

Richard E Peltier

Abbreviated Curriculum Vitae

Updated Feb 2021

Department of Environmental Health Science
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EDUCATION:

Georgia Institute of Technology, School of Earth and Atmospheric Sciences
PhD – Atmospheric Chemistry, Dec 2007

Atlanta, GA

Advisor: Rodney J. Weber

Dissertation entitled:

“Ambient Submicron Particle Composition in North America: Their Sources, Fate, and Impact”

Columbia University, Mailman School of Public Health
Masters of Public Health – Environmental Health Sciences, Dec 2001

New York, NY

University of Massachusetts
B.S. Biology, May 1997

Amherst, MA

PROFESSIONAL APPOINTMENTS:

- 2017-2018 US-UK Fulbright Scholar, University of York, United Kingdom
2016- Associate Professor (with tenure), Department of Environmental Health Science,
University of Massachusetts, Amherst MA
2010-2016 Assistant Professor, University of Massachusetts, Amherst, Department of
Public Health, Division of Environmental Health Science, Amherst, MA
Adjunct Assistant Professor, University of Massachusetts Civil and
Environmental Engineering Department
2009-2010 Pathway to Independence (K99) Postdoctoral Fellow, NYU School of Medicine,
Tuxedo, NY
2007-2009 NRSA Postdoc, Department of Environmental Medicine, NYU School of
Medicine, Tuxedo, NY

PUBLICATIONS:

In press, original research (Most recent 30 of 60)

- 2020 Hagler, GSW., Birkett, D., Henry, R.C. and **Peltier, R.E.**. Three Years of High Time-resolution Air Pollution Monitoring in the Complex Multi-source Harbor of New York and New Jersey. *Aerosol Air Qual. Res.* <https://doi.org/10.4209/aaqr.2020.02.0069>
2020 *Moriarty, R. J., Wilton, M. J., Liberda, E. N., Tsuji, L. J., & **Peltier, R. E.** Wood smoke black carbon from Indigenous traditional cultural activities in a subarctic Cree community. *International Journal of Circumpolar Health*, 79(1), 1811517.
2020 **Peltier, R.E.**, Buckley, T.J. Sensor technology: a critical cutting edge of exposure science. *J Expo Sci Environ Epidemiol* **30**, 901–902 (2020). <https://doi.org/10.1038/s41370-020-00268-3>

- 2020 *Mani, S. A., Mani, F. S., Kumar, A., Shah, S., & Peltier, R. E.. *Traffic related PM_{2.5} air quality: Policy options for developing Pacific Island countries*. Transportation Research Part D: Transport and Environment, 87, 102519.
- 2020 Peltier, R. E., *Wang, J., Hollenbeck, B. L., Lanza, J., Furtado, R. M., Cyr, J., ... & Kobayashi, K. J. (2020). *Addressing decontaminated respirators: Some methods appear to damage mask integrity and protective function*. Infection Control & Hospital Epidemiology, 41(12), 1446-1448.
- 2020 Peltier, RE., and GT Goldman, It's not about transparency: politics is intruding into USEPA science and it could cost the public's health. *J Exposure Science & Environmental Epidemiology* (2020): 1-2.
- 2019 Shakya, KM, Kramer, P, Henderson, K, McMahon, M, **Peltier, RE**; Bromberg, S, and Stewart, J; Mobile monitoring of air and noise pollution in Philadelphia neighborhoods during summer 2017. *Environmental Pollution*. 255(1), 2019.
- 2019 Rana, J., Uddin, J, Peltier, RE, Oulhote, Y. Associations between Indoor Air Pollution and Acute Respiratory Infections among Under-Five Children in Afghanistan: Do SES and Sex Matter? *Int J of Env Res and Pub Health*. 16, 2910, 2019
- 2019 *Smith, KR Edwards, PM, Ivatt, PD, Lee, JD, Squires, F, Dai, C, **Peltier, RE**, Evans, MJ and Lewis, AC. An improved low power measurement of ambient NO₂ and O₃ combining electrochemical sensor clusters and machine learning. *Atmos. Meas. Tech*, 12, 1325-1336, 2019.
- 2019 *Shakya, KM, **Peltier, RE**, Zhang, Y., and B. Pandey. Roadside Exposure and Inflammation Biomarkers among a Cohort of Traffic Police in Kathmandu, Nepal. *Int. J. Environ. Res. Public Health* 2019, 16(3), 377
- 2019 *Pant, P & M. Lal, Raj & K. Guttikunda, Sarath & Russell, Armistead & S. Nagpure, Ajay & Ramaswami, Anu & **E. Peltier, Richard**. (2018). Monitoring particulate matter in India: recent trends and future outlook. *Air Quality, Atmosphere & Health*. 12(10), 45-58, 2019
- 2018 *Pant, P., *Huynh, W., and **Peltier, RE**. (2018). Exposure to air pollutants in Vietnam.: Assessing potential risk for tourists. *J Environmental Sciences*, 73: 147-154 Nov 2018.
- 2017 *Shakya, K. M., Rupakheti, M., Shahi, A., Maskey, R., Pradhan, B., Panday, A. **Peltier, R. E.** (2017). Near-road sampling of PM_{2.5}, BC, and fine-particle chemical components in Kathmandu Valley, Nepal. *Atmos. Chem. Phys.*, 17(10), 6503-6516. doi:10.5194/acp-17-6503-2017
- 2017 *Shakya, KM, **Peltier, RE**, *Shrestha, H., Byanju, RM. Measurements of TSP, PM₁₀, PM_{2.5}, BC, and PM chemical composition from an urban residential location in Nepal. *Atmospheric Pollution Research*, (advanced online), 1-9.
- 2017 *Pant, P., Habib, G., Marshall, J, and **Peltier RE**. PM_{2.5} exposure in highly polluted cities: A case study from New Delhi, India. *Environmental Research*, 156, 167-174, 2017.
- 2016 *Shakya, KM, *Noyes, A., *Kallin, R, and **RE Peltier**. Evaluating the Efficacy of Cloth Facemasks in Reducing Particulate Matter Exposure. *J Exposure Science and Environmental Epidemiology*, 00, 1-6
- 2016 LaKind, JS, Overpeck, J, Breysse, PN, Backer, L, Richardson, SD, Sobus, J, Sapkota, A, Upperman, CR, Jiang, C, Beard, CB, Brunkard, JM, Bell, JE, Harris, R, Chretien, JP, **Peltier, RE**, Chew GJ, and Blount, BC. Exposure science in an age of rapidly changing climate, accepted, *J Exposure Science and Environmental Epidemiology*, 26(6), 1–10, 2016.
- 2016 Weitzman, M, Yusufali, AH, Bali, *F,m Vilcassim, MJR, Ghandi, S., **Peltier, RE**, Nadas, A., Sherman, S., Lee, L., Hong, Z., Sherston, J., Park SH., and Gordon, T. Effects of hookah smoking on indoor air quality in homes *Tobacco Control* Published Online First: 26 October 2016. doi: 10.1136/tobaccocontrol-2016-053165
- 2016 *Kiros, F, *Shakya: KM, Rupakheti, M, Regmi: RP, Maharjan, R, Byanju: RM Naja: M, Mahata: K, Kathayat: B, and **RE Peltier**, Variability of Anthropogenic Gases: Nitrogen Oxides, Sulfur Dioxide, Ozone and Ammonia in Kathmandu Valley, Nepal, x: 1–14, *AAQR*, 2016
- 2016 *Shakya KM, Rupakheti, M, Aryal, K, and **RE Peltier**, Respiratory Effects of High Levels of Particulate Exposure in a Cohort of Traffic Police in Kathmandu, Nepal, *J of Occup Envi Medicine* 58(6), e218-e225, 2016.
- 2016 *Pant, P., SK Guttikunda, **RE Peltier** Exposure to particulate matter in India: A synthesis of findings and future directions *Environmental Research* 147, 480-496, 2016.
- 2015 EN Liberda, LJS Tsuji, **RE Peltier** Mining in subarctic Canada: Airborne PM 2.5 metal concentrations in two remote First Nations communities *Chemosphere* 139, 452-460, 2015
- 2015 *JE Mirowsky, **RE Peltier**, M Lippmann, GD Thurston, LC Chen, L Neas, D Diaz-Sanchez, R Laumbach, JD Carter and T Gordon. Repeated measures of inflammation, blood pressure, and heart rate variability associated with traffic exposures in healthy adults. *Environmental Health*, 14:66, 2015

- 2015 T. Fang, H. Guo, V. Verma, **R. E. Peltier**, and R. J. Weber. PM_{2.5} water-soluble elements in the southeastern United States: automated analytical method development, spatiotemporal distributions, source apportionment, and implications for health studies, *Atmos. Chem. Phys. Discuss.*, 15, 17189-17227, 2015
- 2015 Verma, V. Fang, T. Xu, L., **Peltier, RE**, Russell, AG, Ng, NL, and Weber, RJ. Organic Aerosols associated with the generation of Reactive Oxygen Species (ROS) by Water-soluble PM_{2.5}" *Environmental Science and Technology*, DOI: 10.1021/es505577w.
- 2014 *Vilcassim, M. J., G. D. Thurston, **R. E. Peltier**, and T. Gordon (2014), Black Carbon and Particulate Matter (PM_{2.5}) Concentrations in New York City's Subway Stations, *Environ Sci Technol*, 48(24), 14738-14745.
- 2014 Zhou, S., M. Weitzman, R. Vilcassim, J. Wilson, N. Legrand, E. Saunders, M. Travers, L. C. Chen, **RE. Peltier**, and T. Gordon (2014), Air quality in New York City hookah bars, *Tob Control*.
- 2014 Fibiger DL, Hastings MG, Lew AF, **Peltier RE**. 2014. Collection of NO and NO₂ for Isotopic Analysis of NO_x Emissions. *Analytical Chemistry* 86(24): 12115-12121.
- 2014 *Shakya KM, **Peltier RE**. 2015. Non-sulfate sulfur in fine aerosols across the United States: Insight for organosulfate prevalence. *Atmospheric Environment* 100(0): 159-166.
- 2014 Verma, V., Fang, T., Guo, H., King, L., Bates, J. T., **Peltier, R. E.**, Edgerton, E., Russell, A. J., and Weber, R. J.: Reactive oxygen species associated with water-soluble PM_{2.5} in the southeastern United States: spatiotemporal trends and source apportionment, *Atmos. Chem. Phys. Discuss.*, 14, 19625-19672, doi:10.5194/acpd-14-19625-2014, 2014.

Other Publications

- 2018 Lewis, von Schneidmesser, and Peltier (editors). Low-cost sensors for the measurement of atmospheric composition: overview of topic and future applications, World Meteorological Organization, May 2018, ISBN 978-92-63-11215-6, Geneva, Switzerland
- 2021 Peltier, R.E (editor). Low-cost sensors for the measurement of atmospheric composition: overview of topic and future applications, World Meteorological Organization

INVITED TALKS (since 2017)

Invited lectures, seminars, or training that were not in response to a submitted abstract

- 2020 Shakya, K, Peltier RE, Shrestha, P. The problem of air pollution in the Kathmandu Valley. 2nd Non-Resident Nepali Global Knowledge Convention (virtual)
- 2019 Peltier, RE and Oulhote, Y, Air Quality, Measurements, and Childhood Development, UNICEF Webinar on Air Quality, NY, NY, November 19, 2019
- 2019 Peltier, RE. User Engagement in Air Quality Sensors, Conference on Air Sensing, Berkeley, CA, April 24-25, 2019
- 2018 Peltier, RE "Sensing a Change", Peking University (China), faculty seminar, 31 March 2018
- 2018 Peltier, RE, "Secondary benefits to climate mitigation activities", WUN Think Tank Conference, Renmin University, Beijing, 24 March 2018
- 2018 Peltier, RE "Low cost sensors for the measurement of atmospheric composition: overview of topic and future applications" ONU Medio Ambiente- Coalición Clima y Aire Limpio/UN Environment- Climate and Clean Air Coalition (webinar), 03 May 2018.
- 2018 Peltier, RE "Investigating Indoor Air Exposures from Seasonal Hunting Activities", Tribal Sciences Council, US EPA (webinar), 23 January 2018
- 2017 Peltier, RE, "Sensing a Change", University of Birmingham (UK), seminar, 12 October 2017
- 2017 Peltier, RE, Instructor and presentations (numerous), AI-SOCD Training School: Air Pollution, Sensors, and Big Data. Taipei, Taiwan, July 2017
- 2017 Peltier, RE, "Engaging Environmental Health Research with Low Cost Technologies". University of Cape Coast (Ghana) Faculty Lecture, April 20, 2017.

PROFESSIONAL CONFERENCE MEETINGS AND SYMPOSIA (in response to submitted abstract, since 2017)

- 2020 Peltier, RE, Wang, J, Investigating N95 respirator performance after decontamination, Intl Society for Exposure Science Annual Conference (virtual), 21 Sept 2020
- 2020 Peltier, RE, Investigator N95 Respirator Performance after Decontamination, NSF National Covid Response Seminar, August 4, 2020 (virtual)

- 2019 Peltier, RE, Air Sensors Everywhere, Worldwide University Networks Annual General Meeting, Dublin, IE, May 20, 2019
- 2018 Shakya et al, Mobile Monitoring of Air Pollution in Philadelphia Neighborhoods, American Geophysical Union, Washington DC, 10-14 Dec 2018.
- 2018 RE Peltier, "Low Cost Sensors for the measurement of atmospheric composition: overview of topic and future applications. Preconference Workshop Plenary, World Meteorological Organization, November 2018, Geneva, CH.
- 2018 RE Peltier, "Low Cost Sensors for the measurement of atmospheric composition: overview of topic and future applications. World Health Organization First Conference on Air Pollution and Health, November 2018, Geneva, CH.
- 2017 K. M. Shakya , R. E. Peltier Assessment of health effects of particulate pollution among traffic police in Kathmandu, Nepal using biomarkers, Intl Society of Exposure Science Annual Conference, Durham, NC, Oct 2017.
- 2017 R. E. Peltier , P. Pant , R. J. Moriarty , M. Wilton , E. Liberda , L. Tsuji, Wood-smoke Inhalation Exposures from Traditional Hunting Practices in a First Nations Community, Intl Society of Exposure Science Annual Conference, Durham, NC, Oct 2017.

HONORS AND AWARDS:

- 2017 US-UK Fulbright Scholar Award (hosted by University of York, UK)
- 2013 Elected to Delta Omega Honorary Society (Rho chapter)
- 2012 HEI Rosenblith New Investigator Award
- 2008 Dissertation Initiative for the Advancement of Climate Change Research (DISCCRS) Scholar
- 2006 John Bradshaw Award (for novel instrumentation development)
- 2005 Air and Waste Management Association (Georgia) Scholarship
- 2005 EAS Chair's Special Service Award
- 2002 Student and Teacher Enhancement Partnership (STEP) Fellowship, Georgia Tech
- 2000 Dean's Scholarship, Columbia University
- 1997 Senior Leadership Award, University of Massachusetts

RESEARCH GRANTS AND CONTRACTS

Recent funding sources include the National Science Foundation, the Commonwealth of Massachusetts, United States Environmental Protection Agency, Institute for Advanced Sustainability Studies, Health Effects Institute, and the Worldwide University Network

Federal Grant Reviewing services:

- 2012 EPA STAR, G2012-STAR-D1/D2 panel
- 2013 NOAA Climate Sciences Program panel.
- 2014 Canadian Institutes of Health Research, Project Grant Review.
- 2015 EPA, G2014-STAR-K1/K2 2016
- 2016 CDC/ATSDR Public Health Assessment review, Corpus Christi Refineries program.
- 2018 NIH, 10 ZES1 LKB-D (K) SEP study section, ad hoc
- 2019 NIH, IMST-B(12), ad hoc.
- 2020 NIEHS, 10 ZES1 LAT-S (99) SEP study section, ad hoc; University Montana External Reviewer, COBRE Center grant.

Disciplinary Service (since 2017)

- 2020 Special Issue Editor, J Exposure Science and Envi Epidemiology, special issue on Sensing for Exposure Science
- 2017-current Deputy Editor in Chief, J Exposure Science and Envir Epidemiology
- 2011-current Associate Editor, J Exposure Science and Envir Epidemiology

SERVICE TO THE UNIVERSITY:

Level	Committee/Activity	Semester, Year and Role as Chair	Semester, Year and Role as Member	Notes
Department	Personnel Committee	F18, S19	F11, S12	
	Admissions Committee	F10, F11, S12		
	Curriculum Committee	F11, S12, F12, S13, F13, S14, F14, S15, F15, S16		
	Faculty Search	F11, F12, F13	F11, F15, F16, F19	two searches in 2011
	Chair Search	F12		
	Bylaws Committee	F16, S17, F18, S19		
	Climate Committee		F20, S21	
	Ad hoc DPC, promotion or tenure	F17, F20, S21		Ford, Vandenberg
School	Research Committee	F20, S21		
	Personnel Committee		F16, S17	
	Bylaws Committee		F10, S11, F20, S21	
	Strategic Planning Committee		F16, S17, F17, S18, F18, S19	
	Human Subjects Review		F12, S13, F13, S14	
	Research Office professional staff search		F17	
	K-Club member/mentor		S11, F11, F12, S13	
	Undergraduate Advisory Committee		F16, S17	
	CEPH accreditation review team (research)		F13, S14	
	Executive Council, space planning		F13, S14	
	Delta Omega (leadership role)		F19, S 20, F20, S21	
Institutional	Undergraduate Research Conference Session Chair	S16, S17		
	Chancellor-appointed University Delegate, Mohawk Trails Woodland Partnership		F18-present	

TEACHING AND MENTORING:

Primary Didactic Teaching Experience at UMass

>500 course number indicates graduate level; numbers indicate end-of-term enrollment.

	PH390x/ PH303/ PH203 (same course)	EHS565	EHS562	EHS690X	PH303H	FFYS197	ECO697	PH494CI	EHS590RP	EHS 704	PH490RP
Year and Semester	Intro to Environ. Health Science	Environmental Health Practices	Air Quality Assessment Methods	Exposure Assessment	Honors Colloquium	Misinformation in the Media	DIT: Environmental Monitoring Systems	Public Health Capstone	Communicating EHS	Journal Club	Fact or Fiction: EHS through film
S11	31										
F11											
S12	165				12						
F12											
S13		32									
F13			15								
S14		23									
F14											
S15	150	29									
F15			9			9	9				
S16		32									
F16	197			11							
S17		42									
F17	On Sabbatical, no teaching at UMass										
S18											
F18	209			7							
S19								27			
F19	160		5								
S20									6	7	
F20	182										
S21*	165										25

ACADEMIC ADVISING

Graduate Students (by year of degree completion)

2010	Research project mentor, Olufunke Bakare MS (NYU School of Medicine)
2010	Research project mentor, Jaime Mirowsky MS 2010 (NYU School of Medicine)
2012	Jeffrey Barowsky, MPH
2013	Jaime Mirowsky PhD Committee Member, NYU School of Medicine
2014	Andrea Garon, MPH
2017	Whitney Huynh withdrawn
2017	Filimon Kiros MS
2017	Ruzmyn Vilcassim PhD Committee Member, NYU School of Medicine
2020-	Shaohsiang Hung, MS
2020-	Shavneet Mani PhD Committee Member, University of South Pacific

Postdoctoral Fellows

2012-16	Dr. Kabin Shakya	Postdoctoral Fellow Mentor (currently Asst Prof, Villanova U)
2014-18	Dr. Pallavi Pant	Postdoctoral Fellow Mentor (currently, Sci Program Officer, HEI)
2019-	Dr. Jiayuan Wang	Postdoctoral Fellow Mentor (current PDF, UMass)

Honors College Undergraduate Students (by year of degree completion)

2017	Randa Kallin	CHC Honors Thesis Advisor, Chair
2015	Alyssa Noyes	CHC Honors Thesis Advisor, Chair
2015	Elizabeth Pongratz	CHC Honors Thesis Advisor, Member
2020	Jared Bowden	CHC Honor Thesis Advisor, Member
2021 (exp)	Megan Michta	CHC Honors Thesis Advisor, Member
2022(exp)	Angelina Rivera	CHC Honors Thesis Advisor, Chair

Doctoral Committees (non-advisee)

2014	Boning Liu	PhD Defense committee member, Civil and Env Engineering
2020	Marjorie Marin	Qualifying Exam Committee (Chair)
2020	Oladele Oluwayiose	Qualifying Exam Committee (Member)
2020	Abosede Sarah, Alli	Qualifying Exam Committee (Member)