

Nanotoxicology Specialty Section Newsletter

Volume 2, Issue 2 (March 2012)

All Aboard for San Francisco – SOT Primer for Nanotoxicology Fans

For nanotoxicology fans who are able to attend this year's SOT meeting in San Francisco, there is plenty to look forward to. Scheduled scientific sessions include Symposium, Workshop, Roundtable and Information Sessions, three Platform Sessions, and four Poster Sessions. And, last but not least, there's the

NTSS reception, where you can mingle with your fellow nanotoxicology fans, find out about this year's award winners, and test your knowledge of all things nano, in a game we're calling "Bluff the Nanotoxicologist".

Officers

President Justin Teeguarden
Vice President Joyce Tsuji
Vice President Elect Alison Elder
Past President David Warheit
Secretary/Treasurer Mara Seeley
Councilors Diane Heck David Hobson
Student Representative Lisa Truong
Postdoctoral Representative Leshuai Zhang
Newsletter Editor Mara Seeley
Website Liaison Christie Sayes

Schedule of Nanotoxicology Events at Annual Meeting

	Monday	Tuesday	Wednesday
Morning	Nanotoxicology: Nanogold or Nanosilver 9:15 - 12:00; Room 309 (Platform Session)	State of the Science and the Future for the Predictive Power of <i>In Vitro</i> and <i>In Vivo</i> Models for Nanomaterials Toxicity Testing 9:00 - 11:45; Room 307 (Workshop)	Nanotoxicology: Carbon Nanotubes and Nanofibers 9:00 - 11:45 Room 310 (Platform Session)
	Nanotoxicology: Environmental Toxicology, Zebrafish, and Nanoparticles 9:30 – 12:00; Exhibit Hall (Poster Boards 300 – 339)	Cardiovascular Toxicity of Nanoparticles 9:00 - 11:45; Room 310 (Platform Session)	
		Nanotoxicology: Nanoparticles II 9:00 - 12:30; Exhibit Hall (Poster Boards 1264 – 1298)	
Mid-Day	NIEHS Centers for Nanotechnology Health Implications Research: Building the Scientific Foundation for Evaluating Public Health Impacts of Engineered Nanomaterials 12:10 - 1:30; Room 305 (Informational Session)	Testing of Nanomaterials for Genotoxicity: Necessity or Waste of Time? 12:00 - 1:20; Room 303 (Roundtable)	
Afternoon	Nanoparticles for Drug Delivery: Interactions with the Immune System 2:00 - 4:45; Room 102 (Symposium)	Nanotoxicology: Nanoparticles III 1:00 - 4:30; Exhibit Hall (Poster Boards 1356 – 1393)	
	Nanotoxicology: Nanoparticles I 1:00 - 4:30; Exhibit Hall (Poster Boards 645 – 679)		
Evening		NTSS Reception!! 6:00 - 7:30 Golden Gate Salon C1 Marriott Marquis	

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Spotlight on Graduate Students and Post-Docs

An important function of SOT, and the Specialty Sections in particular, is to support grad students and post-docs with their professional development. Towards this end, the NTSS recently launched a mentor-mentee program. We would also like to encourage our associate and full members to talk to grad students and post-docs at the NTSS reception. If you'd like to see what they're up to, we will be spotlighting 12 grad students and 5 post-docs at the NTSS reception (also spotlighted in this newsletter on [pages 4 – 6](#)).

Mentor Mentee Program

The mentor-mentee program, which is the brain-child of Christie Sayes, couples mentors with mentees, based on work-related interests, and subsidizes a lunch or social hour for each mentor-mentee group. This program turned out to be extremely popular, with 21 mentor-mentee groups.

Awards

As in previous years, the NTSS is issuing three awards – for Outstanding Graduate Student, Outstanding Post-Doc, and Outstanding Publication. The NTSS received 11 applicants for the Outstanding Graduate Student Award, 9 for the Outstanding Post-Doc, and 6 for the Outstanding Publication. Factors that were considered in reviewing the applications included articulation of a clear hypothesis or rationale for conducting the research; extent of material characterization, quality of data interpretation, and potential impact of the research. Award winners will be announced at the NTSS reception on Tuesday evening, March 13th (the reception is from 6 to 7:30 pm).

Reach out to Grad Students and Post-Docs at the NTSS Reception

The NTSS reception provides a great opportunity to meet and talk with our grad student/post-doc members. We know that many of our associate and full members already make a point of doing this at the reception, but this year we are providing an extra incentive. If you reach out and talk to a grad student/post-doc, you'll receive a raffle ticket for a Starbucks Card.

The Year in Review

Webinar Series

This year, the NTSS was pleased to be able to sponsor or co-sponsor four webinars. The series kicked off in July, with a webinar by Dr. Thomas Peters entitled "Workplace and Environmental Exposure Assessment for Engineered Nanomaterials". For the next webinar, presented in December, we invited the Risk Assessment Specialty Section (RASS) to co-host a webinar by Dr. Thomas Hesterberg, entitled "Studies with Diesel Exhaust Particulate: Implications for the Potential Human Health Hazards of Nanoparticles". The Emerging Nanoscale Materials Specialty Group of the Society for Risk Analysis also participated in this webinar. In January, RASS invited NTSS to co-host a webinar by Dr. J Make Davis, entitled "Comprehensive Environmental Assessment of Nanomaterials: A Meta-assessment Approach". Most recently, Dr. Donald Baer presented a webinar on February 16, entitled "Characterization of Nanoparticles: Critical Needs and Significant Challenges."

NTSS Membership Survey

In September, the NTSS Executive Committee surveyed members to determine how they value the various NTSS functions and activities. We received responses from 70 of our members (~25% of the membership). There was a fairly even distribution of respondents working in academia (33%), government (27%), and industry (24%), with the remainder in consulting (13%) or other (3%). Thank you to those of you who took the time to respond to the poll.

Overall, the survey respondents felt that influencing SOT's scientific program was the most valuable function of the NTSS. Respondents also saw value in mentoring

students – 59% said they would be willing to participate in a [lunch with an expert type program](#), 26% said they would be willing to reserve time at the NTSS reception, and 16% said they would be willing to serve as a career mentor.

Survey respondents considered the NTSS reception to be one of the most valuable activities of the NTSS. When asked specifically about activities at the reception, most (70%) respondents thought there should be more in the way of topical entertainment.

Of the three [awards](#) given by the NTSS, the Outstanding Grad Student and Post-Doc Awards were considered the most valuable, with 60% and 57% of respondents, respectively, considering them to be very valuable. 36% of respondents considered the Best Publication Award to be very valuable.

[Survey results](#) are presented in more detail on pages 8 - 9.

Spotlight on Graduate Students



Majed Alshaeri
Heriot-Watt University
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Research Keywords: CNTs, aquatic organisms, DNA damage and repair



Brittany (Serke) Baisch
University of Rochester Medical Center
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Research Keywords: Dose rate, intratracheal instillation, whole body inhalation, TiO₂



Denisa Cupi
Technical University of Denmark
PI: Professor Anders Baun
Email: denc@env.dtu.dk

Research Keywords: Ecotoxicity, TiO₂ NPs, Ag NPs, aquatic organisms, Standard Testing



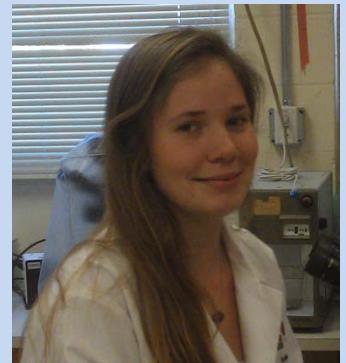
David Ellis
Wright State University/Air Force Research
PI: Dr. Saber Hussain

Email:
David.ellis.ctr@wpafb.af.mil
Research Keywords: SWCNTs, Gold NP, cell culture, uptake, bio-effects



Christin Grabinski
Air Force Research Laboratory
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Research Keywords: *In vitro* chamber, silver NPs, lung cell models, aerosolized NPs, air-liquid interface



Georgia Hinkley
University of Florida
PI: Dr. Stephen M. Roberts
Email: ghinkley@ufl.edu

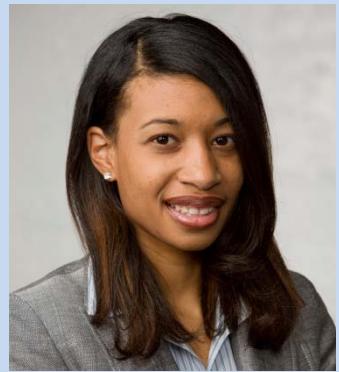
Research Keywords: Oral bioavailability, mice, AuNPs, metal NPs

Spotlight on Graduate Students



Jeremy Larson
University of Wisconsin-Milwaukee
PI: Dr. Reinhold Hutz
Email: [jkclarson@uwm.edu](mailto:jklarson@uwm.edu)

Research Keywords: AuNPs, ovary culture, low concentrations, steroidogenesis, endocrine modulation



Alexandra Noel
University of Montreal, Quebec, Canada
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Research Keywords: TiO₂ NPs, inhalation, inflammation, nano-aerosols generation



Marusia Popovech
New York University School of Medicine
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Research Keywords: Silver & cerium NPs, murine models, inflammation, oxidative stress



Federico Sinche
Oregon State University
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Research Keywords: metal NPs, nanocrystal cellulose, zebrafish, dosimetry, toxicology



Lisa Truong
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Research Keywords: AuNPs, zebrafish, gene expression, developmental toxicology



Leah Wehmas
Oregon State University
PI: Dr. Robert Tanguay
Email: wehmasl@onid.orst.edu

Research Keywords: Metal oxide NPs, zebrafish, cancer, cell culture

Spotlight on Post-Docs



Waleed Abouamer, PhD

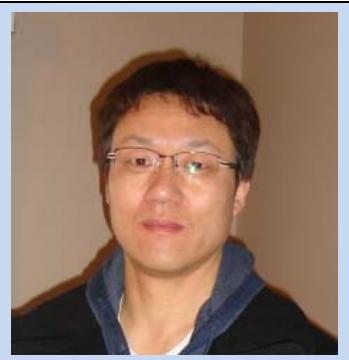
Al-Azhar University
PI: Dr. Robert Tanguay
Email:
aboamer_1020@yahoo.com

Research Keywords:
Pesticides, teratology,
histology



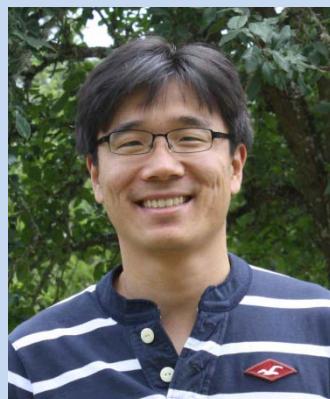
Teri Alyn Girtsman, PhD
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teri.girtsman@mso.umt.edu

Research Keywords:
MWCNTs, inflammation,
NLRP3 inflammasome



Jong Sung Kim
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Research Keywords: metal NPs,
host defense,
in vitro, *in vivo*, inhalation



Kitae Kim, PhD
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Research Keywords: AuNPs,
zebrafish, developmental
toxicity, eye, pigmentation



Leshuai Zhang, PhD
FDA – Division of Drug
Safety Research
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Research Keywords: NP
cellular uptake, skin,
pancreas, dendritic cells, *in
vivo*

Election Results

We would like to welcome the newly elected NTSS officers:

- Vice-President Elect: Saber Hussain
- Post-Doc Rep: Tina Sager
- Student Rep: Christin Grabinski

Donation from nanoTox

This year the NTSS was honored to receive a large \$1000 donation from nanoTox. Based in Austin TX, nanoTox provides risk assessment and risk management services exclusively for nanomaterials. This very generous donation, the first for our specialty section, was designated to support awards for our student members, in line with nanoTox's and the specialty section's commitment to recognition and promotion of our next generation of scientists. We feel very fortunate that Dr. David Hobson, acting Chief Scientific Officer at nanoTox, brought this opportunity to our students. Please take the time to thank him for his efforts.

Business Report

The NTSS is in good shape financially, with 284 members and expected net assets following the annual meeting solidly in the black, in the amount of approximately \$1700. The following is a breakdown of our income and expenses for the 2011 – 2012 fiscal year:

Net assets at beginning of year, \$5,669

Income: \$8,486

- Contributions: \$500
- Dues: \$4,320
- Registration: \$3,231
- Interest: \$434

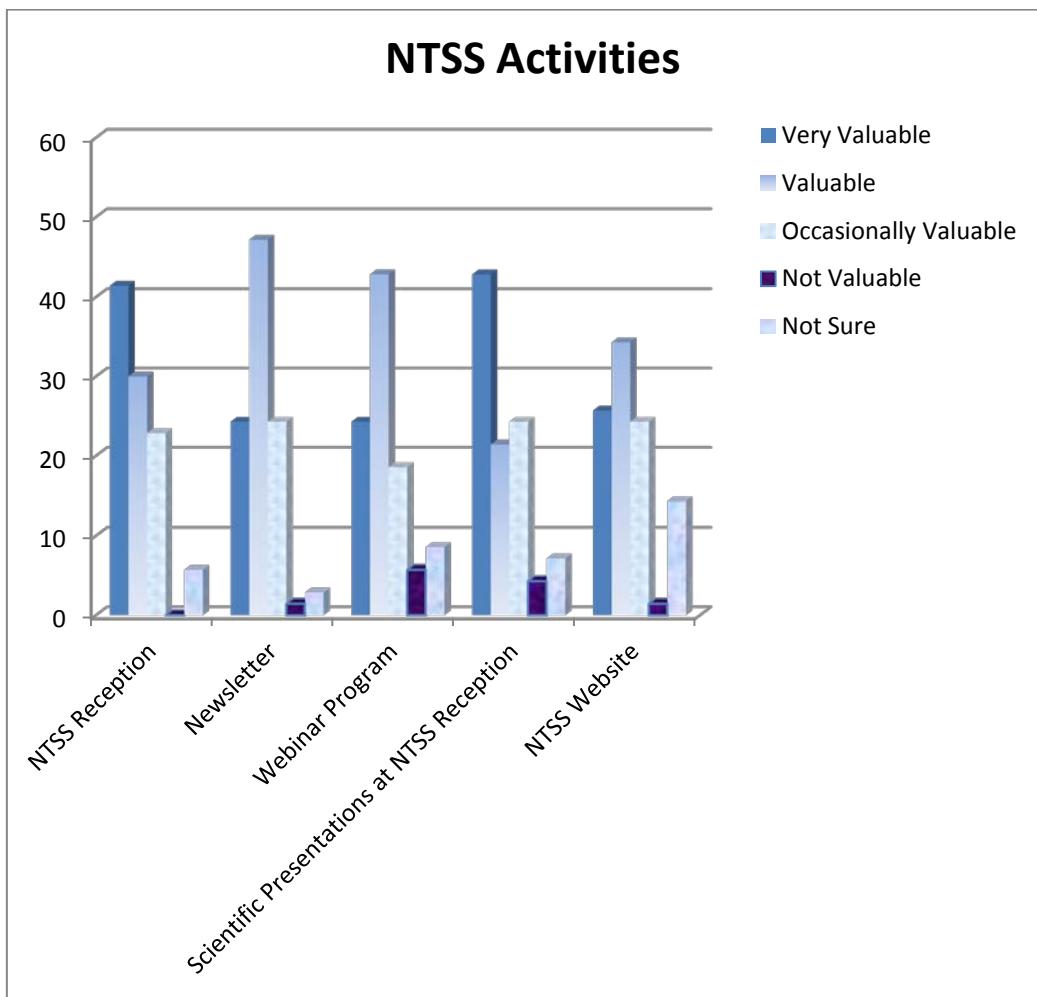
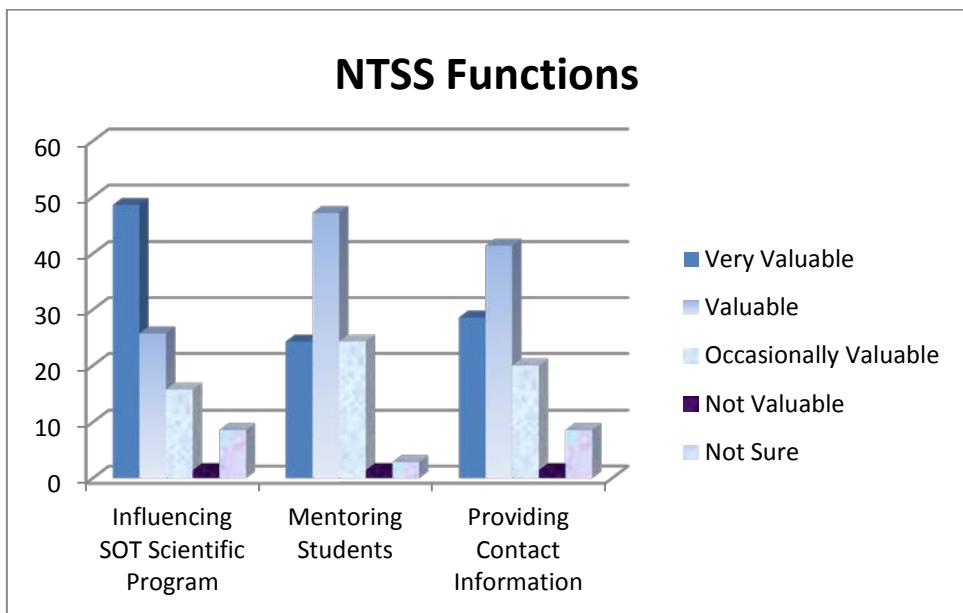
Expenses: \$5,034

- Awards: \$1,248
- Reception: \$3,702
- Executive Meetings \$85

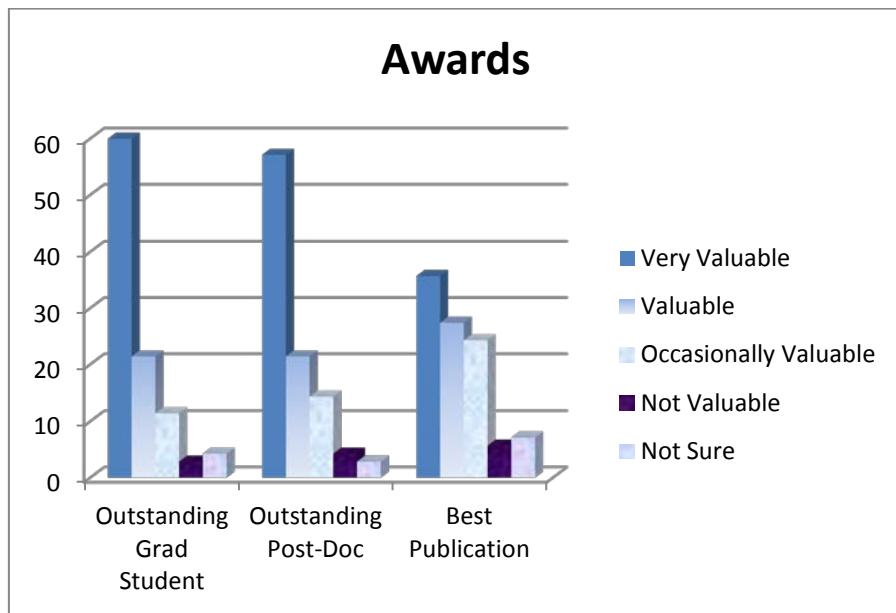
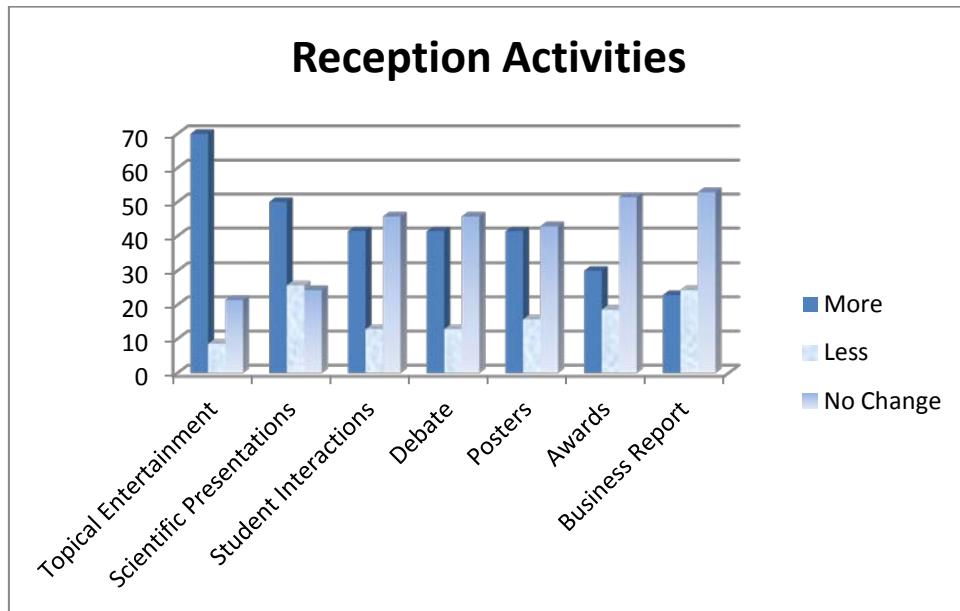
Net assets at end of year, \$9,120

Estimated expenses for 2012 Annual Meeting, \$7,389

Survey Results



Survey Results (continued)



Visit our Web site for more information

See us at:

<http://toxicology.org/ISOT/SS/nano/index.asp>