Maria Chrysochoou, Ph.D.

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RESEARCH AND PROFESSIONAL INTERESTS STATEMENT

Main thrust of expertise involves environmental geochemistry, contaminated site and brownfield remediation, beneficial use of industrial by products and recycled materials, and clay mineralogy. Current research initiatives focus on the evaluation of brownfield redevelopment strategies; development of improved surface complexation models for contaminate transport modeling; surface chemistry of iron oxides; fate, treatment of metals in contaminated soils and solid waste, and spectroscopy applications in the characterization of soils, waste and construction materials. As Director of the Connecticut Brownfields Initiative, my vision is to create a center of excellence that will develop successful strategies for planning and redevelopment, support communities to promote urban renewal and create educational opportunities for students to engage with diverse audiences, including industry and community partners. As Head of the Civil and Environmental Engineering Department, my goal is to cultivate an environment of inclusion, democratic ethos, creativity and innovation.

PROFESSIONAL EXPERIENCE

1/2019 – present

Head, Department of Civil and Environmental Engineering | University of Connecticut, USA

11/2017 – present

Director, Connecticut Brownfields Initiative | University of Connecticut, USA

08/2015 – 08/2018

Director, Environmental Engineering Program | University of Connecticut, USA

08/2013 – Present

Associate Professor, Department of Civil and Environmental Engineering | University of Connecticut,

07/2013 – 06/2015

Marie Curie Fellow | National Technical University of Athens, Greece

08/2007 – 07/2013

Assistant Professor, Department of Civil and Environmental Engineering | University of Connecticut,

05/2006 – 08/2007

Post-doctoral Research Associate, Department of Civil, Environmental and Ocean Engineering | Stevens Institute of Technology, USA

EDUCATION

01/2004 – 05/2006

Stevens Institute of Technology | Hoboken, NJ, USA

PhD: Environmental Engineering

09/2000 – 03/2003

Technische Universität Dresden | Dresden, Germany

MSc: Environmental Engineering

09/1995 – 03/2000

Aristotle University | Thessaloniki, Greece

BSc: Physics

ADMINISTRATIVE EXPERIENCE

Reporting to the Dean, I serve as Head of the Department of Civil and Environmental Engineering, which is one of the seven departments in the School of Engineering (SoE). In this capacity, I supervise 4 direct reports, 33 faculty members, and several post-doctoral associates as well as adjunct faculty and part-time personnel. I am responsible for all budgets ($14.3M), coordination with research center directors, external relations, information technology, communications, development, and alumni relations. As Chief Academic Officer of the department I am responsible for 425 undergraduate and 120 graduate students, two major degree programs, two minor degree programs, and at the graduate level three certificates, two MS, two MEng and two PhD programs.

I have also served as Director of the Environmental Engineering Program in the same department, reporting to the Department Head, during the period 2015-2018. In this capacity, I coordinated 12 core program faculty members, had one direct report, and was responsible for the minor, BS, MS and PhD programs, with 102 undergraduate and 45 graduate students. Some highlights of my tenure as director include:

- Secured Senior Design projects, with companies such as Electric Boat, Loureiro and Comprehensive Environmental Inc. The program brought in $40K in discretionary funds during my tenure.
- Secured an undergraduate fellowship for the program from Langan Engineering.
- Launched the Connecticut Brownfields Initiative, a new educational and municipal assistance program, securing $405K from 12 different private companies located in Connecticut, and the CT Department of Economic and Community Development (http://cbi.uconn.edu).
- Launched the distance learning Advanced Engineering Certificate and Masters of Engineering program in Contaminated Site Remediation.

FUNDED PROJECTS

1. "The Connecticut Brownfields Initiative". 01/18-01/21, $405,000, CT Department of Economic and Community Development and various industry partners, PI: Maria Chrysochoou
2. "Evaluation of Grid Resilience Activities with a Total System Performance Assessment Model informed by Optimization and Economic Methodologies", 01/18-12/19. $292,000. Eversource Energy Center, PI: A. Bagtzoglou, co-PIs: W. Zhang, P. Borochin, M. Chrysochoou (share 20%)
3. "A bottom-up approach to design of chemical soil stabilization using thermodynamic modeling". 7/17-7/20, $256,694, National Science Foundation, PI: Maria Chrysochoou
4. "Laboratory Testing for Sediment Resuspension Mitigation". 12/16-06/17, $12,650, SESI Consulting Engineers, PI: Maria Chrysochoou (share: 60%), co-PI: Ross Bagtzoglou
5. "Investigation of Capillary Rise Induced Chromium Blooms". 08/15-08/17, $125,000, AECOM, PI: Maria Chrysochoou (share: 80%), co-PI: Ross Bagtzoglou
6. "Collaborative Research: Toward a unified model for ferrihydrite behavior in the environment: a multipronged investigation of surface structure and reactivity", 10/14-10/18, $440,000, National Science Foundation: PIs: Maria Chrysochoou (share $236,500) and Nadine Kabengi (Georgia State University)
7. "XRD and SEM characterization of Cr-contaminated samples", 04/14-06/14 $10,850, AECOM, PI: Maria Chrysochoou
8. "XRD and SEM characterization of soil and historic fill materials", 04/14-09/14, $21,000, CB&I, PI: Maria Chrysochoou
9. "SPECHROM— Spectroscopic and computational investigation of chromium binding on pure minerals and Asopos aquifer soils", 07/13-06/15, €222,483, Marie Curie International Incoming Fellowship, National Technical University of Athens
10. "Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials: Phase IV", 04/13-04/14, $187,000, Strategic Highway Research Program 2, PI: Maria Chrysochoou

11. "Sustainable erosion control in developing countries using industrial by-products", U.S. Environmental Protection Agency, 08/11-08/12, $15,000, PI: Maria Chrysochoou

12. "Development of GIS and prioritization strategies for brownfield reclamation", CT Department of Economic and Community Development, 06/11-06/12, $22,200, PI: Maria Chrysochoou

13. "Strengthening and modeling of earth embankments under high loads", U.S. Department of Homeland Security, 09/09-09/10, $118,189, PI: Maria Chrysochoou (share: 45%). Co-PIs: Dipanjan Basu, Amvrossios Bagtzoglou

14. "XRD and SEM characterization of PPG Chromite Ore Processing Residue samples", AECOM, 01/10-05/10, $8,800, PI: Maria Chrysochoou

15. "Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials: Phases I-III", 02/09-04/13, $400,000, Strategic Highway Research Program 2, PI: Adam Zofka, co-PIs: Maria Chrysochoou (share: 25%), Monty Shaw, Jim Mahoney

16. "Investigation of the use of nanoscale Zero Valent Iron for Cr remediation in contaminated soils", UConn Research Foundation, 06/09-06/10, $26,435, PI: Maria Chrysochoou

17. "Reversing Urban Sprawl: A Reclaimability Index Approach for Reviving Downtown Brownfields", Center for Transportation and Livable Systems, U.S. Department of Transportation, 08/08-08/10, $242,405 PI: Maria Chrysochoou (share: 55%) co-PIs: Norman Garrick, Kathleen Segerson, Amvrossios Bagtzoglou

18. "Column studies for treatment optimization at National Chromium", National Chromium Inc., 10/08 - 10/09, $10,000 PI: Maria Chrysochoou

19. "Analysis of soil-cement blending samples", Schnabel Engineering, 09/08-11/08, $3,350 PI: Maria Chrysochoou

20. "Analysis of Al-rich powders", Schnabel Engineering, 03/08-05/08, $6,200 PI: Maria Chrysochoou

21. "Cr-treatability study at the National Chromium Facility", National Chromium Inc., 02/08-08/08. $8,000 PI: Maria Chrysochoou

22. "Soil-cement blending study, Greenport, NY". Schnabel Engineering, 01/08/08-04/30/08. $4,500 PI: Maria Chrysochoou

23. "Investigation of Cr(VI) speciation via micro-XANES, micro-XRF and micro-XRD analyses", Uconn Research Foundation, 10/07, $1,000 PI: Maria Chrysochoou

24. "LaFarge-Dominion Portland Cement–Fly Ash–Dredged Material blend evaluation", Schnabel Engineering, 09/07-04/08 $12,000 PI: Maria Chrysochoou

CONSULTING ACTIVITIES

- 2016-2019, Subject Matter Expert, CH2MHILL and Federal Highway Administration, SHRP2 Implementation Assistant Program, Round 7.
- 2016, Consultant, Phoenix Environmental Services, Evaluation and modeling of environmental data.
- 2014-present, Consultant and Expert Witness, CB&I, Evaluation of the nature of historic fill materials in contaminated sites.
- 2014-present, Consultant and Expert Witness, AECOM, Investigation of chromium speciation in contaminated sites.
- 2014, Consultant, Strategic Highway Research Program 2 (SHRP2), Transportation Research Board, Webinar presenter
- 2012-2013, Consultant and Expert Witness, Kohl's Department Store, Investigation of heaving mechanisms in foundation material.
- 2011-2013, Consultant, National Technical University of Athens, Greece. Project LIFE+: Chromium in Asopos Groundwater System: Remediation Technologies and Measures – "CHARM"

- 2012, Organization and delivery of ASCE Webinar: Geochemistry: An important tool for Geo-Environmental engineers (offered January 10th 2011, April 9th 2012, October 3rd 2012).
- 2011, Environmental Professionals Organization of Connecticut, Organization of professional seminar on in situ remediation technologies.
- 2010, Schnabel Engineering, Project Consultant.

TEACHING

Undergraduate

Brownfield Redevelopment (2018)

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)

Environmental Geotechnology (2005, Stevens Institute of Technology)

ADVISING

Current Post-docs and Graduate Advisees

Yusniel Cruz Hernandez (Post-doctoral research associate)

Tasneem Ahmadullah (PhD student)

Yaguang Du (PhD student)

Jaclyn Sidman (MS student)

PhD students graduated and current placement

Nefeli Bompoti, 2017; Assistant Research Professor, University of Connecticut

Chad Johnston, 2012; Assistant Professor, Loyola University

MS students graduated

Kelly Drengler (2008), Aaron Ting (2010), Matthew Rood (2010), Geeta Dahal (2010), Xiaolong Zhang (2010), Jacqueline Oakes (2013)

Visiting students/scholars supervised

Marie Laure Ducasse (2008), Wang Zhe (2009), Guo Li (2017)

CITATIONS

Scopus: 1244 (as of 02/18/2019) h-index 20

Google Scholar: 1673, h-index 22

PUBLICATIONS

Book Chapters

1. Chrysochoou M. and Bompoti N. Laboratory testing for Chemical Characterization of Solids, Gas and Liquids, *Manual of Geoenvironmental Engineering Professional Practice*, American Society of Civil Engineers (expected publication date, June 2019).

2. Chrysochoou M. 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 (expected publication date March 2019).
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 Articles in Review

1. Bompoti N., Chrysochoou M. and Machesky M. 2018. The MUSE II: Application of a multi-start optimization algorithm for unified modeling of chromate sorption on iron oxides, *Environmental Science and Technology*.

Journal papers published

1. 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*, doi: 10.1021/acsearthspacechem.8b00125.
2. Chrysochoou M., Oakes J. and Dyar D. 2018. Investigation of iron reduction by green tea polyphenols, *Applied Geochemistry, 97, 263-269*.
3. Chrysochoou M. and Du Y. 2018. Experimental and modeling behavior of Chromite Ore Processing Residue from the soda ash process, *Environmental Engineering Science, https://doi.org/10.1089/ees.2018.0047*.
4. 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.
5. 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.
6. 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.
7. Mpouras T., Chrysochoou M. and Dermatas D. 2017. Investigation of hexavalent chromium sorption on serpentine soil, *Journal of Contaminant Hydrology*, 197, 29-38.
8. Bompoti N., Chrysochoou M. and Machesky M., 2017. Surface structure of ferrihydrite: Insights from modeling surface charge. *Chemical Geology*, 464, 34-45.
9. 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.
10. 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.
11. 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.
12. 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.
13. Chrysochoou M., 2015. "Geochemistry in Geotechnical Engineering Problems: Ettringite as Case Study", *Geotechnical Engineering* , 46(4), 1-7.
14. 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.

15. Panagiotakis I., Dermatas D., Vatseris 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.
16. Dermatas D., Mpouras A., Chrysochoou M., Vatseris 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.
17. Chrysochoou M. and Johnston C.P., 2015. Sulfur speciation and reactivity in calcium-polysulfide treated soil, *Journal of Hazardous Materials*, 281, 87-94.
18. Johnston C.P. and Chrysochoou M., 2015. Mechanisms of chromate adsorption on boehmite, *Journal of Hazardous Materials*, 281, 56-63.
19. 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.
20. Johnston C.P. and Chrysochoou M., 2014. Mechanisms of chromate adsorption on hematite, *Geochimica et Cosmochimica Acta*, 138, 146-157.
21. 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
22. 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.
23. 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.
24. 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.
25. 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.
26. 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.
27. Dermatas D., Vatseris 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.
28. 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.
29. Chrysochoou M. and Ting A., 2011. A kinetic study of Cr(VI) reduction by calcium polysulfide, *Science of the Total Environment*, 409, 4072-4077.
30. 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.
31. 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.
32. 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.
33. 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.
34. Chrysochoou M., Ferreira D. and Johnston C., 2010. Calcium polysulfide treatment of Cr contaminated soil, *Journal of Hazardous Materials*, 179, 650-657.

35. 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.
36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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.
42. 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.
43. 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.
44. 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.
45. 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): Cr6+ reduction and heave, *Journal of Hazardous Materials*, 143(3):629-635.
46. 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.
47. 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.
48. 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.
49. 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.
50. 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.
51. 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.
52. 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.
53. 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.

54. 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.
55. 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 Peloponesse in southern Greece, *Engineering Research*, 1:7-18.

CONFERENCE PAPERS AND PRESENTATIONS (past 5 years)

Full conference papers

1. Bompoti N., Chrysochoou M. and Machesky M. 2016. Advances in surface complexation modeling for chromium adsorption on iron oxide, GeoChicago 2016, Sustainability, Energy, and the Geoenvironment, Chicago, IL, August 14-18.
2. Du Y. and Chrysochoou M. 2016. The leaching characteristics of Chromite Ore Processing Residue from China, GeoChicago 2016, Sustainability, Energy, and the Geoenvironment, Chicago, IL, August 14-18.
3. Binteris A., Mpouras T., Panagiotakis I., Dermatas D., Chrysochoou M., 2015. Reed material – A potential biosorbent for the treatment of Cr(VI)-contaminated water discharged into Asopos river, 14th Conference on Environmental Science and Technology, Rhodes, Greece, September 2015, paper 01428.
4. Lagiopoulos I.., Panagiotakis I., Chrysochoou M., Dermatas D., 2015. Treatment of Cr(VI)-contaminated water discharged to Asopos river using low-cost natural materials, Conference on Environmental Science and Technology, Rhodes, Greece, September 2015, paper 01426.
5. Chrysochoou M., Bompoti N., Dermatas D. and Theologou E. 2014. Identification of Cr and Ni origin in Greek soils via R-mode factor analysis, paper A408, Proceedings of the 12th International Conference on Protection and Restoration of the Environment, Skiathos, Greece, June 29 – July 3 2014.
6. Mpouras T., Dermatas D. and Chrysochoou M., 2014. Evaluation of the adsorption of hexavalent chromium on ophiolitic soils, paper A409, Proceedings of the 12th International Conference on Protection and Restoration of the Environment, Skiathos, Greece, June 29 – July 3 2014.
7. Panagiotakis, D. Dermatas, C. Vatseris, P. Merkos, M. Chrysochoou, N. Linardos,T. Mpouras, E. Theologou, N. Papassiopi A. Xenidis, 2014. Assessment of a Cr(VI)-contaminated industrial site in Greece, paper A410, Proceedings of the 12th International Conference on Protection and Restoration of the Environment, Skiathos, Greece, June 29 – July 3 2014.
8. Mystrioti C., Xenidis A., Papassiopi N., Dermatas D. and Chrysochoou M., 2014. "Fate of green tea iron nanoparticles in calcareous soils", Geotechnical Special Publication 234, 2189-2198.
9. Mpouras T., Panagiotakis I., Dermatas D. and Chrysochoou M., 2014. Nano-zero valent iron: An emerging technology for contaminated site remediation, Geotechnical Special Publication 234, 2206-2215.

Abstracts Only

1.
2. 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)
3. 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)
4. 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)
5. Bompoti N., Chrysochoou M. and Machesky M., 2018. Iron oxide – solution interface: Insights from Surface Complexation Modeling. 255thAmerican Chemical Society National Meeting & Exposition, New Orleans, March 18-22. (oral presentation)

6. 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, 255th American Chemical Society National Meeting & Exposition, New Orleans, March 18-22. (oral presentation)
7. 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 38th Annual Meeting, Minneapolis, MN, Nov 12-16, 2017.
8. 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.
9. 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.
10. 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.
11. Bompoti N., Chrysochoou M. and Machesky M., 2016. Surface complexation modelling of chromate adsorption on iron oxides. Air & Waste Management Association's New England Section: Climate Change: Risks, Rewards and Resiliency" Conference 2016, Framingham, Massachusetts, October 27, 2016.
12. Chrysochoou M., Mamais D. and Dermatas D. 2016. Cr and Mn speciation and interactions in Greek ophiolites, Goldschmidt 2016, Yokohama, Japan, June 26-July 1.
13. Chrysochoou M., Kabengi N. Bompoti N., Kubicki J. and Machesky M. 2016. Resolving the fine-scale reactivity of chromate complexation on iron oxide surfaces, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17.
14. Chrysochoou M. and Bompoti N. 2016. Carbonate adsorption on ferrihydrite: a semi-quantitative IR study, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17.
15. Bompoti N., Chrysochoou M. and Machesky M. 2016. Surface complexation modelling of chromate adsorption on iron oxides, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17.

INVITED TALKS

1. Air and Waste Management Association, Women in Engineering Workshop, Hartford, CT, June 26 2018.
2. South Central University for Nationalities, 2018. Geochemical Modeling of Contaminant Fate and Transport Processes, Wuhan, China.
3. South Central University for Nationalities, 2015. Application of spectroscopy in metal remediation: the example of chromium, Wuhan, China, 2 June 2015.
4. Chemical Processes at Environmental Interfaces Symposium, 2015. 249th American Chemical Society Meeting, Denver, CO, March 22-26, 2015.
5. National Technical University of Athens, 2015. Soil functions in metal remediation: the example of chromium, Seminar series of the Water Resources Science and Technology graduate program, October 31st 2015, Athens, Greece
6. Los Alamos National Laboratory, 2013. Application of spectroscopy to delineate chromium geochemistry and optimize remediation, Frontiers in Geochemistry seminar series, invited speaker, December 16-17, Los Alamos, New Mexico, USA.
7. U.S. Army Research and Development Center, 2011. Identifying the mineralogy of soils, sediments and rocks: why you need it and how to do it. Invited workshop, June 20-22, Vicksburg, Mississippi, USA.
8. Rensselaer Polytechnic Institute, Department of Civil and Environmental Engineering, 2011. Application of spectroscopy in metal remediation – the example of chromium.
9. University of Massachusetts at Amherst, Department of Civil Engineering, 2011. A systematic approach to clay stabilization.
10. National Technical University of Athens, 2010. The role of soil in water quality and remediation.

11. Schnabel Engineering, 2010. Geochemistry: A science for dusty classrooms or a living, breathing beast in geotechnical/geoenvironmental engineering?

AWARDS

2019, Finalist, Connecticut Women of Innovation Award (to be announced 3/27)

2016-2019, Castleman Professor in Engineering Innovation

2013-2015 Marie Curie International Incoming Fellowship, European Union

2012, University of Connecticut Environmental Leadership Award

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

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers (ASCE)

American Chemical Society

American Geochemical Society

Association of Environmental Engineering and Science Professors

Engineers Without Borders U.S.A.

Society of Women Engineers

PROFESSIONAL SERVICE

(last five years)

Within UCONN

Departmental Committees: Undergraduate Education, Graduate Education, Department Head Advisory Council, Website, Distance Learning, Merit Review

School of Engineering Committees: Undergraduate Council, Graduate Directors, ABET Steering committee, Materials Science and Engineering Search

University Committees: Environmental Literacy, Environmental Policy Advisory Council, Environmental Metanoia, Kasowitz Colloquim

Outside UCONN

Chair, Environmental Engineering Program Leaders Committee, Association of Environmental Engineering and Science Professors
Member, ASCE Geoenvironmental committee
Guest Editor, Journal of Hazardous Materials, Special issue “Chromium in the geoenvironment”, 2015.
GeoChicago 2016, Conference session organizer, American Society of Civil Engineers, Chicago, IL, August 13-16 2016.
Geocongress 2014 Conference session organizer, American Society of Civil Engineers, Atlanta, February 22-26th 2014.
CEST 2013 conference session organizer, Athens, Greece, September 7-9th 2013.
Peer-review journal reviewer: Environmental Science and Technology, Chemosphere, Journal of Hazardous Materials, Science of the Total Environment, Journal of Environmental Engineering, Journal of Geotechnical and Geoenvironmental Engineering, Journal of Soil and Sediment Contamination, Journal of Environmental Management, Journal of Environmental Monitoring, Geotechnical Testing Journal, American Mineralogist, Journal of Civil Engineering Materials, Journal of Hazardous, Toxic and Radioactive Waste.
National Science Foundation proposal reviewer and panel member
Stanford Synchrotron Radiation Lightsource proposal reviewer