

Brandon Emil Boor

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Current Position

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, filtration, particle adhesion & resuspension, early-life/infant exposures, combustion aerosols & wood smoke, new particle formation, urban air pollution, low-cost air quality monitoring, health effects of air pollution, and fate & transport of VOCs/SVOCs.

Education

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

- **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

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

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 a 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

1. **Boor, B.E.** (2017). Indoor Aerosol and Exposure Lab at Purdue. *Purdue University Environmental and Ecological Engineering Graduate Seminar Series*, West Lafayette, Indiana, January 2017.
2. **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.
3. **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>.
4. **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.
5. **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.
6. **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.
7. **Boor, B.E.** (2014). Exposure to Indoor Air Pollutants while Sleeping. *Aalto University Department of Energy Technology Research Seminar*, Espoo, Finland, May 2014.
8. **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

1. Teimouri, M., Conking, E., Ra, K., Zyaykina, N., **Boor, B.E.**, Howarter, J., and Whelton, A.J. Cured in Place Pipe: Results from a RAPID response study to investigate chemical emissions into the workspace and environment. *109th Indiana Section American Water Works Association (AWWA) Annual Conference*, Indianapolis, Indiana, January 2017.
2. Slade, J.H., Shepson, P.B., Desrochers, S.J., Harvey, R.M., Wallace, W., Griffin, R.J., Bui, A., Kavassalis, S., Shi, Q., Murphy, J.G., Cook, R., Connor, M., Ault, A.P., Pratt, K., Alwe, H.D., Millet, D.B., Bertman, S.B., Stevens, P.S., Wennberg, P.O., **Boor, B.E.**, and Petrucci, G. (2016). The Influence of Monoterpene and Isoprene Nitrates on the Chemistry and Phase State of Secondary Organic Aerosol in a Low-NO_x

- Mixed Deciduous/Coniferous Forest. *American Geophysical Union (AGU) 2016 Fall Meeting*, San Francisco, CA, December 2016.
3. 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.
 4. 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.
 5. 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.
 6. **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.
 7. **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.
 8. 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.
 9. 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.
 10. **Boor, B.E.**, Nogueira dos Santos, V., Abdullah, H., and Hussein, T. (2015). Mobile Measurements of 10 nm to 10 μ m Particles and Black Carbon in Amman, Jordan. *American Association for Aerosol Research (AAAR) 34th Annual Conference*, Minneapolis, MN, October 2015.
 11. 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.
 12. 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.
 13. **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.
 14. 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.
 15. 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.

16. **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.
17. 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.
18. **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.
19. **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.
20. **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.
21. **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.
22. **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.
23. **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.
24. **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

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.

Teaching

- CE 597/EEE 595: Indoor Air Quality: Spring 2017 (10 students), Spring 2016 (22 students)
- CE 311: Architectural Engineering: Fall 2016 (31 students)
- EPICS 065: Global Air Quality Trekkers (GAQT): Spring 2017 (12 students), Fall 2016 (14 students)
- SA 10521: GAQT Nandi Clean Kitchen Study to Eldoret, Kenya: Winter Break 2016-2017 (4 students)

Graduate Student Mentoring

- **Ph.D. Student Primary Advisor:** Wenxin 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:** Bara Abdullatif Alarfaj (CE, Fall 2016 & Spring 2017), Pei Cong (CE, Fall 2016), Ting-yu Chang (CE, Fall 2016)
- **Additional Mentoring of M.S. Students:** 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

- **Advisor,** EPICS Service-Learning Design Program, Global Air Quality Trekkers (GAQT): Aug. 2016-Present
- **Advisor,** Departmental Study Abroad to Kenya, GAQT Nandi Clean Kitchen Study to Eldoret, Kenya: Winter Break 2016-2017 (4 students)
- **Undergraduate Independent Studies Supervised:** Manjie Fu (BME, Fall 2016 & Spring 2017)
- **Mentor:** Manjie Fu (Summer Undergraduate Research Fellowship Program 2016), Jin Pan (Tsinghua University Top Open Program Scholar, Aug.-Sept. 2016)
- **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

- **M.S. Thesis/Report Committee Member:** Kelsey M. Hall (Health Science), Mahmoud Nour (Health Science, Graduated in Dec. 2016), 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

- **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**, \$1,500, Fall 2016.
- **Purdue Graduate Student Government Travel Grant:** awarded to Tianren Wu*, Fall 2016.

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Mentored Student Podium & Poster Presentations (Non-Refereed)

- Wagner, D.* (2016). Nandi Clean Kitchen Study: Mitigating Indoor Pollution in Western Kenya. *Innovation for International Development Lab (I²D 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).

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Grants

- **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 (I²D 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.
- **Instructional Innovation Program: Purdue AirSense: A Student-Centered Teaching Platform for Air Pollution Sensing and Data Analytics**, **PIs: Boor, B.E.** and Michalski, G., \$100,000, 01/01/2017 - 12/31/2018.
- **American Society of Heating, Refrigerating & Air Conditioning Engineers: Reproducing a Representative Urban Atmospheric Aerosol Distribution at High Concentration in the Laboratory for Air Filter Ageing to be used in ASHRAE GPC 35P for Determining the Energy Consumption Caused by Air Filters (1734-TRP)**, **PI: Boor, B.E.**, \$140,000, 08/01/2017-07/31/2019.

Academic & Professional Service

- **Journal Paper Peer-Review:** *Aerosol Science & Technology* (2017: 1 mspt., 2016: 1 mspt., 2015: 1 mspt.), *Journal of Occupational & Environmental Hygiene* (2015: 1 mspt.), *Indoor Air* (2017: 1 mspt., 2016: 2 mspts., 2015: 1 mspt., 2014: 1 mspt., 2013: 1 mspt.), *Science of the Total Environment* (2016: 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

- 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

- "Purdue Students Assess Indoor Air Pollution in Kenya," *Purdue Exponent*, January 18, 2017.
- "Indoor Air Quality in Traditional Kenyan Kitchens, Childcare Facilities, and Beds," *University of Helsinki Division of Atmospheric Sciences Newsletter*, Nr. 36, December 2016
- "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," Interview on *IAQ Radio: Ep. 343*, October 10, 2014.
- "Toxic Dreams: Crib Mattresses May Release Risky Fumes," *Environmental Working Group*, April 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.
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