

# Brandon Emil Boor

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## Current Position

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**Purdue University** West Lafayette, Indiana (Aug. 2015-Present)  
Assistant Professor of Civil Engineering (Architectural Engineering area) and Environmental & Ecological Engineering (by courtesy)

**Research Areas:** Indoor air quality (IAQ), human exposure assessment, airborne nanoparticles, bioaerosols (fungi, bacteria, pollen, allergens), air quality in occupational workplaces, particle resuspension, early-life/infant exposures, combustion aerosols (engine exhaust, cookstoves), urban air pollution, low-cost air quality monitoring, health effects of air pollution, fate & transport of VOCs/SVOCs, ventilation and filtration strategies for low-energy buildings.

## Education

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**The University of Texas at Austin** Austin, Texas (2011-2015)

- Ph.D., Civil Engineering, August 2015
- Dissertation: *Studies on Particle Resuspension, Infant Exposure & the Sleep Microenvironment*
- Dissertation Advisors: Atila Novoselac & Ying Xu

**The University of Texas at Austin** Austin, Texas (2009-2010)

- M.S.E., Environmental & Water Resources Engineering, December 2010
- Thesis: *Monolayer & Multilayer Particle Resuspension from Indoor Surfaces: Literature Review & Experimental Methodology*

**York College of Pennsylvania** York, Pennsylvania (2005-2009)

- B.S., Mechanical Engineering, *Summa Cum Laude*, August 2009

## Awards & Honors

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- **Most Read Paper in ES&T Letters, March-April 2015** (Boor et al. 2015)
- **ACS Editors' Choice for ES&T Letters Paper** (Boor et al. 2015)
- **U.S. Environmental Protection Agency:** Science to Achieve Results (STAR) Fellowship (2014-2015)
- **Best Student Paper Award** (one of top 5 among 250 papers) at the Indoor Air 2014 Conference for paper entitled: *Infant Crawling-Induced Resuspension of Settled Floor Dust*
- **U.S. Department of State Fulbright Program:** Fulbright-CIMO Doctoral Grant to Finland, Co-Sponsored by the Centre for International Mobility (CIMO) (2013-2014)
- **American-Scandinavian Foundation:** Fellowship for Dissertation Research in Finland, Supported by the Scandinavian Seminar & Finnish Funds (2013-2014)
- **National Science Foundation:** Nordic Research Opportunity Supplemental Grant to Finland, Co-Sponsored by the Finnish Funding Agency for Technology & Innovation (Tekes) (2011)
- **National Science Foundation:** Graduate Research Fellowship (2010-2013)
- **National Science Foundation:** Integrative Graduate Education & Research Traineeship (IGERT) in Indoor Environmental Science & Engineering (Trainee: 2010, Affiliate: 2010-2012)
- **American Society of Heating, Refrigerating & Air Conditioning Engineers:** Graduate Student Grant-In-Aid (2010-2011); Henry Adams Scholarship (2007-2008)
- **The University of Texas at Austin:** Graduate Dean's Prestigious Fellowship Supplement (2014-2015); Walter L. & Reta Mae Moore Graduate Fellowship in Civil Engineering (2013-2014); Kolodzey Travel Grant (2012); Thrust 2000 - Hagedorn Endowed Graduate Fellowship in Engineering (2009-2013); David Bruton, Jr. Graduate School Fellowship (2010-2013)
- **York College of Pennsylvania:** Sardari & Saroj Khanna Award in Physics (2009); 1st Place Honors in the 2009 York College Student Scholars Week Poster Competition for the Physical Sciences Department; Academic Senate Scholarship (2007-2008); Student Association Service Scholarship

(2007-2008); Alpha Chi National College Honor Society (2007-2009); Outstanding Freshman Award (2006); Dean's Academic Scholarship (2005-2009)

- **Society of American Military Engineers:** Sundt Scholarship (2005-2009)

## Professional Appointments

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### Academic & Research Affiliations at Purdue University

Ray W. Herrick Laboratories, School of Mechanical Engineering (Aug. 2015-Present)  
Center for High Performance Buildings (CHPB) (Aug. 2015-Present)  
Ecological Sciences & Engineering (ESE) Interdisciplinary Graduate Program (Jan. 2016-Present)  
Engineering Projects in Community Service (EPICS) (Aug. 2016-Present)

**University of Helsinki Division of Atmospheric Sciences & Finnish Institute of Occupational Health**  
*Visiting Researcher*, Urban & Indoor Aerosols Group Helsinki, Finland (Sept. 2013-Aug. 2015)

**The University of Texas at Austin** Austin, Texas (Aug. 2009-Aug. 2015)  
*EPA STAR & NSF Graduate Research Fellow*, Building Energy & Environments Group

**University of Jordan Department of Physics** Amman, Jordan (May-June 2014)  
*Visiting Researcher*

**VTT Technical Research Centre of Finland** Espoo, Finland (Aug.-Dec. 2011)  
*NSF Nordic Research Opportunity Fellow*, Indoor Spaces & Environments Group

**National Institute of Standards & Technology (NIST)** Gaithersburg, Maryland (Jan. 2008-Jan. 2009)  
*Engineering Co-op Student*, Energy & Environment Division, Indoor Air Quality & Ventilation Group

**BAE Systems, Inc.** York, Pennsylvania (May-Aug. 2007)  
*Engineering Co-op Student*, Ground Systems Division

**Johns Hopkins University Applied Physics Laboratory** Laurel, Maryland (Sept. 2004-May 2005)  
*Engineering Intern*, Aerospace Research & Development

## Peer-Reviewed Journal Publications

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1. Cao, G., Liu, S., **Boor, B.E.**, and Novoselac, A. (2015). Characterizing the Dynamic Interactions and Exposure Implications of a Particle-Laden Cough Jet with Different Room Airflow Regimes Produced by Low and High Momentum Jets. *Aerosol & Air Quality Research*, 15:1955-1966.
2. **Boor, B.E.**, Liang, Y., Crain, N.E., Järnström, H., Novoselac, A., and Xu, Y. (2015). Identification of Phthalate and Alternative Plasticizers, Flame Retardants, and Unreacted Isocyanates in Infant Crib Mattress Covers and Foam. *Environmental Science & Technology Letters*, 2(4):89-94.
3. Mølgaard, B., Viitanen, A.K., Kangas, A., Huhtiniemi, M., Larsen, S.T., Vanhala, E., Hussein, T., **Boor, B.E.**, Hämeri, K., and Koivisto, A.J. (2015). Exposure to Airborne Particles and Volatile Organic Compounds from Polyurethane Molding, Spray Painting, Lacquering, and Gluing in a Workshop. *International Journal of Environmental Research & Public Health*, 12(4):3756-3773.
4. **Boor, B.E.**, Spilak, M.P., Corsi, R.L., and Novoselac, A. (2015). Characterizing Particle Resuspension from Mattresses: Chamber Study. *Indoor Air*, 25(4):441-456.
5. **Boor, B.E.**, Järnström, H., Novoselac, A., and Xu, Y. (2014). Infant Exposure to Emissions of Volatile Organic Compounds from Crib Mattresses. *Environmental Science & Technology*, 48(6):3541-3549.
6. Spilak, M.P., **Boor, B.E.**, Novoselac, A., and Corsi, R.L. (2014). Impact of Bedding Arrangements, Pillows, and Blankets on Particle Resuspension in the Sleep Microenvironment. *Building & Environment*, 81:60-68.
7. **Boor, B.E.**, Siegel, J.A., and Novoselac, A. (2013). Wind Tunnel Study on Aerodynamic Particle Resuspension from Monolayer and Multilayer Deposits on Linoleum Flooring and Galvanized Sheet Metal. *Aerosol Science & Technology*, 47(8):848-857.

8. **Boor, B.E.**, Siegel, J.A., and Novoselac, A. (2013). Monolayer and Multilayer Particle Deposits on Hard Surfaces: Literature Review and Implications for Particle Resuspension in the Indoor Environment. *Aerosol Science & Technology*, 47(8):831-847.

#### **Under Review**

9. Cao, G., Liu, S., **Boor, B.E.**, and Novoselac, A. Dynamic Interaction of a Downward Plane and a Cough Jet Regarding Particle Transmission: An Analytical and Experimental Study. Submitted to the *Journal of Occupational and Environmental Hygiene*.
10. Hussein, T., **Boor, B.E.**, Nogueira dos Santos, V., Kangasluoma, J., Petäjä, T., and Lihavainen, H. Mobile Aerosol Measurement in the Eastern Mediterranean: A Utilization of Portable Instruments. Submitted to *Aerosol & Air Quality Research*.

#### **Invited Lectures**

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1. **Boor, B.E.** (2016). Measurement of Sub-3 nm Particles Indoors. *Airmodus nCNC/PSM User Meeting, American Association for Aerosol Research (AAAR) 35th Annual Conference*, Portland, OR, October 2016.
2. **Boor, B.E.** (2016). Surrounded by a Cloud of Dust: Particle Resuspension in Indoor Environments. *Workshop on the Health Risks of Indoor Exposure to Particulate Matter, The National Academies of Sciences, Engineering, and Medicine*, Washington, D.C., February 2016 (telecast to over 400 viewers). Video available on YouTube: <https://www.youtube.com/watch?v=e15YQzkYR9A>.
3. **Boor, B.E.** (2015). A Breath of Indoor Air: New Directions on Infant Exposure and Particle Resuspension. *Purdue University Lyles School of Civil Engineering Seminar*, West Lafayette, Indiana, March 2015.
4. **Boor, B.E.** (2015). Particle Resuspension in Indoor Environments: Overview and New Insights. *University of Helsinki Division of Atmospheric Sciences Seminar*, Helsinki, Finland, February 2015.
5. **Boor, B.E.** (2014). From Sleeping to Crawling: Studies on Human Exposure. *National Institute for Health & Welfare Department of Environmental Health Research Seminar*, Kuopio, Finland, October 2014.
6. **Boor, B.E.** (2014). Exposure to Indoor Air Pollutants while Sleeping. *Aalto University Department of Energy Technology Research Seminar*, Espoo, Finland, May 2014.
7. **Boor, B.E.** (2014). Chemical Emissions from Infant Crib Mattresses. "Healthy Beds" Workshop with the Finnish Allergy & Asthma Federation & VTT Expert Services Ltd., Espoo, Finland, May 2014.

#### **Refereed Conference Proceedings & Presentations**

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1. Wu, T.\* and **Boor, B.E.** (2016). Real-Time Measurements of Fluorescent Biological Aerosol Particles in the Infant Near-Floor Microenvironment in a Child Development Laboratory School. *American Association for Aerosol Research (AAAR) 35th Annual Conference*, Portland, OR, October 2016.
2. Täubel, M., Saari, S., Hyvärinen, A., Holopainen, R., Viitanen, A.K., Vainiotalo, S., Tuomi, T., Keskinen, J., Hämeri, K., and **Boor, B.E.** (2016). Microbiota of Floor Dust and Human Exposure Implications of Resuspension Scenarios. *ISME 16: 16th International Symposium on Microbial Ecology*, Montreal, Canada, August 2016.
3. Alraddadi, O., Leuner, H., **Boor, B.E.**, Hutzler, W., and Dana, M. (2016). Air Cleaning Performance of a Biowall for Residential Applications. *2016 Purdue Herrick Conference*, West Lafayette, IN, July 2016.
4. **Boor, B.E.**, Täubel, M., Holopainen, R., Viitanen, A.K., Vainiotalo, S., Tuomi, T., Keskinen, J., Hyvärinen, A., Hämeri, K., and Saari, S. (2016). Resuspension of Fluorescent Biological Aerosol Particles from Carpeted Flooring. *Indoor Air 2016: 14th International Conference on Indoor Air Quality and Climate*, Ghent, Belgium, July 2016.
5. **Boor, B.E.**, Holopainen, R., Täubel, M., Viitanen, A.K., Koivisto, A.J., Vainiotalo, S., Salmi, K., Tuomi, T., Hyvärinen, A., Hämeri, K., Novoselac, A., and Xu, Y. (2016). Infant Crawling-Induced Particle Resuspension: Size-Resolved Resuspension Rates Derived from a Three-Zone Model. *Indoor Air 2016: 14th International Conference on Indoor Air Quality and Climate*, Ghent, Belgium, July 2016.
6. Täubel, M., Saari, S., Hyvärinen, A., Holopainen, R., Viitanen, A.K., Vainiotalo, S., Tuomi, T., Keskinen, J., Hämeri, K., and **Boor, B.E.** (2016). Resuspension of Microbes in Floor Dust and Implications for Human Exposure. *Indoor Air 2016: 14th International Conference on Indoor Air Quality and Climate*, Ghent, Belgium, July 2016.

7. Tian, Y., Ferro, A.R., and **Boor, B.E.** (2016). Stirring Up House Dust: A Review of Recent Experimental Studies on Human-Induced Particle Resuspension from Flooring, Clothing, and Upholstery. *DUST 2016: 2nd International Conference on Atmospheric Dust*, Taranto, Italy, June 2016.
8. **Boor, B.E.**, Nogueira dos Santos, V., Abdullah, H., and Hussein, T. (2015). Mobile Measurements of 10 nm to 10  $\mu$ m Particles and Black Carbon in Amman, Jordan. *American Association for Aerosol Research (AAAR) 34th Annual Conference*, Minneapolis, MN, October 2015.
9. Kangas, A., Viitanen, A.-K., Huhtiniemi, M., Koivisto, A.J., Vanhala, E., Fonseca, A.S., Mølgaard, B., **Boor, B.E.**, Hussein, T., and Hämeri, K. (2015). Comparison of Nanosized Particles and Gaseous Compounds in Different Work Environments. *SENN 2015 - International Congress on Safety of Engineered Nanoparticles and Nanotechnologies*, Helsinki, Finland, April 2015.
10. Hussein, T., Nogueira dos Santos, V., and **Boor, B.E.** (2015). Particle Number Size Distributions in Jordan Derived from Portable Instruments in a Mobile Setup. *Physics Days 2015 - The 49th Annual Meeting of the Finnish Physical Society*, Helsinki, Finland, March 2015.
11. **Boor, B.E.**, Holopainen, R., Viitanen, A.K., Koivisto, A.J., Täubel, M., Vainiotalo, S., Salmi, K., Tuomi, T., Hyvärinen, A., Hämeri, K., Novoselac, A., and Xu, Y. (2015). Infant Exposure to Resuspended Particles from Carpeted Flooring: Experimental Chamber Study with a Simplified Mechanical Crawling Infant. *Sisäilmastoseminaari 2015 - Finnish Indoor Climate Conference*, Helsinki, Finland, March 2015.
12. Viitanen, A.-K., Kangas, A., Huhtiniemi, M., Vanhala, E., Fonseca, A.S., Mølgaard, B., **Boor, B.E.**, Hussein, T., Hämeri, K., and Koivisto, A.J. (2015). Ultrafine Particles and Gaseous Compounds in Various Work Environments. *Sisäilmastoseminaari 2015 - Finnish Indoor Climate Conference*, Helsinki, Finland, March 2015.
13. Viitanen, A.-K., Kangas, A., Huhtiniemi, M., Peräkylä, O., Lehtipalo, K., **Boor, B.E.**, Maragkidou, A., Hämeri, K., and Koivisto, A.J. (2014). Measurement of Particles from 1 nm in a Naturally Ventilated Shop. *2014 International Aerosol Conference*, Bexco, Busan, Korea, August 2014.
14. **Boor, B.E.**, Koivisto, A.J., Hämeri, K., Novoselac, A., and Xu, Y. (2014). Infant Crawling-Induced Resuspension of Settled Floor Dust. *Indoor Air 2014: 13th International Conference on Indoor Air Quality and Climate*, Hong Kong, July 2014.
15. Liu, S., Cao, G., **Boor, B.E.**, and Novoselac, A. (2014). A Protected Occupied Zone Ventilation System to Prevent the Transmission of Coughed Particles. *Indoor Air 2014: 13th International Conference on Indoor Air Quality and Climate*, Hong Kong, July 2014.
16. **Boor, B.E.**, Liang, Y., Crain, N.E., Järnström, H., Novoselac, A., and Xu, Y. (2014). New and Used Crib Mattresses as a Source of Volatile Organic Compounds, Phthalate and Alternative Plasticizers, and Other Chemical Species in the Infant Sleep Microenvironment. *Indoor Air 2014: 13th International Conference on Indoor Air Quality and Climate*, Hong Kong, July 2014.
17. **Boor, B.E.**, Spilak, M.P., Corsi, R.L., and Novoselac, A. (2012). Inhalation Exposure to Resuspended Particles in the Sleeping Microenvironment: Chamber Study. *International Society of Exposure Science (ISES) 22nd Annual Conference*, Seattle, WA, October 2012.
18. **Boor, B.E.**, Järnström, H., Xu, Y., and Novoselac, A. (2012). Infant Sleeping Microenvironment: Infant Thermal Plume and Inhalation Exposure to Volatile Organic Compounds Originating in a Crib Mattress. *International Society of Exposure Science (ISES) 22nd Annual Conference*, Seattle, WA, October 2012.
19. **Boor, B.E.**, Järnström, H., Xu, Y., and Novoselac, A. (2012). Identification of VOCs, Phthalates, and Isocyanates in Crib Mattresses. *Healthy Buildings 2012*, Brisbane, Australia, July 2012.
20. **Boor, B.E.**, Novoselac, A., and Corsi, R.L. (2011). Inhalation Exposure to Brominated Flame Retardants in the Sleeping Microenvironment: Preliminary Modeling and Results. *Indoor Air 2011: 12th International Conference on Indoor Air Quality and Climate*, Austin, TX, June 2011.
21. **Boor, B.E.**, Siegel, J.A., and Novoselac, A. (2011). Development of an Experimental Methodology to Determine Monolayer and Multilayer Particle Resuspension from Indoor Surfaces. *2011 American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE) Winter Conference*, Las Vegas, NV, February 2011.

22. **Boor, B.E.**, Siegel, J.A., and Novoselac, A. (2010). Experimental Methodology to Determine Absolute Particle Resuspension Fractions for Indoor Surfaces. *American Association for Aerosol Research (AAAR) 29th Annual Conference*, Portland, OR, October 2010.

\*designates graduate student advisee, \*\*designates undergraduate student advisee

### Conference Workshops

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1. **Boor, B.E.**, Tovey, E., Täubel, M., Spilak, M.P., Laverge, J., and Corsi, R.L. (2014). Sleep Microenvironments for Infants and Adults: Pollutant Exposure. Workshop at *Indoor Air 2014: 13th International Conference on Indoor Air Quality and Climate*, Hong Kong, July 2014.
2. **Boor, B.E.**, Laverge, J., Spilak, M.P., Bornehag, C.-G., and Corsi, R.L. (2012). Inhaling while Dreaming: Human Exposure to Pollutants while Sleeping. Workshop at *Healthy Buildings 2012*, Brisbane, Australia, July 2012.

### Grants

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- **National Science Foundation: RAPID: Chemical Air Emissions from Cured-in-Place-Pipe (CIPP) Pipe Repair Activity**, PI: Whelton, A.J., **Co-PI: Boor, B.E.**, \$49,999, 03/15/2016-02/28/2017.
- **Innovation for International Development Lab (I<sup>2</sup>D Lab) Seed Grant Program: The Nandi Clean Kitchen Study**, **PI: Boor, B.E.**, Co-PIs: Wells, E.M.; Lagat, D.K., \$42,108, 09/01/2016-08/30/2017.
- **Study Abroad and International Learning (SAIL) Grant and Intercultural Pedagogy Grant (IPG): Global Air Quality Trekkers - Nandi Clean Kitchen Study**, **PI: Boor, B.E.**, \$10,000, Winter Break 2016-2017.

### Teaching

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- CE 597/EEE 595: Indoor Air Quality: Spring 2017, Spring 2016
- CE 311: Architectural Engineering: Fall 2016
- EPICS 065: Global Air Quality Trekkers (GAQT) Team: Spring 2017, Fall 2016
- SA 10521: GAQT Nandi Clean Kitchen Study to Eldoret, Kenya: Winter Break 2016-2017

### Graduate Student Mentoring

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- **Ph.D. Student Primary Advisor:** Wenxin (Wendy) Wang (CE, Aug. 2016-Present), Tianren Wu (CE, Aug. 2016-Present)
- **M.S. Thesis Student Primary Advisor:** Danielle Wagner (EEE, Aug. 2016-Present)
- **M.S. Independent Studies Supervised:** Pei Cong (CE, Fall 2016), Ting-yu Chang (CE, Fall 2016), Bara Abdullatif Alarfaj (CE, Fall 2016)
- **Additional Mentoring of M.S. Students:** Spencer C. Thomas (Health Science, May 2016-Present), Mahmoud Nour (Health Science, May-Dec. 2016), Giovanni Aguilera (ME, Sept. 2016-July 2016), Osama S. Alraddadi (Purdue Polytechnic Institute, Sept. 2015-April 2016)

### Undergraduate Student Mentoring

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- **Advisor**, EPICS Service-Learning Design Program, Global Air Quality Trekkers (GAQT): Fall 2016 (14 students, including 9 FYE students)
- **Advisor**, Departmental Study Abroad to Kenya, GAQT Nandi Clean Kitchen Study (5 students, Winter Break 2016-2017)
- **Mentor:** Jin Pan (Tsinghua University Top Open Program Scholar, Aug.-Sept. 2016), Manjie Fu (Summer Undergraduate Research Fellowship Program & Independent Study, May 2016-Present)
- **Co-Advisor**, Purdue Air & Waste Management Association Student Organization (Feb. 2016-Present)
- **Consulting Faculty**, Indoor Air Quality Team, 2017 Race to Zero Student Design Competition.

### Graduate Student Committee Service

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- **M.S. Thesis/Report Committee Member:** Kelsey M. Hall (Health Science), Mahmoud Nour (Health Science), Osama S. Alraddadi (Purdue Polytechnic Institute, Graduated in May 2016)

- **External M.S. Thesis/Report Reviewer:** Karoline Veum Solberg, Norwegian University of Science & Technology (Advisor: Guangyu Cao, Graduated in Fall 2016)

## Student Awards & Honors

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- **AAAR Top Presentation** for Tianren Wu\* at AAAR 35th Annual Conference (one of top 20 among 800 registrants). Manuscript invited for submission to *Aerosol Science & Technology*, Fall 2016.
  - **Purdue Student Service Learning Grant:** awarded to EPICS Global Air Quality Trekkers (GAQT) undergraduate team\*\*, Fall 2016.
  - **Purdue Graduate Student Government Travel Grant:** awarded to Tianren Wu\*, Fall 2016.
- \*designates graduate student advisee, \*\*designates undergraduate student advisee

## Student Podium & Poster Presentations (Non-Refereed)

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- Wagner, D.\* (2016). Nandi Clean Kitchen Study: Mitigating Indoor Pollution in Western Kenya. *Innovation for International Development Lab (I<sup>2</sup>D Lab) Seminar*, November 2016 (Podium).
  - Wang, W.\* (2016). Concentrations and Size Distributions of Sub-3 nm Particles in Indoor Environments. *2016 Herrick Industrial Advisory Committee (IAC) Conference Poster Show*, October 2016 (Poster).
  - Wu, T.\* (2016). Characterizing Real-Time Bioaerosol Dynamics in Buildings Using Laser-Induced Fluorescence (LIF). *2016 Herrick Industrial Advisory Committee (IAC) Conference Poster Show*, October 2016 (Poster).
  - Wagner, D.\* (2016). Nandi Clean Kitchen Study: Mitigating Indoor Pollution in Western Kenya. *2016 Herrick Industrial Advisory Committee (IAC) Conference Poster Show*, October 2016 (Poster).
  - Pan, J.\*\* (2016). Biological Particle Adhesion to Indoor Surfaces: A Literature Review. *2016 Herrick Industrial Advisory Committee (IAC) Conference Poster Show*, October 2016 (Poster).
  - Hall, K.M., Hughes, A.J., Nour, M.\*, Thomas, S.C.\*, and Ward, E.J. (2016). Real-Time Characterization of Nanoparticle Exposures by Welders: Impact of Base Metal and Weld Type. *2016 Herrick Industrial Advisory Committee (IAC) Conference Poster Show*, October 2016 (Poster).
  - Fu, M.\*\* (2016). Infant Exposure to Resuspended Particles from Carpeted Flooring: Experimental Chamber Study with a Simplified Mechanical Crawling Infant. *2016 Purdue SURF Research Symposium*, August 2016 (Poster).
- \*designates graduate student advisee, \*\*designates undergraduate student advisee

## Academic & Professional Service

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- **Journal Paper Peer-Review:** *Aerosol Science & Technology* (2016: 1 mspt., 2015: 1 mspt.), *Journal of Occupational & Environmental Hygiene* (2015: 1 mspt.), *Indoor Air* (2016: 2 mspts., 2015: 1 mspt., 2014: 1 mspt., 2013: 1 mspt.), *Building & Environment* (2015: 1 mspt.), *Atmospheric Environment* (2013: 1 mspt.), *Indoor & Built Environment* (2016: 1 mspt.), *Sustainable Cities & Society* (2014: 1 mspt.), *Building Simulation* (2012: 1 mspt.)
- **Conference Paper Peer-Review:** *Indoor Air 2016*, *2016 ASHRAE Annual Conference*, *2016 International Conference on Advances on Clean Energy Research*
- **Proposal Peer-Review:** *Science Foundation Ireland (SFI) Research Infrastructure Grants* (2016), *Environment & Health Fund (EHF) of Israel* (2015)
- **Student Fellowship & Scholarship Peer-Review:** *Borlaug Fellows Program at Purdue* (2016)
- **Panel Member at Purdue:** Graduate Student Workshop - Faculty Positions (March 2016), Faculty Hiring Panel for Post-Docs (April 2016), 2016 Office of Interdisciplinary Graduate Program (OIGP) Spring Reception Poster Competition (May 2016)
- **ENGR 131 Presentations to FYE Students:** September 2016 (2 presentations)
- **IAQ Demonstrations for Minorities in Engineering Summer Program (MIEP):** June 2016
- **Bylaws Committee,** American Association for Aerosol Research (AAAR) (October 2016-Present)
- **Voting Member,** U.S. Technical Advisory Committee (TAG) to ISO/TC 142 - Cleaning Equipment for Air and Other Gases (Jan. 2016-Present)
- **Member,** ASHRAE Standard 62.1 Natural Ventilation Working Group (July 2016-Present)

- **Scientific Advisor**, nExact Project on sub-5 nm particle generation, classification, and counting, for Airmodus Oy (Finland), Sociedad Europea de Analisis Diferencial de Movilidad S.L. (SEADM, Spain), and VSParticle (The Netherlands) (Jan. 2016-Present)
- **Study Abroad Committee**, Lyles School of Civil Engineering (Feb. 2016-Present)
- **Graduate Student Committee**, Lyles School of Civil Engineering (Aug.-Dec. 2016)
- **Session Chair or Co-Chair**: AAAR 2016, Indoor Air 2016, 2016 Purdue Herrick Conference, Healthy Buildings 2012, Indoor Air 2011.
- **Finnish Fulbright Welcome Network** (2016-Present)
- **Equality & Work Well Being Group Committee**, University of Helsinki Division of Atmospheric Sciences (Nov. 2014-Aug. 2015)
- **Planning for the *Healthy Beds* Product VOC Labeling Program in Finland**, with the Finnish Allergy & Asthma Federation & VTT Expert Services Ltd. (May-Sept. 2014)

### Professional Society Affiliations

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- American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE) (Student: 2008-2014, Associate: 2016-Present)
- International Society of Indoor Air Quality & Climate (ISIAQ) (2010-Present)
- American Association for Aerosol Research (AAAR) (2010-Present)
- International Society of Exposure Science (ISES) (2012-2016)
- Aerosol Association in the Middle East and North Africa (AAMENA) (2016-Present)
- Association of Environmental Engineering and Science Professors (AEESP) (2016-Present)

### Selected Media Coverage

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- "Clean Kitchen Study to Reduce Household Air Pollution," *AMPATH Kenya Gazeti*, Autumn 2016
- "How your bed may be making you sick," *CNN Health Video (filmed at Herrick Labs)*, July 7, 2016
- "Indoor Air Quality Research Helps Build Safer Buildings," *Purdue Exponent*, April 8, 2016
- "Air Quality in Bed Is a Nightmare," *Scientific American*, March 17, 2015.
- "Bringing Research to Practitioners & IAQA/ASHRAE Update," Interview on *IAQ Radio: Ep. 343*, October 10, 2014.
- "Toxic Dreams: Crib Mattresses May Release Risky Fumes," *Environmental Working Group*, April 22, 2014.
- "Crib Mattress Dangers," *National Science Foundation Discoveries & Science Now: Ep. 22*, April 9, 2014.
- "UT Study Finds Crib Mattresses Emit Volatile Organic Compounds," *Austin American-Statesmen*, April 5, 2014.
- "UT Engineers Caution Parents About Chemicals in Crib Mattresses," *Alcalde*, April 4, 2014.
- "Crib Mattresses Release Potentially Harmful Chemicals, Study Finds," *Fox News*, April 2, 2014.
- "Crib Mattresses Emit High Rates of Potentially Harmful Chemicals, Cockrell School Engineers Find," *UT News*, April 2, 2014.
- "Is Your Baby's Mattress Poisoning Them as They Sleep?," *UK Daily Mail*, April 2, 2014.
- "Crib Mattresses Expose Infants To Elevated Levels of Volatile Organic Compounds," *Chemical & Engineering News of the American Chemical Society*, February 27, 2014.
- "Les Matelas, Source Méconnue de Pollution," *Le Figaro Santé*, January 8, 2013.