

# Marisa (Maria) Chrysochoou, Ph.D.

Professor and Head, Department of Civil and Environmental Engineering  
University of Connecticut Storrs CT 06269 USA

Email: [marisa.chrysochooou@uconn.edu](mailto:marisa.chrysochooou@uconn.edu) | Telephone: +1 860 486 3594  
<https://cee.engr.uconn.edu/people/chrysochoou-maria>

## EDUCATION

2006 Ph.D. Environmental Engineering | Stevens Institute of Technology | Hoboken, NJ  
2003 M.S. Environmental Engineering | Technische Universität Dresden | Germany  
2000 B.S. Physics | Aristotle University | Thessaloniki, Greece

## ACADEMIC LEADERSHIP POSITIONS

1/2019 – present Head, Department of Civil and Environmental Engineering | University of Connecticut  
2015 – 2018 Director, Environmental Engineering Program | University of Connecticut  
2012 - 2013 Associate Director, Environmental Engineering Program | University of Connecticut

## ACADEMIC APPOINTMENTS

2019 - Professor, Department of Civil and Environmental Engineering | University of Connecticut  
2013 – 2019 Associate Professor, Department of Civil and Environmental Engineering | University of Connecticut  
2007 – 2013 Assistant Professor, Department of Civil and Environmental Engineering | University of Connecticut

## PROFESSIONAL LEADERSHIP POSITIONS

2021 – present ASCE Civil Engineering Department Heads Coordinating Council (elected member)  
2017 – 2019 Chair, Environmental Engineering Program Leaders Committee, Association of Environmental Engineering and Science Professors

## SCHOLARSHIP

**Research Interests:** STEM education (neurodiversity, service learning), remediation and redevelopment of contaminated sites, environmental justice, environmental geochemistry, spectroscopy for material characterization

**Funding:** Total \$19.7M in external support, \$10.2M as PI.

**Publications:** 70 journal papers, 4 book chapters, >100 conference papers and presentations

## CONSULTING EXPERIENCE

- 2023, Subject Matter Expert, Schnabel Engineering, investigation of ground movements in I-95 pier.
- 2016-2019, Subject Matter Expert, CH2MHILL and Federal Highway Administration, SHRP2 Implementation Assistant Program, Round 7.
- 2016, Phoenix Environmental Services, Evaluation and modeling of environmental data.
- 2014-2016, CB&I, Evaluation of the nature of historic fill materials in contaminated sites.
- 2014-2016, AECOM, Investigation of chromium speciation in contaminated sites.
- 2012-2013, Kohl's Department Store, Investigation of heaving in store foundations.

## FUNDED PROJECTS

<b>Funding Source</b>	<b>Role</b>	<b>Title</b>	<b>Team</b>	<b>Duration</b>	<b>Amount</b>
<b>EPA</b>	PI	EPA Region 1: Technical Assistance for Brownfields Program	co-PIs Lin, Parekh	10/23-10/28	\$5,000,000
<b>NIST</b>	Co-PI	Risk Management and Mitigation of Pyrrhotite-Induced Concrete Deterioration	PI Wille, co-PI Mahoney	10/23-10/26	\$4,000,000
<b>EPA</b>	PI	EPA Region 1: Technical Assistance for Brownfields Program	co-PIs Dickson, Parekh	10/21-10/24	\$1,000,000
<b>NIST</b>	co-PI	Risk Management of Pyrrhotite-Induced Concrete Deterioration	PI Wille, co-PI Mahoney	09/21-09/24	\$1,400,000
<b>NIST</b>	co-PI	Development of a Risk Assessment Framework for Pyrrhotite-Induced Concrete Damage	PI Wille, co-PI Mahoney	09/20-09/22	\$1,100,000
<b>NSF</b>	PI	IUSE/PFE:RED Innovation Beyond Accommodation: Leveraging Neurodiversity for Engineering Innovation	co-PIs Zaghi, Bagtzoglou, Gabriel	01/20-12/24	\$2,000,000
<b>NSF</b>	co-PI	Redefining Public Engagement at the University of Connecticut	PI Arnold, co-PIs Campbell	10/19-09/24	\$2,250,000
<b>CT Department of Economic and Community Development</b>	PI	The Connecticut Brownfields Initiative	Sole PI	01/18-08/22	\$141,000
<b>Eversource Energy Center</b>	co-PI	Resilience System Modeling and Dynamic Economic Impacts	PI Bagtzoglou, co-PI Zhang	05/20-04/23	\$490,493
<b>Eversource Energy Center</b>	co-PI	Evaluation of Grid Resilience Activities with a Total System Performance Assessment Model	PI Bagtzoglou, co-PI Zhang	01/18-12/19	\$292,000
<b>NSF</b>	PI	A bottom-up approach to design of chemical soil stabilization	Sole PI	07/17-07/22	\$256,694
<b>AECOM</b>	PI	Investigation of Capillary Rise Induced Chromium Blooms	co-PI Bagtzoglou	08/15-08/17	\$125,000
<b>NSF</b>	PI	Collaborative Research: Toward a unified model for ferrihydrite behavior in the environment	PI for GSU Kabengi	10/14-10/18	\$440,000
<b>EU Marie Curie</b>	PI	SPECHROM—Spectroscopic and computational investigation of chromium binding on pure minerals and Asopos aquifer soils	Mamais, National Technical University of Athens	07/16-06/15	€222,483

<b>Funding Source</b>	<b>Role</b>	<b>Title</b>	<b>Team</b>	<b>Duration</b>	<b>Amount</b>
<b>SHRP2</b>	PI	Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials: Phase IV	Sole PI	04/13-04/14	\$187,000
<b>SHRP2</b>	PI	Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials: Phases I-III”	co-PIs Shaw, Mahoney	02/09-04/13	\$400,000
<b>EPA</b>	PI	Sustainable erosion control in developing countries using industrial by-products	Sole PI	08/11-08/12	\$15,000
<b>CT Department of Economic and Community Development</b>	PI	Development of GIS and prioritization strategies for brownfield reclamation	Sole PI	06/11-06/12	\$22,200
<b>DHS</b>	PI	Strengthening and modeling of earth embankments under high loads	co-PIs Bagtzoglou and Basu	09/09-09/10	\$118,189
<b>Center for Transportation and Urban Planning</b>	PI	Reversing Urban Sprawl: A Reclaimability Index Approach for Reviving Downtown Brownfields	co-PIs Garrick, Segerson, Bagtzoglou	08/08-08/10	\$242,405

## INDUSTRY FUNDING

My lab regularly engages in fee-for-service for a variety of companies, providing specialized material characterization with X-ray Diffraction, X-ray Fluorescence, Scanning Electron Microscopy and wet chemical analyses. The lab has received over \$100,000 in the last 15 years, from companies including:

- AECOM
- Schnabel Engineering
- Arcadis
- PPG Industries
- APTIM
- City of Hartford
- CEI Consulting Engineers
- JHA Environmental
- SESI Consulting Engineers

## TEACHING

**Undergraduate:** Neurodiversity in Engineering (2022, 2023), Brownfield Redevelopment (2018-2023); Brownfield Practicum (2019-2023), Soil Mechanics I (2007-2013, 2015-2018); Geoenvironmental Engineering (2017); Air Pollution (2012, 2013, 2016); Environmental Senior Design (2010); Environmental Debate (2008)

**Graduate:** Geoenvironmental Engineering (online, 2018); Contaminant Source Remediation (2010); Environmental Transport Phenomena (2009)

## ADVISING

### Funded Research Personnel

- Randi Mendes (Research Associate I)
- Connie Syharat (Research Assistant I)

Wayne Bugden (Research Assistant III)  
Katherine Malgioglio (Research Assistant I)  
Caressa Wakeman (Graduate Research Assistant)

### **Graduate Advisees**

Hayley Clos (PhD student)  
Leana Santos (PhD student)  
Ogochukwu Okeke (PhD student)  
Salem Smith (PhD student)  
Dominic Anziano (MS student)

### **CITATIONS**

**Scopus:** 2,683 h-index 27

**Google Scholar:** 3,471, h-index 30

### **PUBLICATIONS**

#### ***Book Chapters***

1. Chrysochoou M. and Bompoti N. 2024. Laboratory testing for Chemical Characterization of Solids, Gas and Liquids, *Manual of Geoenvironmental Engineering Professional Practice*, American Society of Civil Engineers (expected publication date, March 2024).
2. Chrysochoou M. 2020 Understanding soil-contaminant interactions: a key to improved groundwater quality, In: *Women in Water Quality: Investigations by Prominent Female Engineers*, Editor: Deborah O'Bannon. Springer, pp. 185-196.
3. Kabengi N. and Chrysochoou M., 2015. Soil Science in Environmental Management. In: *An Integrated Approach to Environmental Management*, Editors: Rupali Datta, John Wiley and Sons, pp. 75-98.
4. Chrysochoou M., 2013. Application of quantitative X-ray Diffraction in Geoenvironmental problems: overview and case studies, Chapter 5, In: *X-ray Diffraction: Structure, Principles and Applications*, Editor: Kaimin Shih, Nova Science Publishers.
5. Chrysochoou M. and Dermatas D., 2011. An overview of the properties and treatment of Chromite Ore Processing Residue, In: *Management of hazardous residues containing Cr(VI)*, Nova Science Publishers, pp. 273-302.

#### ***Journal papers***

1. Ahmadullah T. and Chrysochoou M., 2023. Thermodynamic and Kinetic Modeling of the Lime-Kaolinite System, *ACS Earth and Space Chemistry*, 7(10), 1947-1955.
2. Byung-Yeol Park, Rebecca Campbell-Montalvo, Todd Campbell, Hannah Cooke, Oxana Sidorova, Chester Arnold, Maria Chrysochoou, Peter Diplock, 2023. Applied Environmental Teaching using Caring Pedagogy is Essential in Educational Disruptions, *Research Issues in Contemporary Education*, 8(1), 72-101.
3. Alireza Namayandeh, Olaf J Borkiewicz, Nefeli M Bompoti, Steven K Watson, James D Kubicki, Maria Chrysochoou, F Marc Michel, 2023, Effects of Oxyanion Surface Loading on the Rate and Pathway of Ferrihydrite Transformation, *ACS Earth and Space Chemistry*, 7(10), 2154-2165.
4. Clos H., Chrysochoou M., Bompoti N., and Jacob I. 2023. A Soil Screening Study to Evaluate Soil Health for Urban Garden Applications in Hartford, CT, *Sustainability*, 15(10), 7924; <https://doi.org/10.3390/su15107924>.
5. Chrysochoou, M., Zaghi, A. E., Syharat, C. M., (2022) Reframing Neurodiversity in Engineering Education, *Frontiers in Education*, 7:995865. doi: 10.3389/educ.2022.995865
6. Alireza Namayandeh, Olaf J Borkiewicz, Nefeli M Bompoti, Maria Chrysochoou, F Marc Michel, 2022. Oxyanion Surface Complexes Control the Kinetics and Pathway of Ferrihydrite Transformation to Goethite and Hematite, *Environmental Science and Technology*, 56, 22, 15672-15684.

7. Fan Y, Wang X, Funk T, Rashid I, Herman B, Bompoti N, Mahmud MD, Chrysochoou M, Yang M, Vadas T, Lei Y, and Li B, 2022, A Critical Review for Real-Time Continuous Soil Monitoring: Advantages, Challenges, and Perspectives, *Environmental Science & Technology* 56(19), 13546-13564
8. Nefeli M. Bompoti, Yusniel Cruz-Hernández, Maria Chrysochoou, and Michael L. Machesky 2022. Interfacial Properties of Al-Ferrihydrites: Surface Complexation Modeling as a Probe of Surface Structure *ACS Earth and Space Chemistry* 6 (7), 1717-1724.
9. Byung-Yeol Park, Rebecca Campbell-Montalvo, Todd Campbell, Hannah Cooke, Chester Arnold, John C Volin, Maria Chrysochoou, Peter C Diplock, 2022, The development of high leverage practices in environmental sustainability-focused service learning courses: applications for higher education, *Environmental Education Research*, 28:11, 1635-1655, DOI: 10.1080/13504622.2022.2070603.
10. Chester Arnold, Juliana Barrett, Todd Campbell, Maria Chrysochoou, Nefeli Bompoti, 2021. The Environment Corps: Combining classroom Instruction, service-learning and extension outreach to create a new model of community engaged scholarship at the University of Connecticut, *Journal of Higher Education Outreach and Engagement*, 25(2), 215-232.
11. Campbell-Montalvo R., Campbell T., Park E.Y., Arnold C., Volin J., Chrysochoou M and Diplock P. 2021. E-Corps' Implementation of Environmental Sustainability-Focused Service-Learning: Conditions Supporting the Establishment of an Epistemic Community, *Journal of STEM Outreach*, 4(1), 1-12.
12. Cruz-Hernandez Y., Chrysochoou M. and Wille K. 2020. Wavelength dispersive X-ray fluorescence method to estimate the oxidation reaction progress of sulfide minerals in concrete, *Spectrochimica Acta Part B: Atomic Spectroscopy* 172, 105949
13. P Yue, N Chen, D Peak, NM Bompoti, M Chrysochoou, A Onnis-Hayden, 2020, Oxygen atom release during selenium oxyanion adsorption on goethite and hematite, *Applied Geochemistry*, 04605
14. Du Y. and Chrysochoou M. 2020. Microstructural Analyses of Cr(VI) Speciation in Chromite Ore Processing Residue from the Soda Ash Process, *Journal of Hazardous Materials*, 122385.
15. Kollias K., Mylona E., Adam K., Chrysochoou M., Papassiopi N. and Xenidis A. 2019. Characterization of phosphate coating formed on pyrite surface to prevent oxidation, *Applied Geochemistry*, 110, 104435.
16. Bompoti N., Chrysochoou M. and Machesky M. 2019. A unified surface complexation modeling approach for chromate adsorption on iron oxides, *Environmental Science and Technology*, 53(11), 6352-6361.
17. Bompoti N., Chrysochoou M. and Machesky M. 2018., Assessment of modeling uncertainties using a multi-start optimization tool for surface complexation equilibrium parameters (MUSE), *ACS Earth and Space Chemistry*, 3(4), 473-483.
18. Chrysochoou M., Oakes J. and Dyar D. 2018. Investigation of iron reduction by green tea polyphenols, *Applied Geochemistry*, 97, 263-269.
19. Chrysochoou M. and Du Y. 2018. Experimental and modeling behavior of Chromite Ore Processing Residue from the soda ash process, *Environmental Engineering Science*, 35(11), 1185-1193.
20. Kubicki J., Kabengi N., Chrysochoou M. and Bompoti N. 2018. Density functional theory modeling of chromate adsorption onto ferrihydrite nanoparticles, *Geochemical Transactions*, 19:8, <https://doi.org/10.1186/s12932-018-0053-8>.
21. Lagiopoulos I., Binteris A., Mpouras T., Panagiotakis I., Chrysochoou M. and Dermatas D. 2017. Potential biosorbents for treatment of chromium(VI)-contaminated water discharged into Asopos River, *International Journal of Environmental Science and Technology*, 14(7), 1481-1488.
22. Chrysochoou M., and Reeves K. 2017. Investigation of hexavalent chromium reduction by green tea polyphenols, *Bulletin of Environmental Contamination and Toxicology*, 98(3), 353-358.
23. Mpouras T., Chrysochoou M. and Dermatas D. 2017. Investigation of hexavalent chromium sorption on serpentine soil, *Journal of Contaminant Hydrology*, 197, 29-38.
24. Bompoti N., Chrysochoou M. and Machesky M., 2017. Surface structure of ferrihydrite: Insights from modeling surface charge. *Chemical Geology*, 464, 34-45.

25. Kabengi N., Chrysochoou M., Bompoti N. and Kubicki J. 2017. An integrated flow microcalorimetry, infrared spectroscopy and density functional theory approach to the study of chromate complexation on hematite and ferrihydrite, *Chemical Geology*, 464, 23-33.
26. Chrysochoou M., Theologou E., Bompoti N., Dermatas D. and Panagiotakis I. 2016. Occurrence, Origin and Transformation Processes of Geogenic Chromium in Soils and Sediments, *Current Pollution Reports*, 2(4), 224-235.
27. Johnston C. and Chrysochoou M. 2016. Mechanisms of Chromate, Selenate, and Sulfate Adsorption on Al-Substituted Ferrihydrite: Implications for Ferrihydrite Surface Structure and Reactivity, *Environmental Science and Technology*, 50(7), 3589-3596.
28. Bompoti N., Chrysochoou M. and Dermatas D. 2015. "Geochemical characterization of Greek ophiolitic environments using statistical analysis", *Environmental Processes*, 2, (Suppl 1), S5-S21 DOI: 10.1007/s40710-015-0097-z.
29. Chrysochoou M., 2015. "Geochemistry in Geotechnical Engineering Problems: Ettringite as Case Study", *Geotechnical Engineering*, 46(4), 1-7.
30. Mystrioti C., Sparis D., Papassiopi N., Xenidis A., Dermatas D. and Chrysochoou M. 2015. "Assessment of Polyphenol Coated Nano Zero Valent Iron for Hexavalent Chromium Removal from Contaminated Waters" *Bulletin of Environmental Contamination and Toxicology*, 94(3), 302-307.
31. Panagiotakis I., Dermatas D., Vatsieris C., Chrysochoou M., Papassiopi N., Xenidis A. and Vaxevanidou K. 2015. Forensic Investigation of a Chromium(VI) groundwater plume in Thiva, Greece, *Journal of Hazardous Materials*, 281, 27-34.
32. Dermatas D., Mpouras A., Chrysochoou M., Vatsieris C., Papassiopi N., Xenidis A., Theologou E. and Bompoti N. 2015. Origin and concentration profile of chromium in a Greek aquifer, *Journal of Hazardous Materials*, 281, 35-46.
33. Chrysochoou M. and Johnston C.P., 2015. Sulfur speciation and reactivity in calcium-polysulfide treated soil, *Journal of Hazardous Materials*, 281, 87-94.
34. Johnston C.P. and Chrysochoou M., 2015. Mechanisms of chromate adsorption on boehmite, *Journal of Hazardous Materials*, 281, 56-63.
35. Mystrioti C., Papassiopi N., Xenidis A., Dermatas D. and Chrysochoou M., 2015., "Column study for the evaluation of the transport properties of polyphenol coated nano iron", *Journal of Hazardous Materials*, 281, 64-69.
36. Johnston C.P. and Chrysochoou M., 2014. Mechanisms of chromate adsorption on hematite, *Geochimica et Cosmochimica Acta*, 138, 146-157.
37. Chrysochoou M., 2014. Investigation of mineral dissolution rate and strength development in stabilized soils using quantitative X-ray Diffraction, *Journal of Materials in Civil Engineering*, 26(2), 288-295
38. Chrysochoou M., Zhang X and Amador J., 2013. Comparison of Cr(VI) reduction by aerobic bacteria in culture and soil conditions, *Soil and Sediment Contamination*, 22, 273-287.
39. Johnston C.P. and Chrysochoou M., 2012. Investigation of Chromate Coordination on Ferrihydrite by in situ ATR-FTIR Spectroscopy and Theoretical Frequency Calculations, *Environmental Science and Technology*, 46(11), 5851-5858.
40. Chrysochoou M., Brown K., Dahal G., Granda C., Segerson K., Garrick N. and Bagtzoglou A., 2012. Decoupling brownfield assessment from end use: A GIS tool and indexing scheme for long term redevelopment planning, *Landscape and Urban Planning*, 105(3), 187-198.
41. Chrysochoou M., Grubb D.G. and Malasavage N., 2012. Assessment of Sulfate-Induced Swell in Stabilized Dredged Material: Is Ettringite Always a Problem?, *Journal of Geotechnical and Geoenvironmental Engineering*, 138(3), 407-414.
42. Chrysochoou M., Johnston C. and Dahal G., 2012. A Comparative Evaluation of Cr(VI) Treatment in Contaminated Soil by Calcium Polysulfide and Nanoscale Zero Valent Iron, *Journal of Hazardous Materials*, 201-202, 33-42.
43. Dermatas D., Vatsieris C., Panagiotakis I. and Chrysochoou M., 2012. Potential contribution of geogenic chromium in groundwater contamination of a Greek heavily industrialized area, *Chemical Engineering Transactions*, 28, 217-222.
44. Chrysochoou M., McGuire M. and Dahal G., 2012. Transport Characteristics of Green-Tea Nano-scale Zero Valent Iron as a Function of Soil Mineralogy, *Chemical Engineering Transactions*, 28, 121-126.
45. Chrysochoou M. and Ting A., 2011. A kinetic study of Cr(VI) reduction by calcium polysulfide, *Science of the Total Environment*, 409, 4072-4077.

46. Chrysochoou M., Granda C., Brown K., Dahal G., Garrick N., Segerson K. and Bagtzoglou A., 2011. Reviving Connecticut's brownfields: institutions and obstacles, *The Connecticut Economy*, 19(1), 14-16.
47. Chrysochoou M., Grubb D.G., Drengler K. and Malasavage N., 2010. Stabilized Dredged Material III: A mineralogical perspective, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(8), 1037-1050.
48. Grubb D.G., Malasavage N., Smith C.J and Chrysochoou M., 2010. Stabilized Dredged Material II: Geomechanical behavior, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(8), 1025-1036.
49. Grubb D.G., Chrysochoou M., Smith C.J. and Malasavage N., 2010. Stabilized Dredged Material I: A parametric study, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(8), 1011-1024.
50. Chrysochoou M., Ferreira D. and Johnston C., 2010. Calcium polysulfide treatment of Cr contaminated soil, *Journal of Hazardous Materials*, 179, 650-657.
51. Chrysochoou M., Dermatas D., Moon D.H., Grubb D.G. and Christodoulatos C., 2010. Geoenvironmental characterization of Chromite Ore Processing Residue: Implications for treatment, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(3), 510-521.
52. Chrysochoou M., Fakra S., Marcus M.A., Moon D.H. and Dermatas D., 2009. Microstructural Analyses of Cr(VI) Speciation In Chromite Ore Processing Residue (COPR), *Environmental Science and Technology*, 43(14), 5461-5466.
53. Chrysochoou M., Moon D.H., Fakra S., Marcus M.A., Dermatas D. and Christodoulatos C., 2009. Use of Micro-X-ray Absorption spectroscopy and diffraction to delineate Cr(VI) speciation in COPR, *Global NEST Journal*, 11(3), 318-324.
54. Grubb D.G., Moon D.H., Reilly T., Chrysochoou M., Dermatas D. 2009. Stabilization/solidification (S/S) of Pb and W contaminated soils using type I/II portland cement, silica fume cement and cement kiln dust, *Global Nest Journal* 11 (3) , pp. 267-282.
55. Chrysochoou M., Dermatas D. and Christodoulatos C., 2009. Experimental studies on coupled treatment of Chromite Ore Processing Residue, *Journal of ASTM International*, Vol. 6 No. 3 DOI: 10.1520/JAI102165.
56. Dermatas D., Chrysochoou M., Grubb D.G. and Xu X., 2008. Phosphate treatment of firing range soils: Pb fixation or P release?, *Journal of Environmental Quality*, 37: 47-56.
57. Wazne M., Moon D.H., Jagupilla S.C., Jagupilla S.C., Christodoulatos C., Dermatas D., Chrysochoou M., 2007. Remediation of chromite ore processing residue using ferrous sulfate and calcium polysulfide, *Geosciences Journal*, 11(2): 105-110.
58. Dermatas D. and Chrysochoou M., 2007. Lead particle size and its association with firing conditions and range maintenance: implications for treatment, *Environmental Geochemistry and Health*, 29(4):347-355.
59. Moon D.H., Dermatas D., Wazne M., Sanchez A., Chrysochoou M. and Grubb D.G, 2007. Swelling related to ettringite crystal formation in Chromite Ore Processing Residue, *Environmental Geochemistry and Health*, 29(4):289-294.
60. Chrysochoou M., Dermatas D. and Grubb D.G., 2007. Phosphate application to firing range soils for Pb immobilization: the unclear role of phosphate, *Journal of Hazardous Materials*, 144(1-2):1-14.
61. Moon D.H., Wazne M., Dermatas D., Christodoulatos C., Sanchez A.M., Grubb D.G., Chrysochoou M. and Kim M.G., 2007. Long-term treatment issues with chromite ore processing residue (COPR): Cr<sup>6+</sup> reduction and heave, *Journal of Hazardous Materials*, 143(3):629-635.
62. Dermatas D., Chrysochoou M., Pardali S. and Grubb D.G., 2007. Influence of X-Ray Diffraction sample preparation on quantitative mineralogy: implications for chromate waste treatment, *Journal of Environmental Quality*, 36(2):487-497.
63. Chrysochoou M. and Dermatas D., 2007. Application of the Rietveld method to assess Cr(VI) speciation in Chromite Ore Processing Residue, *Journal of Hazardous Materials*, 141(2):370-377.
64. Dermatas D., Chrysochoou M., Moon D.H., Grubb D.G., Wazne M. and Christodoulatos C., 2006. Ettringite-Induced Heave in Chromite Ore Processing Residue (COPR) upon Ferrous Sulfate Treatment, *Environmental Science and Technology* 40(18):5786-5792.

65. Chrysochoou M. and Dermatas D., 2006. Evaluation of Ettringite and Hydrocalumite Formation for Heavy Metal Immobilization: Literature Review and Experimental Study, *Journal of Hazardous Materials*, 136(1):20-33.
66. Dermatas D., Shen G., Chrysochoou M., Grubb D.G., Menounou N. and Dutko P., 2006. Pb speciation vs. TCLP release in army firing range soils, *Journal of Hazardous Materials*, 136(1):34-46.
67. Dermatas D., Bonaparte R., Chrysochoou M. and Moon D.H., 2006. Chromite Ore Processing Residue: Hazardous Contaminated Soil or Solid Waste?, *Journal of ASTM International*, Vol. 3 No.7, doi: 10.1520/JAI13313.
68. Chrysochoou M., Dermatas D., Moon D.H., Christodoulatos C., Wazne M., French C., Morris J. and Kaouris M., 2006. Investigation of barium treatment of Chromite Ore Processing Residue, *Journal of ASTM International* Vol. 3 No.6, doi: 10.1520/JAI13314.
69. Moon D.H., Dermatas D., Chrysochoou M. and Shen G., 2006. An Investigation of the Heaving Mechanism Related to Chromite Ore Processing Residue, *Journal of ASTM International* Vol. 3 No.6, doi: 10.1520/JAI13309.
70. Karagiannidis A., Chrysochoou M., Moussiopoulos N., Samaras Z., and Rakibey P. (2006). Examples of solid waste analysis and characterisation in accordance with contemporary European environmental legislation, *International Journal of Sustainable Development and Planning*, 1(4):464-475.
71. Karagiannidis A., Perkoulidis G., Moussiopoulos N. and Chrysochoou M., 2004. Facility location for solid waste management through compilation and multicriterial ranking of optimal decentralised scenarios: a case study for the region of Peloponnesse in southern Greece, *Engineering Research*, 1:7-18.

## CONFERENCE PAPERS AND PRESENTATIONS (past 5 years)

### Full conference papers

1. Sarira Motaref, Mousumi Roy, Maria Chrysochoou, 2023, Peer Observation Practice to Enhance Inclusive Teaching: An Exploratory Approach to Evaluate Faculty Perceptions, 2023 ASEE Annual Conference and Exposition.
2. Maria Chrysochoou, Arash Esmaili Zaghi, Connie Mosher Syharat, 2023, Board 415: Transforming Engineering Education for Neurodiversity: Epistemic Communities as a Model for Change, 2023 ASEE Annual Conference and Exposition.
3. Erin Scanlon, Connie Syharat, Arash Esmaili Zaghi, Maria Chrysochoou, Rachael Gabriel, 2023, Engineering instructors' constructions of the universality or individuality of neurodiversity, 2023 ASEE Annual Conference and Exposition.
4. Hannah Cooke, Rebecca Campbell-Montalvo, Todd Campbell, Chester Arnold, Maria Chrysochoou, Byung-Yeol Park, Peter C Diplock, 2023, Community-University Relationships in Environmental Engineering Service-Learning Courses: Social Network Vectors and Modalities of Communication, 2023 ASEE Annual Conference and Exposition
5. M Roy, C Syharat, M Chrysochoou, 2022. Redesigning Soil Mechanics as an Inclusive Course 2022 ASEE Annual Conference & Exposition.
6. Caressa Adalia Wakeman, Amvrossios Bagtzoglou, Maria Chrysochoou, 2022. Improving the Learning Experience of Neurodiverse Students in a Fluid Mechanics Course During the COVID-19 Pandemic, ASEE-NE Conference.
7. Ahmadullah T. and Chrysochoou M., 2022. Strength Development and Reaction Kinetics in Lime-Treated Clays, Geo-Congress 2022, pages 138-147.
8. Chrysochoou, AE Zaghi, CM Syharat, S Motaref, S Jang, A. Bagtzoglou, C. Wakeman. Redesigning engineering education for neurodiversity: new standards for inclusive courses - 2021 ASEE Virtual Annual Conference Content Access, 2021
9. Du Y. and Chrysochoou M. 2018. Microstructural analyses of Cr(VI) speciation in soda-ash chromite ore processing residue from China, Proceedings of the Air and Waste Management Association's Annual Conference and Exhibition, AWMA Volume 2018-June, Air and Waste Management Association's 111th Annual Conference and Exhibition, Hartford, CT.

### Abstracts Only

1. T Ahmadullah, M Chrysochoou, 2022. Relationship between Strength Development and Pozzolanic Reactions in Stabilized Kaolinite, Goldschmidt Conference, Hawaii, July



2. Bompoti, YC Hernandez, M Chrysochoou, M Machesky, 2021. Interfacial phenomena of Al-substituted ferrihydrite, Goldschmidt Virtual.
3. Ahmadullah T., Bompoti N. and Chrysochoou M. 2021. Thermodynamic and kinetic modeling of cementitious reactions in lime-treated clays, Goldschmidt 2021 virtual conference, July 4-9 2021.
4. Ahmadullah T. and Chrysochoou M. 2020. Evaluation of reaction kinetics in chemical clay soil stabilization, 57<sup>th</sup> Annual Meeting of the Clay Minerals Society, October 18-23, 2020, virtual meeting.
5. Chrysochoou M., Wille K. and Mahoney M. Evaluation Of Reaction Progress In Pyrrhotite-Impacted Concrete Foundations Using A Wd-Xrf Method, Geological Society of America Abstracts with Programs. Vol. 53, No. 1, 2021. doi: 10.1130/abs/2021NE-361700
6. Mangines H., Du Y., Bompoti N. and Chrysochoou M., 2018. Chromate adsorption on iron rich soils: Experiments and modeling. New England Graduate Student Water Symposium, University of Massachusetts, September 7-9. (oral presentation)
7. Adsit W., Bompoti N. and Chrysochoou M., 2018. Modeling of U (VI) of adsorption on iron oxides. New England Graduate Student Water Symposium, University of Massachusetts, September 7-9. (oral presentation)
8. Bompoti N., Chrysochoou M. and Machesky M., 2018. Towards a unified thermodynamic database: U (VI) and Cr (VI) adsorption on iron oxides. Goldschmidt 2018, Boston, MA, August 12 -17. (oral presentation)
9. Bompoti N., Chrysochoou M. and Machesky M., 2018. Iron oxide – solution interface: Insights from Surface Complexation Modeling. 255<sup>th</sup> American Chemical Society National Meeting & Exposition, New Orleans, March 18-22. (oral presentation)
10. Chrysochoou M., Bompoti N., and Machesky M., 2018. The MUSE: A MULTI – Start optimization algorithm for surface complexation Equilibrium parameters in complex systems. Symposium in Honor of James A Davis, 255<sup>th</sup> American Chemical Society National Meeting & Exposition, New Orleans, March 18-22. (oral presentation)
11. Bompoti N., Chrysochoou M. and Machesky M., 2017. Advances on reactive transport modeling: Modeling adsorption of heavy metals on iron oxides using an innovative surface complexation model. SETAC North America 38<sup>th</sup> Annual Meeting, Minneapolis, MN, Nov 12-16, 2017.
12. Bompoti N., Chrysochoou M. and Machesky M., 2017. Predicting Chromate Adsorption on Iron Oxides: A surface complexation modeling study. 2017 ASA, CSSA, and SSSA Annual Meeting in Tampa, FL, Oct. 22-25.
13. Bompoti N., Chrysochoou M. and Machesky M., 2017. The MUSE: A MULTI –start optimization algorithm for Surface complexation Equilibrium parameters. Goldschmidt 2017, Paris, France, August 13 -18, 2017.
14. Bompoti N., Chrysochoou M. and Machesky M., 2017. The MUSE application: A Unified Surface Complexation Modeling approach for chromate binding to iron oxides. Goldschmidt 2017, Paris, France, August 13 -18, 2017.

## AWARDS AND HONORS

2023, Outstanding Contribution to Environmental Engineering & Science Education, Association of Environmental Engineering and Science Professors

2022, Petit Family Foundation Women in Science Leadership Award, Connecticut Science Center

2022, UConn Provost Community Engaged Scholarship Award, INCLUDE project

2021, UConn Provost Community Engagement Award, Faculty Team (Environment Corps)

2021, Inductee, Connecticut Academy of Science and Engineering

2020, Women of Innovation Postsecondary Academic Innovation and Leadership Award, Connecticut Technology Council and Connecticut Center for Advanced Technology

2020, Distinguished Service Award, American Society of Environmental Engineering and Science Professors

2019, Honoree, Connecticut Women Hall of Fame; Women: A Force for Nature

2013, Marie Curie Fellow, European Union

2012, P3 (People, Prosperity and the Planet) Award, U.S. Environmental Protection Agency

2012, University of Connecticut Environmental Leadership Award

### **INVITED TALKS (selected)**

1. Vanderbilt University, 2023, Department of Mechanical Engineering, Reframing neurodiversity in Higher Education.
2. ABB, 2023, Neurodiversity in the Workplace.
3. Davidson College, 2023. Reframing neurodiversity in Higher Education, Student FIRST Action Team.
4. University of Illinois at Chicago, 2021. International Geoenvironmental Engineering Webinar Series, Dissecting the solid: spectroscopy in geoenvironmental applications.
5. Columbia University, Department of Earth and Environmental Engineering, 2021. Neurodiversity in Engineering: Cultivating the Potential of Nontraditional Thinkers.
6. Air and Waste Management Association, Women in Engineering Workshop, Hartford, CT, June 26 2018.
7. South Central University for Nationalities, 2018. Geochemical Modeling of Contaminant Fate and Transport Processes, Wuhan, China.

### **PROFESSIONAL MEMBERSHIPS**

American Society of Civil Engineers (ASCE)

American Society of Engineering Education (ASEE)

Association of Environmental Engineering and Science Professors

### **UNIVERSITY SERVICE**

College of Engineering Committees:

- Chair, Governance Board, Vergnano Institute for Diversity and Inclusion (2022)
- Chair, Promotion Tenure and Reappointment Amplification of Procedures Committee (2021)
- Member, School of Engineering Strategic Planning Committee (2021)

University Committees:

- Presidential Committee for Research Indirect Returns Policy, chair (2023)
- Senate Executive Committee (2021-to date)
- Provost Taskforce for Life Transformative Education member and co-chair, Authentic and Inclusive Learning Working Group (2019-2021)
- UConn Regional Accreditation Steering Committee: co-authored university 5-year interim report to NECHE (New England Consortium for Higher Education) (2021)
- Krenicki Institute Steering Committee: member of steering committee that oversees the activities of the Krenicki Institute for Fine Arts and Engineering (2020-to date)

### **COMMUNITY SERVICE**

Board of Directors Member, Corporation for Independent Living (non-profit organization supporting housing for people with disabilities), 2021 to date.

Sustainable CT, volunteer sustainability certification program for CT communities: reviewer and brownfield program evaluator, 2017-2020.