

2015 CEINT Annual Internal Meeting, May 13th & 14th



Wednesday May 13 th		
7:30	Meet in Hotel Lobby - Bus LEAVES at 7:45 sharp	
8:00	8:15	Continental Breakfast in Atrium
8:15	9:00	Director's welcome and introductory remarks – Mark Wiesner
9:00	9:05	Agenda overview and administrivia – Christine Hendren
Research presentations and discussions		
9:05	10:05	Session 1: Nanomaterial Design, Synthesis, Characterization and Detection
Presentations	Marjorie Willner	High Throughput Optofluidic SERS Interrogation
	Xuehong Liu	Metal Fingerprinting Approach to Quantify Single-walled Carbon Nanotube
	Rui Serra Maia	Structure and Physico-Chemical Characterization of a Platinum Nanocatalyst Material
	Astrid Avellan	Tunable Ecofriendly Alumino-germanate Nanotubes as a Model Compound for Ecotoxicity Studies
	Matthew Chan	High Sensitivity Detection and Characterization of Dissolved Species – Gold Nanoparticle Interaction in Water via Surface Enhanced Raman Spectroscopy
Panel-led Discussion	Moderator: Jie Liu	Panelists: Marc Michel, Peter Vikesland, Jerome Rose
10:05	10:15	Break
10:15	11:15	Session 2: Realistic Exposures
Presentations	Theresa Dankovich	Release and Transformations of Silver Nanoparticles in Polymeric Nanocomposites Exposed to Environmental Scenarios
	Manuel Montaña	Release of Polymer Additives and Plasticizers from Polymer Nanocomposites Containing CNTs
	James Dale	Characterization and Ecosystem Impacts of Cerium Emitted from n-ceria Diesel Fuel-borne Catalysts
	Mathieu Therezien	Exposure to NPs via Heterogeneous Aggregation
	Yi Yang	The Importance of a Nanoscience Approach in the Understanding of Major Aqueous Contamination Scenarios: A Case Study from a Recent Coal Ash Spill
Panel-led Discussion	Moderator: Linsey Marr	Panelists: Lee Ferguson, Ben Colman, Jean-Yves Bottero
11:15	12:15	Session 3: Fate, Transport and Transformations
Presentations	S. M. Hossein Abtahi	Fate and Transport of Elongated Shape Gold Nanorods in Aquatic Matrices
	Shauna-Gaye Campbell	Mobility of Transformed Nanomaterials through Porous Media
	Kaiqi Fang	Possible Reactions for CuS in the Sediment
	Xiaoyu Gao	Dissolution of NPs in Soil
	Amy Dale	Stream Dynamics and Chemical Transformations Control the Environmental Fate of Ag and ZnO Engineered NPs
Panel-led Discussion	Moderator: Greg Lowry	Panelists: Kim Jones, Gordon Brown, Mark Wiesner
12:15	1:15	Lunch

Meeting Location: Schiciano Auditorium, 1st floor of the Fitzpatrick Center for Interdisciplinary Engineering, Medicine and Applied Sciences, First building on the right when dropped at the Science Drive traffic circle • 101 Science Drive • Durham, NC 27708

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Wednesday May 13 th Continued		
1:15	2:15	Session 4: Bioavailability, Biouptake & Bioaccumulation
Presentations	Chuanjia Jiang	Effects of Natural Organic Matter on the Dissolution, Aggregation and Uptake Kinetics of Copper Oxide Nanoparticles
	Carol Johnson	Mercury Methylation: The 3D Relationship between Bioavailability, Bacterial Gene Expression, and Methylmercury Production
	Clement Layet	Phytoavailability of Nanoparticles, Speciation and Modelisation
	John Stegemeier	Transformations of Engineered Nanoparticles in Natural Systems and Interactions with Plant Roots
	Amalia Turner	An Integrated Approach to Predicting Bioaccumulation of Nanomaterials in Plants
Panel-led Discussion	Moderator: Jason Unrine	Panelists: Greg Lowry, Melanie Auffan, Helen Hsu-Kim
2:15	2:50	Session 5: Life Cycle Thinking and Risk Assessment
Presentations	Paramjeet Pati	Life Cycle Considerations for Sustainable Nanotechnology
	Marina Vance	Nanotechnology in the Real World: Redeveloping the Nanomaterial Consumer Products Inventory
	Véronique Adam	Assessing the Environmental Impacts and Risks of TiO ₂ ENMs using Bayesian Networks at a Site-Specific Scale
Panel-led Discussion	Moderator: Liz Casman	Panelists: Peter Vikesland, Mark Wiesner, Jean-Yves Bottero
2:50	3:00	<i>Break</i>
Special sessions		
3:00	6:30	A. All students, post-docs, scholars – CSSC Sessions, including 5:00 cocktail hour with hors d'oeuvres (see separate agenda)
3:00	5:15	B. Faculty: Mesocosm planning and data integration discussions
5:30		<i>Bus transportation to Faculty dinner leaving from Science Drive Traffic Circle</i>
6:30		<i>Bus transportation from CSSC Sessions to Hotel leaving from Science Drive Traffic Circle</i>

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7:30	Meet in Hotel Lobby - Bus LEAVES at 7:45 sharp	
8:00	8:45	Continental Breakfast in Atrium
8:45	9:00	CSSC Leadership report out of Thursday CSSC session outcomes
Research presentations and discussions		
9:00	10:20	Session 6: Organismal Impacts of Nanomaterials
Presentations	Alex Bertuccio	Natural Organic Matter Increases Tolerance to Silver Nanoparticles
	Danielle Gorka	Effect of Oxidation Time on Winged-Carbon Nanotube Phytotoxicity
	Stuart Lichtenbert	Sulfidated Silver Nanoparticles Induce Toxicogenomic Effects Distinct from Pristine Silver Nanoparticles and Silver Ions
	Eric McGivney	TiO ₂ Nanoparticles Prevent <i>B. subtilis</i> Cell Lysis in Low Nutrient Conditions
	Temitope Adegboye	Impacts of Graphene Oxide on Bacterial Growth, Biofilm Formation, and Microbial Community Function
	Mohamed Hamidat	Relationships Between ENMs' Design and their Environmental Impact
	Anye Wamucho	Multigenerational Effect of Silver Nanoparticles on Reproduction and Genomic Stability in <i>C.elegans</i>
	Vignesh Ramchandran	Clustering Analysis for Pulmonary Toxicity Studies in Rodents
Panel-led Discussion	Moderator: Jason Unrine	Panelists: Joel Meyer, Kelvin Gregory, Jeremy Gernand
10:20	10:35	Break
10:35	11:50	Session 7: Nanomaterial Impacts in Natural and Engineered Ecosystems
Presentations	Carley Gwin	Microbial Community Analysis of Activated Sludge SBRs Receiving AgNPs using Ion Torrent
	Joe Moore	Differential Impacts of Pristine and Transformed Ag NPs and of Cu NPs and Cu Ion on CEINT Mesocosm Surficial Sediment Microbial Communities
	Daniel Ross	Effects of Nanomaterials on Bacterial Transformation Efficiency
	Christopher Ward	Microbial Community Responses to Acute and Chronic Environmental Loading of Ag Nanoparticles in Wetland Mesocosms
	Moncie Wright	Presence of Grazing Fish Can Amplify the Negative Effects of TiO ₂ Nanoparticles on Stream Periphyton Communities
Panel-led Discussion	Moderator: Cole Matson	Panelists: Claudia Gunsch, Ben Colman, Greg Lowry
11:50	1:00	Lunch
1:00	2:00	Session 8: Data Integration and Analysis
Overview of the Data Integration Team Goals and Activities – Christine Hendren		
Introduction to CEINT NanoInformatics Knowledge Commons – Sandra Karcher		
Presentations	Sandra Karcher	Getting from Data to Knowledge in CEINT NIKC – Interactive Queries
	Yuan Tian	Utilizing the Web-Based CEINT Data Sharing System to Network Within the Center
Panel-led Discussion	Moderator: Christine Hendren	Panelists: Greg Lowry, Mark Wiesner

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Thursday May 14 th Continued		
2:00	2:45	Session 9: Translational Nanoscience: Implications of CEINT Research for Water Treatment Processes Should the Drinking Water Industry be Concerned about Nanomaterials in our Water? – Greg Lowry
Presentations	Danna Shan	Removal of Carbamazepine and Tetracycline from Water by Magnetic Carbonaceous Nano-adsorbents Prepared by Ball-milling
	Michael Vargas	Role of Filter Media on Nanoscale Formation of Colloidal Manganese Oxides During Drinking Water Treatment
Panel-led Discussion	Moderator: Mark Wiesner	Panelists: Mitsuhiro Murayama, Claudia Gunsch, Liz Casman
2:45	3:00	Director's Wrap-up and Adjourn

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