KSU
4. Brook Litney 2024-current, Department Agronomy, KSU
5. Cayce Barry 2024-current, Department Agronomy, KSU
6. Taylor Eckerberg 2023-current, Department Agronomy, KSU
7. Jaymee Renfro-Dubovich 2023-current, Department Agronomy, KSU
8. Steven Hayse 2022-current, Department Agronomy, KSU (Terminated)
9. Corbyn Meyers 2022-2023, Department Agronomy, KSU (transferred to HFRR)
10. Brooke Livenhood 2020 -2024 Department of Agronomy, KSU (Graduated)
11. Treven Hegwood 2020 -2023, Department of Agronomy, KSU (Graduated)
12. Adelaide Katzer 2020-2023, Department of Agronomy, KSU (Graduated)
13. Bryce Hermann 2019-2022, Department of Agronomy, KSU (Graduated)
14. Joel Johnson 2017- 2020, Department of Agronomy, KSU (Graduated)
15. Markus Pfeiffer 2016- 2017, Department of Agronomy, KSU (Terminated)
16. Lyndsay Brown 2016- 2017, Department of Agronomy, KSU (Transferred to AS)
17. Parker Maloney 2015- 2016, Department of Agronomy, KSU (Transferred to Ag. Econ)
18. Logan Weiche 2015- 2018, Department of Agronomy, KSU (Graduated)
19. Reiny Ostrander 2014- 2018, Department of Agronomy, KSU (Graduated)
20. Garrett Reiss 2012- 2015, Department of Agronomy, KSU (Graduated)
21. Rebecca Eshelman 2012-2013, Department of Agronomy, KSU (Terminated)
22. Justin Cecchini 2012- 2013, Department of Agronomy, KSU (Transferred to HFRR)
23. Abigail Bartel 2012- 2015, Department of Agronomy, KSU (Graduated)
24. Chisholm Miller 2011- 2015, Department of Agronomy, KSU (Graduated)
25. Carolyn Fox 2011- 2015, Department of Agronomy, KSU (Graduated)
26. David Janzen 2011- 2015, Department of Agronomy, KSU (Graduated)
27. Dorothy Menefee 2009- 2013, Department of Agronomy, KSU (Graduated)
28. Thomas Weninger 2009- 2010, Department of Agronomy, KSU (transferred to HFRR)
29. Amy Vu 2009- 2011, Department of Agronomy, KSU (Graduated)
30. Jonathan Meals 2009-2010, Department of Agronomy, KSU (transferred)
31. Mary Stevens 2010, Department of Agronomy, KSU

Teaching Experience:

Kansas State University

- Advanced Soil Chemistry (AGRON 905)
- Soil and Environmental Chemistry (AGRON 605)
- Environmental Quality (AGRON 335)
- Soil Fertility Laboratory
- Guest lectures in Soil Physical Chemistry, Soil Microbiology, Soil Fertility, Environmental Quality, and Soil and Plant Analysis

University of Adelaide

- Environmental Toxicology and Remediation (3005WT)
- Soil Ecology and Nutrient Cycling (3016WT)

University of Peradeniya

- Environmental Soil Chemistry
- Environmental Pollution and Control
- Advanced Instrumentation in Environmental Research
- Remediation of Contaminated Soil and Water
- Soil Chemistry
- Soil Degradation and Conservation

Additional undergraduate and graduate courses in soil science and environmental quality

Professional and College Activities:

International

2023-present	Specialty Chief Editor, Terrestrial Ecotoxicology, Frontiers in Environmental Toxicology
2023-present	Editorial Board, ACS Agricultural Science & Technology
2022- present	Treasurer, International Society of Trace Element Biogeochemistry
2022- present	Guest Associate Editor, Frontiers in Environmental Science
2019- present	Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka, Journal - Editorial Advisory Committee Member
2017-2021	Chair, International Committee, International Society of Trace Element Biogeochemistry
2015- 2021	Auditing Committee, International Society of Trace Element Biogeochemistry
2014- present	Section Editor, Land Pollution Section, Current Pollution Reports Journal, Springer Nature
2015-2020	Technical Editor, Journal of Environmental Quality
2014-2018	Chair of Commission 4.2 Soils, Food Security and Human Health of the International Union of Soil Sciences
2009- 2015	International Committee, International Society of Trace Element Biogeochemistry
2003-2005	Associate Editor, Journal of Environmental Quality

Professional and College Activities (continued):

National

2024-current	Member, Board of Directors, Soil Science Society of America
2019-2022	Chair-elect, chair and past chair, Soil Chemistry Division, Soil Science Society of America (currently past chair)
2016- 2022	Chair, Multistate Research Project, The Chemical and Physical Nature of Particulate Matter Affecting Air, Water and Soil Quality (NC1187)
2016-2020	Chair, Multistate Research Project, Soil-Based Use of Residuals, Wastewater and Reclaimed Water (W3170)
2010-2016	Secretary/vice-chair, Multistate Research Projects W2170 and NC1187
2007-2008	President, Australian Soil Science Society- South Australia Branch
2015-2021	Faculty Senate, Kansas State University
2011, 2013	Faculty Search Committee Member, Civil Engineering Department, KSU
2010	Guest Associate Editor, Journal of Environmental Quality
2005-present	Manuscript reviewer for various professional journals in soil, water, food and environmental science area (example, Environmental Science & Technol.)
2001-present	Grant proposal reviewer for various funding agencies (example: National Science Foundation, USA)

University/Department

2018-present	Chair, Department Committee on Planning
2022-present	Faculty representative, Environmental Science Degree Program
2010- present	Member, Graduate Committee- Department of Agronomy
2009- present	Chair, Graduate Scholarship Committee- Department of Agronomy
2008- present	Member, The Roscoe Ellis Lectureship Committee- Department of Agronomy
2018-2022	Member, College of Agriculture Committee on Planning
2015-2021	Faculty Senate-Kansas State University
2008- 2018	Safety Committee- Department of Agronomy
2005-2006	Convener, Discipline of Soil and Land System Seminar Series
2004	Faculty Representative, Research and Development Committee, University of Peradeniya, Sri Lanka
2004	Member, Faculty of Agriculture Research & Development and Ethical Review Committee, University of Peradeniya, Sri Lanka
2003-2004	Co-coordinator, Degree Program in Environmental Soil Science, Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka
2003	Member, Faculty of Agriculture Student Welfare Committee, University of Peradeniya, Sri Lanka
2003	Executive committee member in Peradeniya University Agriculture Teacher's Association
2003	Chairperson, Sessions and Registration Committee, 15th Annual Congress, Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka
1997-1998	Department of Agronomy Course and Curriculum Committee, KSU
1996-1999	Department of Agronomy International Committee, KSU
1993	Secretary of Postgraduate Student Association, Post Graduate Institute of Agriculture, University of Peradeniya, Sri Lanka
1985-1991	Girl's Batch Representative, University of Peradeniya, Sri Lanka

Professional Affiliations

Soil Science Society of America
American Society of Agronomy
American Chemical Society
North American Colleges and Teachers of Agriculture
American Association for the Advancement of Science
Sri Lankan Association for the Advancement of Science
Gamma Sigma Delta Honor Society of Agriculture
Sigma Xi Honor Society

Grant proposals reviewed/Panel member

National Science Foundation, U.S.A.
Phosphate and Potash Institute, U.S.A.
Foundation for Food and Agriculture Research, U.S.A.
US Environmental Protection Agency
Australian Antarctic Science Program, Australia
National Science Foundation, Sri Lanka
Swish National Foundation of Science
Polish National Research Council
Louisiana Board of Regents
University of Wisconsin
University of California, Davis

Synchrotron Proposal Review Panel

Canadian Light Source (since 2013)
Australian Synchrotron Program (since 2008)
Stanford Light Source (since 2012)

Invited Presentations (Scientific International/scientific local/non-scientific): since Jan. 2005

1. Hettiarachchi, G.M. 2026. Strategies for Minimizing Toxic Trace Element Uptake in Vegetables Grown in Contaminated Urban Soils. School of the Environment, Henan University of Technology. Presented online from the Institute of Soil Science, Chinese Academy of Sciences, June 10.
2. Hettiarachchi, G.M. 2026. Integrated Phosphorus Management and Soil Health Strategies for Water Quality Protection. Soil Health Workshop. China Agricultural University, Beijing, China, September 06.
3. Hettiarachchi, G.M. 2025. Significance of bioavailability-based sustainable strategies for risk reduction of lead in urban soils. Mid-Atlantic Biosolids Association, November 18.
4. Hettiarachchi, G.M. 2025. Strategies for Minimizing Toxic Trace Element Uptake in Vegetables Grown in Contaminated Urban Soils. Special Session-Mitigating Toxic Elements Contamination in Foods: Bridging Knowledge Gaps. Salt Lake City, Utah. Nov. 9-11.
5. Hettiarachchi, G.M. 2025. The impact of organic amendments on carbon stabilization in soil aggregates. Soil Health Nexus Digital Cafe Webinar, September 17.
6. Hettiarachchi, G.M. 2025. Reducing human exposure to lead. Midwest Lead Summit. Webinar. Sep. 9.
7. Hettiarachchi, G.M. 2025. Symposium Honoring M.L. Jackson: Tracking Mineral and Chemical Changes in Fertilized Soil. XVIII International Clay Conference, Dublin July 13-18.
8. Hettiarachchi, G.M. 2024. Direct evidence on the impact of organic amendments on carbon stabilization in soil microaggregates. The Association of Renewable Energy and Clean Technology/The Compost Council of Canada/ International Compost Alliance. 2024 World Soil Day Webinar, Dec. 5.
9. Hettiarachchi, G.M. 2024. Use of organic amendments to minimize the risk of contaminants in urban soils. North West Biosolids Webinar. Nov. 13.
10. Hettiarachchi, G.M. 2024. Potential of reclaimed and manufactured struvite to use as a phosphorus fertilizer in agriculture. OECD Conference- Fertilizers from waste: Recovering and reusing nutrients via circular processing of agricultural residues. Sep. 9-12, Lincoln, NE.
11. Hettiarachchi, G.M. 2024. Kansas City Soil Lead Study. Region 7 Brownfields and Superfunds Four-State Meeting. July 9-10, Topeka, KS.
12. Hettiarachchi, G.M. 2023. Ecosystem Restoration of Mine Lands. Sustainability Dialog. Kansas State University, Manhattan, KS. https://engg.k-state.edu/chsr/sustainability/dialogs/2023dos. July 22.
13. Hettiarachchi, G.M. 2024. Benefits of land application of water treatment plant residuals to reduce risks within urban soil environments: the soil science perspective. American Water Work Association. Webinar, March 28.

14. Hettiarachchi, G.M. 2024. Soil-based wastewater remediation and resource recovery from wastewater. CE 5200 Environmental and Water Resources Seminar, Cal Poly, Pomona, CA. Virtual Seminar. March 5.
15. Hettiarachchi, G.M. 2024. Kansas City Soil Lead Study, Health Department, Kansas City, MO. Jan 30, Kansas City, MO.
16. Martin, S., G.M. Hettiarachchi, and Ann Carroll. 2023. Growing Resilience and Creating Brownfield Communities' Connection to Food. USEPA Brownfields Webinar, Dec. 12.
17. Hettiarachchi, G.M. 2023. Kansas State University. Manipulating Reaction Pathways for Managing Nutrient and Contaminant Elements in Soils. Outstanding Scientist Presentation, Sigma Xi Kansas State University. Oct. 13, 2023, Mahattan, Kansas.
18. Hettiarachchi, G.M. 2023. Ecosystem Restoration of Mine Lands. 2023. Eighteenth Annual Dialog on Sustainability: Ecosystem Restoration. July 22, Manhattan, KS.
19. Hettiarachchi, G.M. R. Kumarasinghe, K. Shunje, and C. Aackeröy. 2023. Exploring Behavior of Urea Co-crystals for Responsible and Efficient Nitrogen Management in Soils. Workshop on Novel Fertilizers and Plant Nutrition, Newark, DE, June 5.
20. Hettiarachchi, G.M., A. Roberts., and A. Bracker. 2022. Kansas City Soil Lead Study. Kansas Housing Conference. Wichita, KS., August 30-Sep. 1.
21. Hettiarachchi, G.M. 2022. Minimizing soil-plant transfer of contaminants in urban soils. Kansas Department of Agriculture. Midwest Association of Official Analytical Collaboration international (AOACI) Annual Meeting, Manhattan, KS, June 6-8.
22. Hettiarachchi, G.M. 2021. Altering Fertilizer Reaction Pathways in Soils to Optimize Nutrient Use Efficiency. Mohammed VI Polytechnic University, School of Agriculture, Fertilizers and Environmental Sciences (ESAFE) Seminar Series, May 25. https://www.youtube.com/watch?v=ZC2Gbae8RNw
23. Hettiarachchi, G.M. 2021. Manipulating Reaction Pathways to Optimize Soil Nutrient Availability. Iowa State University Seminar series. Virtual. March. 24, https://www.youtube.com/playlist?list=PLHF5VQesmflRShq51SiSXMLRWRxlmL6iA
24. Hettiarachchi, G.M. 2020. Improving Human Nutrition Though Manipulating Nutrient Reaction Pathways in Soils. ASA-CSSA-SSSA International Annual Meeting, Virtual. Nov. 9-13.
25. Hettiarachchi, G.M. 2020. Soil-based wastewater remediation. North Central Region Water Network Current Seminar series, Virtual. May 13.
26. Hettiarachchi, G.M. 2019. Sensors in Soil Chemistry: Opportunities and Challenges. Soil Chemistry Symposium, ASA-CSSA-SSSA International Annual Meeting, Nov. 10-13, San Antonio, TX.
27. Hettiarachchi, G.M. et al. 2019. Manipulation of bioavailability of contaminants in urban garden and yard soils. International Conference of Biogeochemistry Trace Elements. May 5-9, Nanjing, China.
28. Hettiarachchi, G.M. et al. 2018. Minimizing Human Exposure to Contaminants in Urban Soils. Oct. 4-5. Three Rivers Urban Soil Symposium, Pittsburg, PA

29. Hettiarachchi, G.M. 2018. Manipulating Reaction Pathways to Optimize Soil Nutrient Availability. Aug. 2, The University of Adelaide. Adelaide, Australia.
30. Hettiarachchi, G.M. 2017. Kansas Environmental Conference, Kansas Department of Health and Environment, Topeka, KS, Aug 8-10, 2017.
31. Hettiarachchi, G.M. 2016. Reclaiming Brownfields for Community Gardens. The Center for Engagement and Community Development Announces Fall Engagement Brown Bags. Sep. 2016, Manhattan, KS.
32. Hettiarachchi, G.M. 2015. Embedding soils in the general education undergraduate curriculum. ASA/SSSA/CSA Annual Meetings, Nov. 2015, Minneapolis, MN.
33. Hettiarachchi, G.M. and S. Martin. 2015. Growing safely to produce healthy crops-community gardens on previously used sites. American Community Gardening Association, August 15, Denver, CO.
34. Hettiarachchi, G.M., C. P. Attanayake, P. Defoe, and S. Martin. 2015. Managing urban garden soils: Minimize potential for soil contaminant transfer. The 100th Annual Meeting of Ecological Society of America, Aug. 2015. Baltimore, MD.
35. Hettiarachchi, G.M., C. Attanayake, P. Defoe, and S. martin. 2015. Gardening on contaminated urban soils: Mechanisms to reduce risk potential. The 12th International Phytotechnologies Conference, Sep. 2015, Manhattan, KS.
36. Hettiarachchi, G.M. 2015. Promising opportunities to use biosolids in revitalizing urban brownfields. International Water Association/Water Environment Federation/ Residuals and Biosolids Conference. June 2015. Washington, DC.
37. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, and G. M. Pierzynski. 2014. Minimizing human exposure to contaminants in urban soils. ASA/SSSA/CSA Annual Meetings, Nov. 2014, Long Beach, CA.
38. Hettiarachchi, G.M., C. Attanayake, P. Defoe, and S. Martin. 2014. Growing food crops on urban soils. ASA/SSSA/CSA Annual Meetings, Nov. 2014, Long Beach, CA.
39. Hettiarachchi, G.M., J. Pierzynski, and R. Khatiwada. 2014. Mobility, availability and reaction products of different phosphorus fertilizer sources in high P-fixing soil types. March 2014, Great Plains Soil Fertility Conference, Denver, CO.
40. Hettiarachchi, G.M. 2014. Trace element contamination in rice growing soils and impact on human health. July 2014, University of Peradeniya, Peradeniya, Sri Lanka.
41. Hettiarachchi, G.M., C. Attanayake, P. Defoe, S. Martin, and G. M. Pierzynski. 2013. Potential for Transfer of Lead, Arsenic and Polycyclic Aromatic Hydrocarbons from Amended Urban Soils to Vegetables and Humans. American Chemical Society Fall 2013 National Meeting. September 8-12, Indianapolis, IN.
42. Hettiarachchi G.M. 2013. Reducing human exposure to soil contaminants from urban agriculture. Press Conference. 246th American Chemical Society National Meeting and Exposition. September 8, Indianapolis, IN.
43. Hettiarachchi, G.M. Soil Contaminants in Urban Environments: Availability and Plant Uptake. February 2, 2013. In collaboration with Purdue Extension, Indianapolis, IN.
44. Hettiarachchi, G.M. Soil Contaminants in Urban Environments. March 4, 2013. In cooperation with Kristen McIvor, the Community Garden Program Manager for Pierce County, Tacoma, WA.

45. Hettiarachchi, G.M. Soil Contaminants: Bioavailability and Transfer. October 26, 2013. In cooperation with Colorado State University Extension, Burlington, CO.
46. Hettiarachchi, G.M. Contaminants: Bioavailability and Transfer. November 16, 2013. In cooperation with Denver Urban Gardens (DUG), CO.
47. Hettiarachchi, G.M. Soil Contaminants in Urban Environments: Their bioavailability and Transfer. February 14, 2012. Guest Lecture via GoTo Meetings for research seminar on Phytotechnologies for Landscape Architects, Harvard University, Graduate School of Design.
48. Hettiarachchi, G.M. Gardening on Brownfields. September 22, 2011 via Skype for the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) Brownfields Focus Group Meeting, the Hall of States Building, Washington, D.C.
49. Martin, S. and G.M. Hettiarachchi. Challenges of Urban Agriculture. February 16, 2011. Guest Lecture for the Planning for Urban Agriculture course at the University of Missouri, Kansas City (UMKC) Department of Architecture, Urban Planning and Design.
50. Hettiarachchi, G.M. 2011. Growing garden crops on brownfields: Potential health impacts, soil testing and best management practices. June 20, 2011. Public Library, Kansas City, KS.
51. Carroll, A. and G.M. Hettiarachchi. Strengthening Urban Agriculture and Food Access in CARE (Community Action for a Renewed Environment) Communities. July 7, 2010.
52. Martin, S. and G.M. Hettiarachchi. Participated in a webinar and provided project information during the Vita Nuova webinar on March 26, 2010
53. Martin, S. and G.M. Hettiarachchi. Gardening on Brownfields Sites-Is it Safe?: NALGEP (National Association of Local Government Environmental Professionals) webcast, March 3, 2010
54. Hettiarachchi, G.M. 2010. Soil Quality Issues in Urban Agriculture. Department of Horticulture, Forestry and Rec. Resources Seminar Series. March 2nd 2010.
55. Hettiarachchi, G.M. and S. Martin. 2009. Gardening on Brownfields Sites: Washington Wheatley, KC site. EPA Region 7 Site Visit and Implementing Neighborhood Sustainability Meeting: Washington Wheatley Neighborhood. Wednesday September 2, 2009. Seton Center, 23rd and Benton, Kansas City, MO.
56. Hettiarachchi, G.M. Growing vegetables in urban environments: Problems and Remedies. Washington Wheatley monthly neighborhood meeting. March 16, 2009.
57. Hettiarachchi, G.M. Growing vegetables in urban environments: Problems and Remedies. At a Special Community Gardening Meeting. Northern Arizona University, Flagstaff, AZ. April 30, 2009.
58. Hettiarachchi, G.M. Soil test results, their meaning and site recommendations. The Washington Wheatley Community Garden site, Kansas City, MO. May 5, 2009.
59. Hettiarachchi, G.M. Growing vegetables in urban environments: Problems and Remedies. City Hall Meeting in Gary, IN. March 16, 2009.

60. Hettiarachchi, G. M. 2007. Science at CSIRO Land & Water Adelaide Laboratory- snapshot presentation. CSIRO Land & Water Science Retreat. March 19-22, 2007, Sydney.
61. Hettiarachchi, G.M., M.J. McLaughlin, E. Lombi, and D. Chittleborough. 2006. ARC Project Update: Understanding differential behaviour of fluid and granular micronutrient fertilizers in soils. CSBP, Ltd. June 22, 2006, Perth.
62. Hettiarachchi, G.M. 2005. Synchrotron Based Spectroscopic Investigations of Inorganic Pollutants in Waste Materials. December 3, 2005. Special Seminar series organized by South Australian Synchrotron Users Network. Plant Genetics Resource Center, The University of Adelaide.
63. Hettiarachchi, G.M., E. Lombi, M.J. McLaughlin, and D. Chittleborough. 2005. Lability and mobility of zinc and manganese fertilizers in soil as a function of distance of application. November 24, 2005. University of Adelaide. Soil Chemistry Research Group.
64. Hettiarachchi, G. M., K. G. Scheckel., and J. A. Ryan. 2005. Micro scale investigations to understand binding mechanisms of metals in biosolids using synchrotron based x-ray fluorescence and x-ray absorption. Soil Metal Behavior, Soil Chemistry Division Special Symposium. ASA/SSSA/CSA Annual Meetings, Nov. 2005, Salt Lake City, UT.
65. Hettiarachchi, G.M., E. Lombi, M.J. McLaughlin, D. Chittleborough, and T. McBeath. 2005. Granular and Fluid Phosphorus. SAGIT Project Management Committee (PMC) meeting, October 13, 2005.
66. Hettiarachchi, G.M., E. Lombi, M.J. McLaughlin, and D. Chittleborough. 2005. Investigations on fertilizer products. CSBP, Ltd. August 12, 2005, Perth.
67. Hettiarachchi, G.M., E. Lombi, M.J. McLaughlin, and D. Chittleborough. 2005. Project Update-Investigations on Mosaic fertilizer products. July 26, 2005. Adelaide.
68. Hettiarachchi, G.M., E. Lombi, M.J. McLaughlin, and D. Chittleborough. 2005. Use of spectroscopy, microscopy and other X-ray techniques for understanding reaction products of granular and fluid P fertilizers in Australian soils. June 2, 2005. The University of Adelaide. Soil Chemistry Research Group.
69. Hettiarachchi., G.M. 2005. Spectroscopic Investigations of Inorganic Pollutants in Waste Materials. Emerging Science Initiative for Synchrotron Science Workshop, CSIRO, Clayton 13th April 2005.
70. Hettiarachchi, G.M. 2005. Macroscopic and Spectroscopic Approaches toward Understanding the Metal Binding in biosolids and biosolids amended soils. March 15, 2005. Soil & Land Systems Seminar. The University of Adelaide.
71. Hettiarachchi, G.M. 2005. Macroscopic and Spectroscopic Approaches toward Understanding the Metal Binding in biosolids and biosolids amended soils. February 16, 2005. CSIRO Land & Water. Science Presentation. Adelaide.

Extension and Other Publications:

1. Bourns, M., N. Nelson, P. Tomlinson, K. Roozeboom, G. Kluitenberg, G. Hettiarachchi, E. Yeager, and D. Presley. 2026. Cover crops for protecting water quality, Kansas State University. MF3686. https://bookstore.ksre.ksu.edu/item/cover-crops-for-protecting-water-quality_MF3686
2. Weeks, J. and G.M. Hettiarachchi. 2018. Can humic substances alter fertilizer reaction pathways in acid soils? The Fluid Journal. Summer 2018, Vol. 26, No. 3, Issue # 101. pp. 5-7. https://fluidfertilizer.org/wp-content/uploads/2018/08/Su18-A1.pdf
3. Weeks, J. and G.M. Hettiarachchi. 2016. Blending MAP, APP Reduces Fluid Fertilizer Input Costs-While mitigating environmental impact in high pH soils. The Fluid Journal. Winter 2017, Vol. 25, No. 1, Issue # 95. pp. 12-16. https://fluidfertilizer.org/wp-content/uploads/2017/03/W17-A3.pdf
4. Pierzynski, J. and G.M. Hettiarachchi. 2015. What About Fluid P Fertilizers In Moderately Calcareous Soils? The Fluid Journal. Winter 2016, Vol. 24, No. 1, Issue # 91. pp. 4-9. https://fluidfertilizer.org/wp-content/uploads/2016/05/W16-A1.pdf
5. Martin, S. and G.M. Hettiarachchi. 2014. Gardening on Brownfields: Testing Your Soil for Contaminants. MF3192. http://www.ksre.ksu.edu/bookstore/pubs/MF3192.pdf
6. Defoe, P.P. D. Presley, and G.M. Hettiarachchi. 2014. Gardening on Lead-contaminated Soils. MF3166. http://www.ksre.ksu.edu/bookstore/pubs/MF3166.pdf
7. Pierzynski, J., G.M. Hettiarachchi, and R. Khatiwada. 2013. Can Soil Chemical Changes Influence Plant Growth? What about mobility and lability of various P fertilizers on high P-Fixing soils? The Fluid Journal. Winter 2014, Vol. 22, No. 1, Issue # 83. pp. 11-13.
8. Martin, S. and G.M. Hettiarachchi. 2013. Historical Property Usage and Implications. Kansas State University, MF3078. http://www.ksre.ksu.edu/bookstore/pubs/MF3078.pdff
9. Martin, S. and G.M. Hettiarachchi. 2013. Obtaining Property Information and Site History. Kansas State University, MF3096. https://www.bookstore.ksre.ksu.edu/pubs/MF3096.pdf
10. Martin, S. and G.M. Hettiarachchi. 2013. Testing your Soil for Nutrients, pH, and Organic Matter. Kansas State University, MF3095. http://www.bookstore.ksre.ksu.edu/pubs/MF3095.pdf
11. Hettiarachchi, G.M., and R. Khatiwada, and D. Mengel. 2012. Understanding influence of P placement under field conditions. The Fluid Journal, Winter 2012, Vol. 20, No. 1, Issue # 75. pp. 11-13. https://fluidfertilizer.org/wp-content/uploads/2016/08/Understanding-Influence-of-P-Placement-Under-Field-Conditions.pdf
12. Hettiarachchi, G.M., N.O. Nelson, S. C. Agudelo-Arbelaez, Y.A. Mulisa. and J. Lemunyon. Phytoremediation: Protecting the environment with plants. Kansas State University, August 2012. MF 3067. http://www.ksre.ksu.edu/bookstore/pubs/mf3067.pdf