December 2023 Academic, Research and Student Success Committee Meeting

Schedule	Tuesday, December 12, 2023 8:30 AM — 8:45 AM CST
Venue	Maxine A. Smith University Center - Bluff Room (304)
Organizer	Sparkle Burns

Agenda

7. Adjournment 63
   Presented by Jeffrey Marchetta

1. Call to Order and Open Remarks

Presented by Jeffrey Marchetta

2. Roll Call and Declaration of Quorum

Presented by Melanie Murry

3. Approval of September 6, 2023 Meeting Minutes

For Approval

Presented by Jeffrey Marchetta

University of Memphis Board of Trustees
Academic, Research and Student Success Committee Meeting
September 6, 2023
Meeting Minutes

Committee Membership:

Douglas Edwards, Committee Vice Chair
Jeff Marchetta, Committee Chair
Marissa Clark, Student Trustee, Non-voting
Marvin Ellison
David McKinney
David North
Carol Roberts
Jeff Marchetta
David Russomanno, Provost, Ex-Officio, Non-voting Member
Jasbir Dhaliwal, Vice President for Research, Ex-Officio, Non-voting Member
Karen Weddle-West, Vice President for Student Academic Success, Ex-Officio, Non-voting Member

Agenda Item 1: Call to Order and Opening Remarks

Chair Edwards welcomed the committee and indicated this was his favorite time of year to welcome students back to campus and see our president run through the fountain. He commented that this was particularly exciting because we are well into the process of implementing the strategic plan that was adopted at the March meeting. He called on President Hardgrave to make introductions. President Hardgrave introduced the following:

- David Russomanno, the new Provost, joined the UofM July 1.
- Greg DuBois, interim CFO, joined September 5. Greg will be with the University until hire a permanent CFO.
- Colton Cockrum, incoming Board Secretary, effective January 2024.

Chair Edwards called the meeting to order and requested Secretary Murry to call the roll.

Agenda Item 2: Roll Call and Declaration of Quorum

Secretary Melanie Murry called roll. The following Trustees were in attendance:
Trustee Roberts (verified she was present, could hear her, and was alone)
Trustee Clark
Trustee North
Trustee McKinney
Trustee Edwards
Trustee Marchetta

Additional trustees in attendance but not part of this committee:
Trustee Johnson
Trustee Carter

Secretary Murry announced the presence of a quorum.

Chair Edwards entertained the motion to have Jeff Marchetta serve as chair of ARSS. The motion was properly seconded. Secretary Murry called for roll call. Motion carried.

Chair Edwards turned the meeting over to Trustee Marchetta.

Agenda Item 3: Approval of Meeting Minutes for June 14, 2023

Chair Marchetta called for the minutes from the June 14 meeting be approved. Trustee North made a motion to approve the minutes and the motion was properly seconded. Secretary Murry called for roll call. Motion carried.

Agenda Item 4: Revision to Board Policy on Tenure and Academic Freedom (Recommendation for Approval)

Chair Marchetta recognized himself and Provost Russomanno to present. Chair Marchetta summarized the changes related to tenure on appointment and criteria for tenure.
Several minor revisions were made to the handbook, mostly cleanup from the first major revision that was passed last year. The main changes that affect the board are tenure upon appointment. An expedited tenure review process has been added so that departments, colleges, and the provost in particular situations, can provide input for recommendations that would be put forth by the president to grant tenure by the board. This expedited process is a 5-day period so it will not significantly delay any critical new hires to the university.
The second piece deals with some cosmetic changes to criteria for tenure. The old policy had what was considered non-measurable criteria. Non-measurable criteria were consolidated in terms of code of faculty conduct in the original revision and have now we provided a summary that faculty need to maintain comportment, consistent with the faculty code of conduct.

Chair Marchetta made a motion for the revision to Board Policy on Tenure and Academic Freedom be approved. The motion was properly seconded.

There was a brief discussion about the faculty code of conduct as it relates to the handbook, the process that was used to revise the handbook and that the changes for tenure upon on appointment resulted in a stronger, better process.

Chair Edwards noted that Trustee Springfield has joined the meeting.

Secretary Murry called for roll call. Motion carried.

Agenda Item 5: Research & Innovation Annual Report for FY 2023 (for Information)

Chair Marchetta recognized Dr. Dhaliwal, Executive Vice President for Research and Innovation. Dr. Dhaliwal gave highlights of the 2023 Annual Report for Research & Innovation.

Agenda Item 6: Additional Business

Chair Marchetta asked if there was any additional business. There was none. Chair Marchetta requested a voice vote for adjournment. It was unanimous. The committee adjourned.

4. Tenure Upon Appointment, Dr. Ilias Kavouras

For Approval

Presented by David Russomanno

The University of Memphis Board of Trustees

For Approval

Date: December 12, 2023

Committee: Academic, Research and Student Success Committee

Presentation: Tenure Upon Appointment: Dr. Ilias Kavouras, School of Public Health

Presented by: Dr. David Russomanno, Executive Vice President for Academic Affairs and Provost

Background:

Dr. Kavouras is the incoming Assistant Dean, Academic Affairs in the School of Public Health. He is currently a tenured Professor and Department Chair of Department of Environmental, Occupational and Geospatial Health Sciences, City University of New York where he has been a faculty member since 2018. Prior to that, he was a tenured Associate Professor with the Department of Environmental Health Sciences, University of Alabama at Birmingham. He also holds faculty affiliation with the Environmental Sciences Initiative, Advanced Science Research Center, City University of New York and an adjunct appointment with the Department of Environmental Health Sciences, University of Alabama at Birmingham.

He has co-authored more than 95 peer-review publications in reputable scientific journals and obtained funding from federal, state, and international agencies. His scholarly and professional record is indicative of his capacity to build and maintain long-lasting partnerships. Additionally, he has worked collaboratively to support students, develop evidence based robust and high-quality preceptorships and improve the experiential learning experiences. The credentials of Dr. Kavouras have been reviewed at the school level and he has been unanimously recommended to be awarded tenure upon appointment as professor.

Recommendation:

The Academic, Research, & Student Success Committee recommends approval of tenure upon appointment as professor in School of Public Health for Dr. Kavouras.

THE UNIVERSITY OF MEMPHIS

TIMELINE ADJUSTMENT FOR PROMOTION AND/OR TENURE

(formerly known as "Tenure Reduction Form")

FACULTY INFORMATION

NAME: Ilias (FIRST) Kavouras (MIDDLE) (LAST) U-NUMBER: U00932728 (U00123456)

COLLEGE/SCHOOL: School of Public Health

DEPARTMENT: School of Public Health

PLEASE CHECK ONE (1):

- [x] TENURE UPON APPOINTMENT**
- [ ] PROMOTION TIMELINE — TIMELINE REDUCTION _____ YEAR(S)
- [ ] TENURE TIMELINE * — TIMELINE REDUCTION _____ YEAR(S)
- [ ] TENURE & PROMOTION TIMELINE * — TIMELINE REDUCTION _____ YEAR(S)

* WILL THIS REDUCTION RESULT IN A CHANGE IN THE INDIVIDUAL'S MID-TENURE REVIEW TIMING? [ ] YES [ ] NO

IF YES, INDICATE THE ADJUSTED MID-TENURE YEAR: _____ (YEAR ONLY – 20XX)

JUSTIFICATION REQUIRED

PLEASE SUBMIT YOUR CV AND JUSTIFICATION, ALONG WITH THIS FORM TO PROVOST@MEMPHIS.EDU.

**Please reference Section 4.9.3A in the Faculty Handbook regarding procedures for Tenure Upon Appointment

RECOMMEND APPROVAL

		RECOMMENDED
CHAIR	DATE (MM/DD/YYYY)	[ ] YES
DEAN: Ashish Joshi	DATE (MM/DD/YYYY): 12/13/2023	[x] YES

APPROVAL

		APPROVED
PROVOST: David Russomanno	DATE (MM/DD/YYYY): 10/27/2023	[x] YES

*ADJUSTED TENURE AND/OR PROMOTION APPLICATION: _____ (SEMESTER) _____ (YEAR – 20XX)

*COMPLETED BY PROVOST

SEND COMPLETED FORM TO PROVOST@MEMPHIS.EDU

REVISED MAY 2023

THE UNIVERSITY OF MEMPHIS

School of Public Health
236 Robison Hall
Memphis, Tennessee 38152-3370

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www.memphis.edu/sph

NOTE: faculty proposed start date is January 1, 2024 per SPH

Memorandum

To: Dr. Bill Hardgrave, President University of Memphis
From: Dr. Ashish Joshi, Dean School of Public Health
Date: October 13, 2023
Re: Tenure on appointment for Dr. Ilias Kavouras

This memo is to request that Dr. Ilias Kavouras be granted immediate tenure as Professor upon appointment. This request is based on his exceptional and sustained record of research, teaching, mentorship, and public health outreach.

Dr. Kavouras is currently a tenured Professor and Department Chair of Department of Environmental, Occupational and Geospatial Health Sciences, City University of New York where he has been a faculty member since 2018. Prior to that, he was a tenured Associate Professor with the Department of Environmental Health Sciences, University of Alabama at Birmingham. He also holds faculty affiliation with the Environmental Sciences Initiative, Advanced Science Research Center, City University of New York and an adjunct appointment with the Department of Environmental Health Sciences, University of Alabama at Birmingham.

He has co-authored more than 95 peer-review publications in reputable scientific journals and obtained funding from federal, state, and international agencies. His scholarly and professional record is indicative of his capacity to build and maintain long-lasting partnerships.

At his current university, he has worked collaboratively to improve the supervised fieldwork/capstone project (aka culminating experience) to further support students, develop evidence based robust and high-quality preceptorships and improve the experiential learning experiences.

His portfolio is well rounded in teaching, research and service. I request your approval of his tenure on appointment.

The University of Memphis
School of Public Health

Memorandum

Date: October 25, 2023

From: Hongmei Zhang, PhD, Chair, School of Public Health Promotion and Tenure (P&T) Committee

P&T Committee Members: Drs. Chunrong Jia, Yu Jiang, Satish Kedia, Marian Levy, Fawaz Mzayek, Latrice Pichon, Meredith Ray, Matthew Smeltzer, Yong Yang, Xinhua Yu, Hongmei Zhang.

To: Dr. Ashish Joshi, PhD, MBBS, MPH, Dean

Re: Committee Report of Dr. Ilias Kavouras' appointment with tenure

The School of Public Health P&T Committee reviewed Dr. Ilias Kavouras' teaching, research, and service on October 24th and 25th and assessed his qualification for offering tenure upon appointment.

Currently, Dr. Kavouras is Professor with tenure and Chair of the Department of Environmental, Occupational and Geospatial Health Sciences (DEOG) and interim Chair of the Department of Epidemiology and Biostatistics, City University of New York (CUNY). Prior to the role as Department chairs, he served as Doctoral Program Director of DEOG at CUNY. Before he joined CUNY in 2018, Dr. Kavouras was a tenured Associate Professor in the Department of Environmental Health Sciences (DEH) at the University of Alabama at Birmingham and served as the Graduate Program Director of DEH.

Thus far, Dr. Kavouras has published three book chapters and co-authored 97 peer-review publications in reputable scientific journals, of which he was the senior author or first author on a large portion of the publications. He also has extensive experience in securing research funds from federal, state, and international agencies. Dr. Kavouras has more than 20 years teaching experience in the area of environmental and occupational health both at the undergraduate and graduate level. In terms of service besides his administrative role, Dr. Kavouras has served on a number of committees at the Department, University and external community level in the past more than 20 years.

After reviewing, the P&T Committee is confident that Dr. Kavouras' research, teaching, and service meet the criteria for tenure at his current rank of Professor and recommend his appointment as a Professor with tenure.

CURRICULUM VITAE

Ilias G. Kavouras, PhD
Graduate School of Public Health and Health Policy
City University of New York

EDUCATION

1998	Ph.D., Chemistry, Department of Chemistry, University of Crete, Greece
1994	B.Sc., Chemistry, Department of Chemistry, University of Crete, Greece

EMPLOYMENT and POSITIONS HELD

Administrative and Institutional Governance appointments

2022-	Chair, Department of Environmental, Occupational and Geospatial Health Sciences, City University of New York
2023-	Interim Chair, Department of Epidemiology and Biostatistics, City University of New York
2019-2022	Chair, SPH Governance Council Assessment Committee, City University of New York
2018-2019	Doctoral Program Director, Department of Environmental, Occupational and Geospatial Health Sciences, City University of New York
2016-2018	Graduate Program Director, Department of Environmental Health Sciences, University of Alabama at Birmingham

Professional appointments

2018-	Professor (with tenure), Department of Environmental, Occupational and Geospatial Health Sciences, City University of New York
2018-	Affiliated Faculty, Environmental Sciences Initiative, Advanced Science Research Center, City University of New York
2018-	Adjunct Professor, Department of Environmental Health Sciences, University of Alabama at Birmingham
2015-2018	Associate Professor (with tenure), Department of Environmental Health Sciences, University of Alabama at Birmingham
2011-2015	Associate Professor, Department of Environmental and Occupational Health, University of Arkansas for Medical Sciences
2010-2011	Environmental Health Program Director, French Longitudinal Study of Children, National Institute for Demographic Studies (INED)
2005-2010	Assistant Research Professor, Division of Atmospheric Sciences, Desert Research Institute
2002-2005	Research Assistant Professor, Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece
1998-2002	Research Fellow, Department of Environmental Health, Harvard School Public Health

HONORS, AWARDS, and INTELLECTUAL PROPERTY

CUNY SPH 2021 Faculty Mentoring Award
Delta Omega Honorary Society in Public Health, inducted in 2021.
Impaction Substrate and Methods of Use, US Letters Patent 6,435,043
High Volume Particle Sampler, HU License No.1589-98

Personal Multi-pollutant Sampler, HU License No. 1795-00
Sampling system for particle and gas phase organics, HU License No.1796-00
Low volume inlets, HU License No.1797-00
Young Scientist Travel Award, International Global Atmospheric Chemistry, 1999
Keith Runcorn Fellowship, European Geophysical Union, 1998

PROFESSIONAL ACTIVITIES

Grant reviewer

NIH/NIEHS, U24 Research Coordinating Center to Support Climate Change and Health Community of Practice, P20 Exploratory Grants for Climate Change and Health Research Center Development
NIH Career Awards K99/R00, K01 and K23 grant applications.
NIEHS, Time-Sensitive Research Study Section, Co-chair.
CUNY Junior Faculty Research Award in Science and Engineering, panel member
CUGH Global Health Workforce Panel, 2021-, panel member
NIEHS, Systemic Injury of Environmental Exposure Study Section, member
CUNY Office of Research Interdisciplinary Research Grant, panel member
PSC-CUNY pilot grant, panel member
National Science Foundation (NSF), panel member
European Research Council (ERC), panel member
National Oceanic and Atmospheric Administration (NOAA) Climate Change Program, panel member
Jackson State University RCMI-Center for Environmental Health (RCMI-CEH) Pilot Project Program, panel member
French Public Safety, Nutrition, Environment and Occupational Safety Agency (ANSES), panel member

Invited professional activities.

NYC Pandemic Response Institute, Impossible Heatwaves: Should Everyone Have the Right to Remain Cool During a Global Climate Crisis? Panel moderator, 2023
Coro New York Leadership Center, City's Just Energy Transition, Panel member, 2022
Climate Inclusive Clinical Research: Interprofessional Engagement and Training Around Climate and Health Equity, SUNY Downstate Medical Center, 2022, panel member
CUNY Think Tank: A two-day symposium on the impact of climate crisis on the ecosystem and human health, 2011, panel member

Editorial boards and adhoc journal reviewer

Frontiers in Environmental Science, Associate Editor, Climate and Atmosphere, 2023-
Atmosphere, MDPI, 2020-, Editorial Board member
Environmental Research, Elsevier (2017-2018), editorial board member
Heliyon, Elsevier (2015-2019), editorial board member
Environmental Toxicology and Chemistry (2012-2015), editorial board member
Environmental Health Perspectives, Environmental Toxicology and Chemistry, Environmental Science and Technology, Atmospheric Environment, Atmospheric Research, Catena, Environmental Science and Pollution Research, Chemosphere, Journal of Environmental and Public Health, Journal of Exposure Sciences and Environmental Epidemiology, Environmental Monitoring and Assessment, Stochastic Environmental Research and Risk Analysis, BMC Pediatrics, Atmospheric Chemistry and Physics, Science of the Total Environment, Fuel, Environmental Technology, Journal of Environmental Health, International Journal of Air Quality, Atmosphere and Health, reviewer

Policy and program evaluation

Aliso County Scientific Oversight Committee, committee member
Materials Sciences and Advanced Technologies, Department of Materials Sciences, University of Crete, Greece, training program evaluator

United States National Academies of Sciences, Engineering, and Medicine report: “Future of Atmospheric Chemistry Research: Remembering Yesterday, Understanding Today, Anticipating Tomorrow, from our Board on Atmospheric Sciences and Climate”, reviewer

United States National Academies of Sciences, Engineering, and Medicine report: “Controlled Human Inhalation-Exposure Studies at EPA”, reviewer

Lake Tahoe Air Quality Monitoring Plan, science policy reviewer

PROFESSIONAL DEVELOPMENT

2023	CUNY Professional Development Workshop for Department Chairs
2020	CUNY Assessment Council. Assessment 101
2020	General Overview - Policy on Sexual Misconduct Training
	CUNY-Wide Sexual Misconduct Panel
	FSDC Chairperson Training
	CIS Zoom Training for Title IX Remote Hearing
2020	The Ethics of Public Health Emergency Response to COVID-19 to Public Health Disaster Preparation and Planning for Tomorrow. Society for Disaster Medicine and Public Health
2020	Open Pedagogy at CUNY: A Cross-Institutional Conversation
2020	WGU-CUNY Professional Development: Effective Practices, Pedagogical Design, High Impact Discussion Strategies, Guiding Student Research.
2019	Student Conduct Institute Basic Compliance Training, State University of New York
2019-now	Managerial Competencies Certificate, CUNY Professional Development and Learning Management Office
2019-now	Supervisory Competencies Certificate, CUNY Professional Development and Learning Management Office
2016-2018	American Council on Education Leadership Academy for Department Chairs
2015	3D Online Instruction: Design, Develop and Deliver, UAB e-Learning and Professional Studies
2013	Applied Logistic Regression and Survival Analysis. Central Arkansas Statistical Association Research Assistant Professor, Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece
2013	Pediatric Forum for Primary Care and Specialty Physicians, Arkansas Children Hospital
2011-2015	Teaching Certificate, University of Alabama at Birmingham
2010-2011	Mentoring Certificate, University of Alabama at Birmingham

SPONSORED RESEARCH

Pending

NIEHS R21: “Congestion pricing in Lower Manhattan: Community scale of traffic air toxics in environmental justice neighborhoods in New York City”, PI	2023-2025
NIEHS R15: “Effects of biomass burning ultrafine particles on p53 function”, Co-Investigator	2023-2026
NIAID R21: “Joint impact of air pollution with longer pollen season on childhood asthma and underlying epigenetics”, Co-PI	2023-2025

Current

Mt.Sinai School of Medicine-CUNY Research Foundation: “Use of the Realtime and Historical “Floodnet” Data to Determine the Impact of Flooding on the Surge of Acute Respiratory Illnesses in the Specific Densely Populated Flood Prone New York City Communities in 1 Year” Role: Co-PI Budget: $41,000.	2023-2024
US Environmental Protection Agency: “Innovative approach to assess the effect of metal mixtures from infant meconium associated with adverse health outcomes by identifying methylation loci in mothers and infants” Role: Co-Investigator. (12.5%)	2022-2025
New York City Mayor’s Office: “Pandemic Research Institute: Workforce development” Role: Co-Leader. (5%)	2022-
Harvard University: “Chemical characterization of the hydrophilic fraction of wood burning aerosol emissions.” Role: Principal Investigator, Budget: $22,500	2021-
NIOSH 1R21OH011740-01A1: “A feasibility study to develop a multilevel occupational health intervention program for nail salon employees and owners.” Role: Collaborator	2021-2023
PSC-CUNY Award # 63531-00 51: “Vaping epidemic: electronic cigarettes and cannabis products, a ticking public health bomb.” Role: Principal Investigator, Budget: $6,000	2020-2021
CUNY Interdisciplinary Climate Crisis: “The effect of climate-driven extreme heat weather on cardiovascular and pulmonary health of susceptible individuals in NYC”. Role: Co-Investigator	2020-2021
CUNY Interdisciplinary Climate Crisis: “Climate Change Impacts on Air Quality and Health in Urban Environments”. Role: Co-Investigator	2020-2021

Completed

NCI, R25CA112383 Cancer Epidemiology Education in Special Populations Program: “Carcinogens in electronic cigarettes vapors”. Recipient: Karina Castillo; Role: Mentor	2019
CDC/NIOSH, T42OH008436: “Deep South Center for Occupational Health and Safety Education and Research Center”. Role: Co-Investigator	2015-2017
CDC/NIOSH, T42OH008673: “Exhaled breath condensate: understanding exposures of firefighters to smoke” Role: Principal Investigator. Budget: $ 8,500	2015-2016
Texas Commission of Environmental Quality: “Ozone Pollution: Understanding the local and regional contributors to ozone pollution in El Paso Texas.” Role: Subcontract Principal Investigator. Budget: $ 30,001	2015-2016
US Environmental Protection Agency, NE-00F65601-0: “Pest Management Practices and Chemical Use Reduction in Homes: Partnering with Arkansas STEM Centers in the Use of Liberating Structures for Environmental Education.” Role: Co-Principal Investigator	2013-2015
New Mexico Environment Department: “Receptor-based dust source analysis for windblown dust emission inventory at the international border region of southern New Mexico.” Role: Subcontract Principal Investigator. Budget: $ 20,000	2013-2014
US Environmental Protection Agency, XA-00F59601-0: “HIPPY for Healthy Homes Program: Curriculum Development and Capacity Building for Managing Indoor Air Quality in Homes.” Role: Co-Principal Investigator	2012-2014
NIH/NCRR UL1TR000039 (TRI): “Projected impacts of climate change on respiratory and cardiovascular health in Arkansas.” Role: Principal Investigator. Budget: $ 27,004	2013-2014
New Mexico Office of Border Health: “Assessment of Land-based Sources of Air Quality Contaminants in the Binational Border Region of Southwestern New Mexico and Northwestern Chihuahua.” Role: Subcontract Principal Investigator. Budget: $ 91,000	2011-2013
Clark County Department of Air Quality and Environmental Management: “Impact of Wildfire Emissions on Clark County Air Quality.” Role: Co-Investigator	2008

State of Idaho: “PM2.5 Precursors Study-Treasure Valley, Idaho.” Role: Principal Investigator. Budget: $ 77,000	2008-2009
State of Idaho: “Treasure Valley Ozone Precursor Monitoring Study.” Role: Principal Investigator. Budget: $ 80,000	2007-2008
US Department of Energy AC52006NA26383: Fire and Soil Radionuclide Contaminant Transport Study. Role: Co-Investigator.	2007-2012
US Environmental Protection Agency XA-9663709-1: “Community-Scale Air Toxics monitoring and risk assessment project for the City of Albuquerque.” Role: Principal Investigator. Budget: $ 236,442	2007-2009
US Environmental Protection Agency: “Unpaved roads particulate emissions in Paso del North region.” Role: Principal Investigator. Budget: $ 84,802	2007-2009
Western Regional Air Partnership: “New Mexico Pilot Study: Salt Creek and White Mountain Wilderness areas.” Role: Principal Investigator. Budget: $ 20,000	2006
US Department of Energy AC52-06NA26383: “Yucca Mountain Environmental Monitoring Systems Initiative and Phase I of Air Quality Scoping Studies.” Role: Co-Investigator	2006-2010
Bernalillo County Air Quality Division: “PM_{10} emission inventory for the City of Albuquerque.” Role: Co- Investigator	2006
Department of Development, Greece: “Support and accreditation of existing infrastructure of the Atmospheric Chemistry Laboratory of the National Observatory of Athens for providing services on chemical analysis and measurements of atmospheric pollutants with emphasis on public health hazards.” Role: Principal Investigator; Budget: 312,900 €	2005-2006
European Commission - Directorate-General for Research & Innovation QLK4-CT-2002-02236: “Air pollution and inflammatory response in myocardial infraction survivors: Gene-environment interactions in high-risk group.” Role: Principal Investigator of Greek consortium: 22,160 €	2005-2006
European Commission – Directorate-General for Research & Innovation QLK4-CT-2002-51599: “Investigation of the chemical interaction between DNA and chemical carcinogens present in urban air-Effect of air pollution on depurinating DNA-adducts formation.” Role: Principal Investigator; Budget: 106,600 €	2003-2006
European Commission - Directorate-General for Research & Innovation QLK4-CT-2001-00452: “Relationships between ultrafine and fine particulate matter in indoor and outdoor air and respiratory health.” Role: Principal Investigator of the Green Exposure team; Budget: 197,690 €	2003-2006
Department of Development, Greece and German Research Foundation (Max Planck Institute for Chemistry): “Formation of secondary organic aerosol.” Role: Principal Investigator; Budget: 20,000 €	2002-2004
Department of Development, Greece and The British Council: “Urban growth and environmental pollution: Development of a sustainable plan.” Role: Principal Investigator; Budget: 17,500 €	2002-2004
Motor Oil S.A.: “Exposure assessment to benzene and HF of workers in oil refineries using biological markers.” Role: Principal Investigator; Budget: 25,000€	2003-2004

PUBLICATIONS

Scientific impact

H-index: 32; Citing articles: 2,851 (excluding self-citations)

Books

Occupational Safety and Health, Kavouras IG and Chalbot M-C (Eds), Nova Scientific Publishers, ISBN: 978-1-63117-695-1, 2014

Book chapters

Environmental solution-state NMR spectroscopy: recent advances, potential and impacts, Chalbot M-C, Kavouras IG. in "Multidimensional analytical techniques in environmental research" (Ed: R Duartes), Elsevier Publishing, Paperback ISBN: 9780128188965

Concentrations and physicochemical properties of ambient aerosol in the northern hemisphere, Chalbot M-C, Kavouras IG. in "Air Pollution and Pollutants" (Ed: W Hejing), Academy Publish, ISBN: 978-1-941249-02-4. 2015

Atmospheric input of natural and anthropogenic organic compounds in the Eastern Mediterranean Sea. Stephanou EG, Gogou A, Kavouras IG. In "Sea-Air Exchange: Processes and Modeling", Eds. (J.M. Pacyna, D. Broman and E. Lipiatou), 197-201, 1997.

Policy briefs

Pemberton S, Gadhoke P, Brenton BP, Kavouras I. (2021) COVID-19 Widened food isecurity and food access disparities in households with and without children in New York City (July-August 2020). National Food Access and COVID Research Team. https://www.nfactresearch.org/new-york-city-policy-briefs

Peer-review papers

(Students underlined, post-doctoral fellows double underlined)

97 Hardell J, Silver EJ, Kavouras I, Lee DD, Gross E. (2023) Childhood asthma in the Bronx, NY; the impact of pollutants on length of hospital stay, Journal of Asthma, doi: 10.1080/02770903.2023.2225607

96 Goldfarb D, Prezant D, Zeig-Owens R, Schwartz T, Kavouras IG. (2023) Development of a job-exposure matrix (JEM) for exposure to smoke particle mass among firefighters of the Fire Department of the City of New York (FDNY). *Occupational and Environmental Medicine*, oemed-2022-108549. doi: 10.1136/oemed-2022-108549

95 Dada O, Castillo K, Hogan M, Chalbot MCC, Kavouras IG. (2022) Evidence of the coupling of nicotine, solvents, flavorings, and new particle formation in electronic cigarette vapors. *Scientific Reports*, 12(1):18571. doi: 10.1038/s41598-022-21798-w

94 Singh D, Tassew DD, Nelson J, Chalbot MG, Kavouras IG, Demokritou P, Tesfaigzi Y. (2022) Development of an Integrated Platform to Assess the Physicochemical and Toxicological Properties of Wood Combustion Particulate Matter. Chem Res Toxicol. 2022 Sep 19;35(9):1541-1557. doi: 10.1021/acs.chemrestox.2c00183.

93 Singh D, Tassew DD, Nelson J, Chalbot MG, Kavouras IG, Tesfaigzi Y, Demokritou P. (2022) Physicochemical and toxicological properties of wood smoke particulate matter as a function of wood species and combustion condition. J Hazard Mater. 2023 Jan 5;441:129874. doi: 10.1016/j.jhazmat.2022.129874.

92 Singh S, Johnson G, DuBois, DW, Kavouras IG. (2022) Assessment of the contribution of local and regional biomass burning on PM2.5 in New York/New Jersey metropolitan area. *Aerosol and Air Quality Research*, https://doi.org/10.4209/aaqr.220121

91 Singh S, Johnson G, Kavouras IG. (2022) The Effect of Transportation and Wildfires on the Spatiotemporal Heterogeneity of PM2.5 Mass in the New York-New Jersey Metropolitan Statistical Area. *Environmental Health Insights*. doi:10.1177/11786302221104016

90 Nored AW, Shedd JS, Chalbot MCG Kavouras IG (2022) On the role of atmospheric weathering on paint dust aerosol generated by mechanical abrasion of TiO_2 containing paints. *International Journal of Environmental Research and Public Health* 19 (3), 1265.

89 Singh S, Kavouras IG. (2022) Trends of ground-level ozone in New York City area during 2007-2017. *Atmosphere,* 13(1), 114. https://doi.org/10.3390/atmos13010114.

88 Costa S, Kavouras IG, Cohen N, Huang T (2021) Moving education online during the COVID-19 pandemic: thinking back and looking ahead. *Frontiers of Public Health* 9:751685. doi: 10.3389/fpubh.2021.751685.

87 Nored AW, Chalbot MCG, Shin J, Kavouras IG (2021) The effect of particle size, membrane type, and face velocity on TiO_2-containing paint dust filtration. *Journal of the International Society for Respiratory Protection*, 38 (1), 16-25.

86 Velazquez K, Scott-Jones A, Chalbot MCC, Kavouras IG (2021) Assessment of state socioeconomic and demographic disparities on coronavirus-2019 mortality during the exponential increase period in the US. *Journal of Public Health and Emergency* 5:14. doi: 10.21037/jphe-20-96

85 Chalbot M-C, Siddiqui S, Kavouras IG. (2021) Molecular speciation of size fractionated particulate water-soluble organic carbon by two-dimensional nuclear magnetic resonance (NMR) spectroscopy. *International Journal of Environmental Research and Public Health* 18(3):1334. https://doi.org/10.3390/ijerph18031334

84 Vora A, Chalbot MCC, Shin J, Kavouras IG (2021) Size distribution and lung deposition of particle mass generated by indoor activities. *Indoor and Built Environment* 30(9) 1344–1352 doi:10.1177/1420326X20939249

83 Nelson J, Chalbot MCC, Pavicevic Z, Kavouras I (2020) Characterization of exhaled breath condensate (EBC) non-exchangeable hydrogen functional types and lung function of wildland firefighters. *Journal of Breath Research* 14, 046010. https://iopscience.iop.org/article/10.1088/1752-7163/abb761

82 Nelson J, Chalbot MCC, Tsiodra I, Mihalopoulos N, Kavouras IG (2020) Physicochemical characterization of personal exposures to smoke aerosol and PAHs of wildland firefighters in prescribed fires. *Exposure and Health* doi: 10.1007/s12403-020-00366-5

81 Dada OM, Chalbot MCC, Kavouras IG (2020) Functional characterization of flavorings in electronic cigarette refill liquids by nuclear magnetic resonance spectroscopy. *RSC Analytical Methods* 12, 611-619

80 Chalbot MCC, Kavouras IG (2020) NMR characterization of the water-soluble organic carbon in atmospheric aerosol. *Natural Products Communication* 14(5), 1-10. doi: 10.1177/1934578X19849972

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INVITED PLENARY CONFERENCE CONTRIBUTIONS

The 4th International Electronic Conference on Atmospheric Sciences, July 16-31, 2021, Keynote speaker, Climate Change, human health and environmental justice.

National Firefighter Cancer Symposium 2021, Invited Speaker and Panel Member, Wildland and Wildland Urban Interface Firefighters, Orlando, FL, 2021.

Emergency Responder Health and Safety Conference, Invited Panel Member, New York City, 2020

American Industrial Hygiene Association, Professional Development Course. Climate Change and Occupational Health. AIHA National Meeting, Seattle, WA, 2017

Organizer, American Chemical Society Symposium: Chemistry of Lower Atmosphere, ACS 247th National Meeting, Dallas, TX. 2014

International Symposium on Recent Advances in Environmental Health Research: Air pollution and hospital emergency room and admissions for cardiovascular and respiratory diseases, 2013

Plenary speaker, Arkansas National Association of Housing and Redevelopment Officials Winter Meeting: Healthy Homes, 2013

Plenary speaker, Arkansas Conference for Home Visitation and Parenting Education: Workshop: Maintaining a Healthy Home: Asthma, Allergies, Radon, Mold and Carbon Monoxide, 2013

Southwest Border Symposium on Air Quality and Climate: Air pollution and health in southern New Mexico, 2013

Arkansas Department of Health, Health Research, Policy and Health Promotion Conference: Sources and trends of fine particulate matter in central Arkansas, 2011

Bernalillo County Air Quality Board: Air Toxics Risk Assessment in Bernalillo County, 2009

Chair of the Session “Fugitive Dust” of the 2007 Emission Inventory Conference, Raleigh, NC, May 2007

Northwest International Air Quality Environmental Science and Technology Consortium: Precursors and Sources of $PM_{2.5}$ in the Treasure Valley, Idaho

Panhellenic Pulmonary Conference: Methods to measure personal exposures, 2006

Western Regional Air Partnership Dust Forum: 1. Causes of dust, ambient data analysis and; 2. New

Mexico SIP pilot project, 2005

Chair of the Session “Urban aerosol” of the 7th International Conference on Carbonaceous Particles in the Atmosphere, San Juan, Puerto Rico, November 2000

CONFERENCE PROCEEDINGS (PEER-REVIEWED)

1. Jia C, Zhang H, Batbaatar N, Naser AM, Kavouras I. Clean air benefits and climate penalty: a case study on mortality in Memphis APHA 2023 Annual Meeting and Expo, Nov. 12 - Nov. 15, 2023, Atlanta, GA.
2. Geer LA, Hoepner L, Kavouras IG, Clare CA. Climate Inclusive Clinical Research: Interprofessional Engagement and Training around Climate and Health Equity Symposium – April 5, 2022, APHA 2022.
3. Goldfarb DG, Prezant DJ, Zeig-Owens R, Schwartz T, Liu Y, Kavouras IG. Evaluating incident response data among World Trade Center-exposed Fire Department of the city of New York (FDNY) firefighters between 2010 through 2021. National Firefighter Cancer Symposium 2022
4. Hardell J, Kavouras I, Silver EJ, Lee DS, Gross E. “Ambient ozone, weight status, and pediatric asthma hospitalizations in Bronx, NY”. International Society of Exposure Science Annual Meeting, 2021.
5. Nelson, J, Chalbot, MC, Kavouras, IG. "Cardiovascular Health Response to Biomass Smoke Particulate Matter Exposure Among Wildland Firefighters," SETAC North America 40th Annual Meeting, Toronto, Canada. (2019).
6. Dada O, Chalbot MC, Kavouras IG "Characterization of Electronic Cigarette Liquids by 1D and 2D NMR Spectroscopy," SETAC North America 40th Annual Meeting, Toronto, Canada. (2019).
7. Nelson, J, Chalbot, MC, Kavouras, IG. (2019) ”Biomass Smoke Exposure and the Potential Cardiovascular Health Effects in Wildland Firefighters" American Industrial Hygiene Conference and Exposition (AIHce), May 20-22, 2019, Minneapolis, MN *Best in Show Student Poster Bronze, The Carol Rice Best Student Poster in Occupational and Environmental Epidemiology)*
8. Dada O, Chalbot MC, Kavouras IG (2019) "Characterization of Electronic Cigarette Liquid by Nuclear Magnetic Resonance Spectroscopy" American Industrial Hygiene Conference and Exposition (AIHce), May 20-22, 2019, Minneapolis, MN
9. Nored AW, Chalbot, MC, Kavouras, IG. (2018) The characterization of nanoparticle emissions from aerosolized paint dust SETAC North America 39th Annual Meeting, Sacramento, CA
10. Nelson, J, Chalbot, MC, Kavouras, IG. (2018) Assess personal smoke exposure and acute lung inflammation metabolomics of Exhaled Breath Condensate in fire fighters by NMR-spectroscopy. SETAC North America 39th Annual Meeting, Sacramento, CA (SETAC Student Travel Award)
11. Dada O, Chalbot MC, Kavouras IG, Demokritou P. (2018) Characterization of Electronic Cigarette Liquids and Vapors, a novel methodology. SETAC North America 39th Annual Meeting, Sacramento, CA (SETAC Student Travel Award)
12. Jordan Nelson, Marie-Cecile G. Chalbot , Kavouras IG (2018) Biomass Smoke Exposure and the Potential Pulmonary Health Effects in Wildland Firefighters. AIHce 2018, Philadelphia, PA (*Best in Show Student Poster Gold, The Carol Rice Best Student Poster in Occupational and Environmental Epidemiology, Toxicology Committee Best Student Poster and Students and Early Career Professional Committee Best Student Poster*).
13. Dada O, Chalbot MCC, Demokritou P, Kavouras IG (2018) *Investigation of electronic cigarette refillable solutions and vapors*. AIHce 2018, Philadelphia, PA
14. Nored AW, Chalbot MCC, Kavouras IG (2018) The effect of weathering on the release of TiO2 paint dust by mechanical abrasion. AIHce 2018, Philadelphia, PA
15. Jordan RN, Chalbot MCC, Kavouras IG (2017) Assess personal smoke exposure and acute lung inflammation metabolomics of exhaled breath condensate in firefighters by NMR-spectroscopy. SETAC North America 38th Annual Meeting, Minneapolis, MN

16. Jordan RN, Chalbot MCC, Kavouras IG (2017) Biomass smoke exposure and the potential pulmonary health effects in wildland firefighters. SouthEastern Environmental Conference, Orange Beach, AL (*2nd Best Student Poster Award*)
17. Dada O., Chalbot MCC, Kavouras IG (2017) Electronic cigarette: specifics of electronic cigarette liquid (e-liquid) composition.SouthEastern Environmental Conference, Orange Beach, AL
18. Nored AW, Kavouras IG (2017) Characterization of nanoparticle emissions from aerosolized paint dust. SouthEastern Environmental Conference, Orange Beach, AL
19. Chalbot MCG, Kavouras IG (2017) Applying environmental omics to apportion the origin, chemical and toxicological profiles of organic aerosols. SETAC North America 38th Annual Meeting, Minneapolis, MN
20. Kavouras IG, Chalbot MCG, Pavicevic Z. (2017) Smoke and acute lung function decline if wildland firefighters. AIHce2017, Seattle, WA
21. Nored AW, Kavouras IG (2017) Characterization of nanoparticle emissions from aerosolized paint dust AIHce2017, Seattle, WA *(Best Student Poster Award)*
22. Badhran R, Chalbot MCG, Davis M, Kavouras IG, Lungu T. (2017) Assessment of Psychosocial Work Stress and Oxidative Stress among Emergency Room Nurses in a US Hospital. AIHce2017, Seattle, WA
23. Etyemezian V, Engelbrecht J, Gillies J, Kavouras I., DuBois D. (2015) Overview of mineral dust as an air pollutant. The International Society of Exposure Science, Henderson, NV.
24. Kavouras IG, Rodopoulou S, Samoli E, Chalbot MC, DuBois D, San Filippo B. (2015) Mineral dust and hospital respiratory and cardiovascular emergency room and hospital admissions. The International Society of Exposure Science, Henderson, NV.
25. Miousse IR, Chalbot MC, Demokritou P, Kavouras IG, Koturbash I. (2015) In vitro toxicity and epigenotoxicity of ambient particulate matter collected at different sites. The International Society of Exposure Science, Henderson, NV.
26. Kavouras IG, Lungu CT. (2015) Greenhouse gases and occupational hazards: Current status, future directions and implications to energy, industry and transportation. Alabama Environmental Conference, Orange Beach, AL.
27. Kavouras IG, Chalbot MC (2015) Understanding how global change affects our quality of life and health 2nd Annual Community Engagement Institute, Birmingham, AL.
28. Miousse IR, Chalbot MCG, Pathak R, Lu X, Nzabarushimana E, Krager K, Aykin-Burns N, Hauer-Jensen M, Demokritou P, Kavouras IG, Koturbash I. (2015) In Vitro Toxicity and Epigenotoxicity of Different Types of Particulate Matter. 46th Environmental Mutagenesis and Genomics Society Annual Meeting, New Orleans, LA.
29. Miousse IR, Chalbot MCG, Nzabarushimana E, Kavouras IG, Koturbash I. (2014) Effects of the type of particulate matter on epigenetic response. South Central Chapter of Society of Toxicology Annual Meeting, Oxford, MS. (*Award for the best non-student presentation.)*
30. Ferguson A, Kavouras IG, Ulmer RR, Harris K, Gandy J, Fitzpatrick S (2014) Liberating Structures for Teachers, Institutes, Parents, and Students on Pest Management and Chemical Use Reduction in Homes. National Healthy Homes Conference, Nashville, TN
31. Chalbot M-C, Brown J, Chitranshi P, da Costa GG, Pollock ED, Kavouras IG (2014) H-NMR characterization of water soluble compounds in size-segregated aerosols in an urban area. 247th ACS National Meeting and Exposition, Dallas, TX.
32. Miousse IR, Chalbot MCG, Nzabarushimana E, Kavouras IG, Koturbash I. (2014) Effects of the source and chemical composition of particulate matter on epigenetic response in macrophages. 45th Environmental Mutagenesis and Genomics Society Annual Meeting, Orlando, FL. (*EMGS New Investigator Travel Award Winner)*
33. Miousse IR, Chalbot MC, Nzabarushimana E, Kavouras I, Koturbash I. (2014) Short-term exposure to different sources of particulate matter affects epigenetic mechanisms in lung macrophages. UAMS Research Day, Little Rock, AR.

34. Chalbot, M.C., Brown, J., Chitranshi, P., Gamboa da Costa, G., Kavouras, I.G., 2014. Atmospheric organic aerosol characterization by nuclear magnetic resonance spectroscopy. SETAC North America 35th Annual Meeting in Vancouver, Canada. November 10-14, 2014.
35. Kavouras IG, Racine-Miousse I, Chalbot MC, Aykin-Burns N, Wang X, Basnakian A, Koturbash I. (2013) Epigenetic alterations induced by non-cytotoxic concentrations of ambient particulate matter in the RAW264.7 macrophages.2013 Annual Meeting, South-Central Chapter of Society of Toxicology. Baton Rouge, LA
36. Chalbot M-C, Brown J, da Costa GG, Kavouras IG. (2013) Soil humic-like organic compounds in fire emissions. Society of Environmental Toxicology and Chemistry Annual Meeting, Nashville, TN, USA
37. Rodopoulou S, Chalbot M-C, Samoli E, DuBois DW, San Filippo BD, Kavouras IG. (2013) Air pollution and hospital emergency room and admissions for cardiovascular and respiratory diseases in Doña Ana County, New Mexico. 2013 Conference of the International Medical Geology Association, Arlington, VA, USA
38. DuBois DW, Chalbot M-C, Kavouras IG. (2013) Assessment of the contribution of wildfires on ozone concentrations in the central US-Mexico border region. Environmental Health, Boston, MA, USA.
39. Lianou M, Kavouras IG, Kopania T, Kotronarou A. (2012) The impact of wind conditions on particle mass concentrations in Athens, Greece. 11th International Conference on Meteorology, Climatology and Atmospheric Physics. Athens, Greece.
40. Casas M, Den Hond E, Kavouras I, Pierik F,Slama R, Toft G, Wilhelm M,Vrijheid M. (2011) Measurement of emerging environmental contaminants in European birth cohorts: an inventory and recommendations. 23rd International ISEE conference, Barcelona, Spain.
41. Kavouras IG, Vandentorren S, Vacquier B, Boudet C, Declercq C. (2010) The ELFE study. SLLS Conference: Developments and Challenges in Longitudinal Studies from Childhood. Cambridge, UK.
42. Shafer DS, Etyemezian V, Chief K, Dubois D, Kavouras IG, King J, Miller JJ, Nikolich G, Zitzer .F. (2010) Ecological and physical response and feedbacks to fires in western North American deserts. International Conference on Dryland Development. Oman.
43. King J, Shafer DS, Etyemezian V, Kavouras IG, Nikolich G. (2010) Measuring potential wind erosion from a rangeland fire in the Mojave-Great Basin transition zone. 16thWildland Shrub Symposium, Logan, Utah.
44. Lianou M, Kavouras IG, Kotronarou A. (2010) Factors affecting the spatial distribution of PM10 in Athens. 10th International Conference on Meteorology Climatology and Atmospheric Physics, Athens, Greece.
45. Kavouras IG, DuBois DW, Nikolich G, Eyemezian V. (2009) Impacts of wildfires of exposures to ozone and particulate matter. ISES 2009. Minnesota, USA.
46. DuBois D, Kavouras IG, Nikolich G. (2009) Boundary layer profiling using various techniques for air quality assessments. 89th Annual Meeting of the American Meteorological Society. Arizona, USA.
47. Shafer DS, Miller JJ, Dubois D, Etyemezian V, Kavouras I, Nikolich G, Zitzer SF. (2009) Measuring potential fluvial and Aeolian erosion from a rangeland fire in the Mojave-Great Basin transition zone. 2009 GSA Annual Meeting, Oregon, USA.
48. Lianou M, Lazaridis M, Kavouras IG.(2009) Factors affecting the indoor particle number concentrations in 35 residencies in Athens. 7th International Conference on Air Quality - Science and Application. Istanbul, Turkey.
49. Kavouras IG, DuBois DD, Etyemezian VE, Louks B, Herr H, O'Brien R. (2008) Impacts of wildfires and mobile emission on ozone concentrations in Treasure Valley. A&WMA 2008 Annual Conference and Exhibition. Oregon, USA.
50. Kavouras IG, Etyemezian VE, DuBois DD, Xu J, Pitchford MP. (2008) Sources of atmospheric dust in Class I areas of the Western US. General Assembly of European Geophysical Society Vienna, Austria.
51. Shafer D, DuBois D, Etyemezian V, Kavouras I, Miller JJ, Nikolich G, Stone M. (2007) Fire as a long-term stewardship issue for soils contaminated with radionuclides in the western US. Proceedings of

the 11th International Conference on Environmental Remediation and Radioactive Waste Management ICEM2007. Brussels, Belgium.

52. Lianou M, Kavouras IG, Kotronarou A, Lazaridis M, Lykoudis S. (2006) Factors affecting the spatial distribution of PM_{10} in Athens.8th International Conference on Meteorology Climatology and Atmospheric Physics. Athens, Greece
53. Kavouras IG, Kotronarou A, Lianou M, Chalbot M-C, Vei I, Akylas E. (2006) Relationships between particle number and mass concentrations in an urban area. 2006 AWMA Annual Conference & Exhibition. New Orleans, LA, USA.
54. Kavouras IG, EtyemezianV, Xu J, DuBois D, Pitchford M, Green M. (2006) Investigation of the sources of coarse particles in Western United States. 2006 AWMA Annual Conference & Exhibition. New Orleans, LA, USA.
55. Xu J, Kavouras IG, DuBois D, Etyemezian V, Green M, Pitchford M. (2006) Contribution of smoke to regional haze in the Class I areas of the Western United States. 7th International Aerosol Conference. Minneapolis, MN, USA.
56. Kavouras IG, Xu J, Etyemezian V, DuBois D, Green M, Pitchford M. (2006) Contributions of dust and smoke on aerosol extinction coefficient. *Eos Trans 87*(52) Fall Meet Suppl, Abstract A43B-0135.
57. Sgourena E, Stamatis G, Kavouras IG, Tsiros I. (2006) Wet deposition composition in Athens basin in relation to the atmospheric pollution. 8th International Conference on Meteorology Climatology and Atmospheric Physics. Athens, Greece.
58. Kavouras IG, Etyemezian V, Xu J, DuBois D, Pitchford M. (2005) Investigating the causes of dust in western United States. *Eos Trans AGU, 86*(52) Fall Meet Suppl, Abstract A31A-0813.
59. Petrakis M, Kavouras IG, Psiloglou B, Lykoudis S, Kopania T. (2005) Assessment of traffic induced pollution from the new highway of Athens (AttikiOdos). Proceedings of the 10th International Conference on Harmonization within Atmospheric Dispersion Modeling for Regulatory Purposes.
60. Lianou M, Kavouras IG, Kotronarou A. (2004) Investigation of processes affecting PM10 and $PM_{2.5}$ mass concentrations in in Athens metropolitan area. Meteorology and sources.7th International Conference on Meteorology Climatology and Atmospheric Physics. Nicosia, Cyprus.
61. Kambezidis HD, Lykoudis S, Psiloglou BE, Kavouras IG. (2004) UV-R radiation in the Athens area Greece in the period 1989-2003. CIE Light and Health 2004. Vienna, Austria.
62. Winterhalter R, Römpp A, Kavouras IG, Moortgat GK. (2003) Products from the reaction of monoterpenes with ozone and their distribution between the gas- and particle-phase. Atmospheric Sciences Program EGS-AGU-EUG Joint Assembly. Nice, France.
63. Stephanou EG, Kavouras IG. (2003) Atmospheric secondary organic aerosol formation through heteromolecular nucleation. Atmospheric Sciences Program EGS-AGU-EUG Joint Assembly. Nice, France.
64. Kavouras IG, Stephanou EG. (2002) Direct evidence of atmospheric secondary organic aerosol formation through heteromolecular nucleation. Atmospheric Chemistry within the Earth System: From Regional Pollution to Global Climate Change, Heraclion, Greece.
65. McDow S, Moeini-Nombel L, Lee M-H, Kavouras IG, Allen GA, Koutrakis P (2002) Orga (a8 nic composition of PM25 in the NorthEast Oxidation and Particulate Study using a low cut-off inertial impactor. 4th Conference on Atmospheric Chemistry The 2002 Annual Meeting American Meteorology Society. Miami, FL, USA.
66. Kavouras IG, Mihalopoulos N, Stephanou EG. (2000) Formation of biogenic secondary organic aerosol. *Journal of Aerosol Science* 31, S172-S173.
67. Kavouras IG, Mihalopoulos N, Stephanou EG. (2000) Formation of secondary organic aerosol. 5th International Conference on Protection and Restoration of the Environment. Thassos, Greece.
68. Kavouras IG, Koutrakis P. (2000) Polyurethane foam: A high-capacity collection medium of particles by impaction. 5th International Conference on Protection and Restoration of the Environment. Thassos, Greece.

69. Kavouras IG, Stephanou EG. (2000) Heterogeneous heteromolecular nucleation: A possible mechanism for the formation of biogenic secondary organic aerosol. 7th International Conference on Carbonaceous Particles in the Atmosphere. Puerto Rico.
70. Koutrakis P, Demokritou P, Kavouras IG, Ferguson ST. (2000) Development of particle sampling techniques for inhalation studies. 19th Conference of American Association for Aerosol Research. St. Louis, MI, USA.
71. Kavouras IG, Koutrakis P, Tsapakis M, Stephanou EG, Oyola P, von Baer D. (2000) Source apportionment of urban PAHs using multivariate statistical methods. 7th International Conference on Carbonaceous Particles in the Atmosphere. Puerto Rico.
72. Oyola P, Martinez R, Flores V, Kavouras IG, Koutrakis P, von Baer D, Gidhagen L, Artaxo P (2000) Measurement and Trajectory Analysis of PM_{25} Elemental and Organic Carbon in Santiago Metropolitan Region Chile. 7th International Conference on Carbonaceous Particles in the Atmosphere. Puerto Rico.
73. von Baer D, Kavouras IG, Koutrakis P, Lagoudaki E, Stephanou EG, Oyola P (2000) Comparison of hydrocarbon and polynuclear aromatic hydrocarbon profiles of organic aerosol in Santiago and Temuco (Chile). 7th International Conference on Carbonaceous Particles in the Atmosphere. Puerto Rico.
74. Kavouras IG, Koutrakis P. (2000) Design and performance of a high-capacity cascade impactor. 19th Conference of American Association for Aerosol Research. St. Louis, MI, USA.
75. Kavouras IG, Demokritou P, Ferguson ST, Koutrakis P. (2000) High volume cascade impactor for toxicological and chemical characterization studies. 19th Conference of American Association for Aerosol Research. St. Louis, MI, USA.
76. Koutrakis P, Demokritou P, Ding Y, Kavouras IG, Ferguson ST. (2000) Development of particle sampleing techniques for inhalation studies. 19th Conference of American Association for Aerosol Research. St. Louis, MI, USA.
77. Kavouras IG, Ferguson ST, Koutrakis P. (2000) Use of polyurethane foam as impaction substrate/collection medium in conventional impactors for toxicological and chemical speciation studies. PM2000: Particulate matter and health-The scientific basis for regulatory decision making. Charleston, SC, USA.
78. Demokritou P, Kavouras IG, Ferguson ST, Wolfson JM, Koutrakis P, Wheeler A. (2000) A personal environmental monitoring system for measurements of particulate and gaseous pollutants. PM2000: Particulate matter and health-The scientific basis for regulatory decision making. Charleston, SC, USA.
79. Kavouras IG, Mihalopoulos N, Stephanou EG. (1999) Formation and gas/particle partitioning of monoterpenes photo-oxidation products over forests. 24th General Assembly of European Geophysical Society. The Hague, The Netherlands.
80. Kavouras IG, Ferguson ST, Wolfson JM, Koutrakis P. (1999) Use of polyurethane foam (PUF) as an impaction substrate. 18th Conference of American Association for Aerosol Research Seattle, WA, USA.
81. Kavouras IG, Ferguson ST, Wolfson JM, Koutrakis P. (1999) Design and characterization of a high-volume impactor for particle toxicological and characterization studies 3rd Colloquium on Particulate Air Pollution and Human Health. Durham, NC, USA.
82. Kavouras IG, Demokritou P, Koutrakis P. (1999) Measurement techniques of particles in indoor environment. 3rd International Scientific Conference of Technical Chamber of Greece. Athens, Greece.
83. Demokritou P, Kavouras IG, Koutrakis P. (1999) Experimental methods to measure air exchange rates and contaminants concentration levels in the building environment. 3rd International Scientific Conference of Technical Chamber of Greece. Athens, Greece.
84. Bonsang B, Kanakidou M, Mihalopoulos N, Kavouras IG, Stephanou EG, Pio C, Nunes T, Alves C, Gomes P, Seakins P, Lewis A, Harrison D, Boissard C, Gros V, Sanak J. (1998) Field observation

and modeling of the formation of biogenic organic aerosols in Mediterranean Area. 23rd General Assembly of European Geophysical Society. Nice, France.

85. Kavouras IG, Mihalopoulos N, Stephanou EG. (1998) Field evidence for the chemical coupling between terpenes acidic photo-oxidation products and new particle formation over forested areas. Joint International Symposium on Global Atmospheric Chemistry. Seattle, WA, USA.
86. Kavouras IG, Apostolaki M, Stephanou EG. (1997) Determination of fine organic aerosol content in semi-rural and forest areas in Portugal. 6th International Conference on Carbonaceous Particles in the Atmosphere. Vienna, Austria.
87. Stephanou EG, Gogou A, Kavouras IG. (1997) Atmospheric input of natural and anthropogenic organic compounds in the Eastern Mediterranean Sea. European Workshop on Sea-Air Exchange: Processes and Modeling. Oslo, Norway.
88. Kavouras IG, Mihalopoulos N, Stephanou EG, Louisse C, Cachier H, Kanakidou M, Nguyen B-C, Dulac F, Quisefit J-P Chazette P. (1996) Measurements of aerosol composition and optical depth above Eastern Mediterranean Area. 21st General Assembly of European Geophysical Society. The Hague, The Netherlands.

CURRICULUM DEVELOPMENT

City University of New York
- EOHS 695 Public Health Emergency Preparedness, Climate and Response (graduate)
- EOHS 622 Environmental and Occupational Toxicology (graduate)
- EOHS 647 Climate Change and Public Health (graduate)
- EOHS 621 Environmental Chemistry (graduate)

University of Alabama at Birmingham
- PUH 498 Climate Change, Health and Environment (undergraduate)
- ENH 601 Environmental Chemistry (graduate)
- ENH 609 Climate Change and Global Health (graduate)
- ENH 763 Aerosol Technology (doctoral)
- ENH 701 Advanced Environmental Chemistry (doctoral)

University of Arkansas for Medical Sciences
- PBHL 6053 Climate Change and Public Health (graduate)

University of Crete
- SEE 610 Ecological Risk Assessment: Pollutants Source Apportionment (graduate)

TEACHING EXPERIENCE

Texas Tech University Health Sciences Center, Southwest Center of Pediatric Environmental Health, Toxicology Division, Department of Emergency Medicine
- Pediatric Environmental Health (invited contributor), Fall 2021.

City University of New York
- EOHS 695 Public Health Emergency Preparedness, Climate and Response (course, director), 2021
- EOHS 895 Emerging Issues in Environmental and Occupational Health (course director), 2019
- EOHS 622 Environmental and Occupational Toxicology (course director), 2019
- EOHS 695 Climate Change and Global Health (course director), 2018, 2019, 2021
- EOHS 621 Environmental Chemistry (course director), 2018, 2019, 2020. 2021
- PUBH 698 Capstone Project (course director), 2018. 2019, 2020, 2021, 2022

University of Alabama at Birmingham
- ENH 601 Environmental Chemistry (course director), 2017
- ENH 763 Aerosol Technology (course director), 2017
- PUH 498 Climate Change, Environment and Health (course director), 2016, 2017

ENH 611 Environmental and Occupational Exposure Assessment (course director), 2016, 2017
ENH 705/609 Climate Change and Global Health (course director), 2016, 2017
ENH 790 Current Topics in Environmental and Occupational Health and Safety (course director), 2015, 2016
NUR 798 Research Practicum (course director/mentor), 2016
PUH 491 Undergraduate Research (course director/mentor), 2016
PUH 498 Climate Change, Environment and Health (course director), 2016, 2017
PUH 498 Undergraduate Directed Research (course director/mentor), 2016

University of Arkansas for Medical Sciences
PBHL 6053 Climate Change and Public Health (course director), 2014, 2015
PBHL 5043 Occupational and Environmental Hazard Control (lectures), 2011, 2012, 2013, 2014

Before 2011 (University of Nevada, Las Vegas; University of Crete, Harvard University)
CEE 452/652 Air Pollution Control. (Lectures, UNLV), 2009
EE 610 Ecological Risk Assessment: Pollutants Source Apportionment. (Course director, UoC), 2002
EH 297-01 Air Pollution: Sources, Effects and Modelling (lectures, HSPH), 1999

MENTORING

Post-doctoral fellows

Adamantini Paraskevopoulou – Academic advisor (2002-2004) [Currently Associate Professor at Aristotle University of Thessaloniki]
Marie-Cecile Chalbot – Academic advisor (2003-2005) [Currently Associate Professor at CUNY College of Technology]
Ino-Christina Vei – Academic advisor (2003-2005) [Currently Scientist at State Chemical Labs, Greece]

Doctoral students

Hadler DaSilva – Academic advisor, PhD in EPHS dissertation committee chair (CUNY SPH, 2023-)
Anthony Sun – Academic advisor, PhD in EPHS dissertation committee chair (CUNY SPH, 2023-)
Adrianna Eugene – Academic advisor, PhD in EPHS dissertation committee chair (CUNY SPH, 2022-)
Carice Graffey – Academic advisor, DrPH in EOHS Qualifying exam chair, PhD dissertation committee chair (CUNY SPH, 2020-)
David Goldfarb – Academic advisor, PhD in EPHS dissertation committee chair (CUNY SPH, 2018-2022) [Currently Research Associate at Fire Department of New York]
Subraham Singh – Academic advisor, DrPH in EOHS Qualifying exam chair, PhD dissertation committee chair (CUNY SPH, 2019-2022) [Currently Scientist at NYC Department of Environmental Conservation]
Adam Nored – Academic advisor, PhD in Interdisciplinary Engineering, Qualifying exam member, PhD dissertation committee member (UAB Engineering, 2017-2022)
Jordan Nelson – Academic advisor, PhD in EHS, PhD dissertation committee chair (UAB SPH, 2016-2021) [Currently Assistant Professor at UAB SPH]
Oluwabunmi Dada – Academic advisor, PhD in EHS, PhD dissertation committee chair (UAB SPH, 2016-2021) [Currently Assistant Professor at Murray State University]
Rupkatha Bardham – Academic advisor, PhD in EHS, PhD dissertation committee member (UAB SPH, 2015-2019) [Currently Assistant Professor at Murray State University]
Maria Lianou – Academic advisor, PhD in Environmental Engineering, PhD dissertation committee member (Technical University of Crete, 2005-2010) [Currently Research Associate at National Observatory of Athens]

Graduate students

Dawn McKay, 2023, (MPH Fieldwork mentor, CUNY)
Faith Forde, 2023 (MPH Master's Essay mentor, CUNY)
Pange Salden, 2023, (MPH Fieldwork and Master's Essay mentor, CUNY)

Abida Kabir, 2022, (MPH Fieldwork and Master's Essay mentor, CUNY) - *Dean's Merit Award for Excellence and Dean's Merit Award for Research*
Lindiwei Farrow-Harris, 2021, (MPH Fieldwork and Master's Essay mentor, CUNY)
Adesola Adewale, 2021, (MPH Fieldwork and Master's Essay mentor, CUNY)
Brooke Rawson, 2021, (Independent study, CUNY, Infectious diseases climatology)
Gertrude Turinawe Hatanga, 2020, (MPH Fieldwork and Master's Essay mentor, CUNY)
Priyanshi Patel, 2020, (MPH Fieldwork and Master's Essay mentor, CUNY)
Colleen Kearns, 2020, (MPH Fieldwork and Master's Essay mentor, CUNY)
Miranda Hogan, 2020, (MPH Fieldwork and Master's Essay mentor, CUNY)
Kenneth Velasquez, 2020, (MPH Fieldwork and Master's Essay mentor, CUNY)
Erin Stolz, 2020, (MPH Fieldwork and Master's Essay mentor, CUNY)
Karina Castillo, 2019, (CEESP mentor, MPH Fieldwork and Master's Essay mentor, CUNY) - *Dean's Merit Award for Research*
Apeksha Vora, ongoing, 2019, (MPH Fieldwork and Master's Essay mentor, CUNY) - *Dean's Merit Award for Research*
Alhaji A Dansani, ongoing, 2019, (MPH Fieldwork mentor, CUNY)
Sonia Ibelka Aracena, ongoing, 2018, (MPH advisor, Fieldwork mentor, CUNY)
Jennifer Cristine Grosberger, 2018, (MPH Fieldwork mentor, CUNY)
Dionibe Some, 2018, (MPH Fieldwork mentor, CUNY)
Yana Martysevich, 2018, (MPH Fieldwork mentor, CUNY)
Taksh Shah, 2018, (MPH Fieldwork mentor, CUNY)
Maria Kyprianidou, 2016, (MS committee member, NKUA)
Tina Gomez, 2012, (MPH Capstone mentor, UAMS)
Victor Vargas, 2013, (MS thesis mentor, UAMS)
Tam Vuong, 2015, (MPH committee member, UAMS)
Maria Gini, 2005, (MS committee member, NKUA)
Eleni Sgourina, 2005 – 2006, (MS committee member, AUoA)

Undergraduate students

Jared Ball, 2016, BS (Directed Research Study mentor, UAB)
Frankie Kimbrell, 2016, BS (Directed Research Study mentor, UAB)
Stella I. Sheke, 2016, BS (Directed Research Study mentor, UAB)
Ikiyoulemo Ekperekunmo, 2016, BS (Directed Research Study mentor, UAB)
Mark Austin, 2015, BS (Directed Research Study mentor, UAB)
Brianna J. Richey, 2015, BS (Directed Research Study mentor, UAB)
Praise Tangbe, 2015, BS (Directed Research Study mentor, UAB)

K-12 students

Rachel Masterson, 2021, HS, Dobbs Ferry Science Program (CUNY) – 2022 NASA Earth System Science Award at the WESEF competition
Frida Bajic, 2020, HS, Dobbs Ferry Science Program (CUNY)
Alexander Scott-Hansen, 2020, HS, Dobbs Ferry Science Program (CUNY)
    Winner of the 2020 DFHS Science Research Symposium
    Finalist of the 2020 Genious Olympiad International Competition
Tamara Jones, 2013, HS (AR Commitment Scholars mentor, UAMS)
Breanna MacElroy, 2012, HS (AR Commitment Scholars mentor, UAMS)

PROFESSIONAL EXPERIENCE

Search Committee Chair (appointed by the Ministry of Development and Infrastructure) for the Director of the Institute for Environmental Research and Sustainable Development at National Observatory of Athens, Greece

The 6th International Electronic Conference on Atmospheric Sciences, 15–30 Oct 2023, Scientific Committee
The 4th International Electronic Conference on Atmospheric Sciences, July 16-31, 2021; Scientific Committee, “Air Quality” session leader
Exposure Modelling and Assessment Advisory Group, Society of Environmental Toxicology and Chemistry, 2015 – now
Nanotechnology Advisory Group, Society of Environmental Toxicology and Chemistry, 2014 – now
American Chemical Society, 1998 – now
ACS Central Arkansas Chapter, Councilor, 2015
Society of Environmental Toxicology and Chemistry, 2003 – now

UNIVERSITY SERVICE

City University of New York

Interim Chair, CUNY SPH School-wide Appointments, Promotion and Tenure Committee, 2023
CUNY, COACHE, SPH Liaison, 2022-
Member, Search Committee, SPH Associate Dean of Academic and Student Affairs, 2022
Parliamentarian, SPH Governance Council, 2019-2022
Member, SPH Strategic Planning subtask “Educational excellence”
Chair, CUNY-wide Sexual Misconduct Panel Adjudication Committee, 2020-
Chair, CUNY-wide Sexual Misconduct Panel Appeals Committee, 2020-
Member, Middle States Commission on Higher Education team, Graduate Center, 2020.
Member, SPH, Grade Appeals Committee, 2019-
Lead Faculty, Implementation of Delta Omega Honorary Society at SPH (Leadership and Membership Committee), 2020-
Lead author, SPH, MPH in Environmental and Occupational Health Assessment, 2019-
Chair, SPH Assessment Committee, 2019-
Chair, SPH, Sexual Misconduct Subcommittee, 2019-2020
Member, The Collaborative on Academic Careers in Higher Education, 2019-
Member, Search Committee, Open rank faculty position in Biostatistics, 2019-2020
Member, SPH Faculty-Student Council Steering Committee, 2019-
Evaluator/grader, Comprehensive exam, Doctoral program, 2019
Member, Search Committee, Open rank faculty position in Epidemiology, 2019
Member, SPH, Faculty Student Academic Integrity Committee, 2019-
Member, SPH EOGHS Department Promotion and Tenure Committee, 2018-

University of Alabama at Birmingham

Member, SOPH Educational Policy Committee, 2017
Chair, SOPH EHS Department Promotion and Tenure Committee, 2017
Member, SOPH Promotion and Tenure Committee, 2016
Member, President's Award for Excellence in Teaching Committee, 2015
Member, SOPH Dual Programs Committee, 2015 – now

University of Arkansas for Medical Sciences

Task Leader, Chancellor Executive Cabinet - Academic Senate Retreat, 2013
Member, Faculty Affairs Committee, 2013 – 2015
Member, Exports Control Committee, 2013 – 2015
Member, Intergenerational Day Care Center Committee, 2013 – 2015
Departmental Point-of-Contact, COPH Conference Planning Committee, 2013 – 2015
Member, Academic Senate Executive Committee. 2012 – 2015

Before 2011 (Institut National des Etudes Demographiques, Desert Research Institute, National

Observatory of Athens, University of Crete)

Member, Search Committees for ELFE Regional Coordinators, UnitéMixte INED / INSERM/EFS, 2010
Member, Faculty Senate, Desert Research Institute, 2007 – 2009
DRI Open House, 2006
DRI Research Foundation Trip, 2006
General Secretary, Scientific and Advisory Board, Institute for Environmental Research and Sustainable Development, National Observatory of Athens, 2004 – 2005
Member of the Graduate Program Committee and Acting President, Department of Chemistry, University of Crete, 1994 – 1998

MEDIA APPEARANCE AND INTERVIEWS

Inside Climate News, Justice: Wildfire Haze Adds To New York's Climate Change Planning Needs, https://insideclimatenews.org/news/13062023/wildfire-new-yorks-climate-change-planning/ (released June 14, 2023)

WNYC Health Convening: New York City's Enduring Crises, The Impact of Vehicle Emissions and Idling on New Yorkers, Panelist, https://thegreenespace.org/event/wnyc-health-convening/ (released June 8, 2023)

The City, How to Stay Safe as Hazardous Wildfire Smoke Engulfs New York, https://www.thecity.nyc/health/2023/6/7/23752771/safety-health-wildfire-smoke (released June 7, 2023)

The Gothamist, New York City's air quality is improving — but it still isn't healthy enough. https://gothamist.com/news/new-york-citys-air-quality-is-improving-but-it-still-isnt-healthy-enough (released February 9, 2022)

University of California, Berkeley Center for Occupational and Environmental Health: Firefighter Respiratory and Cardiovascular Health" Climate Change and Smoke Exposure https://youtu.be/F6ypHfKWXDc (released February 8, 2022)

Reuters Health: Female Nurses with Long-Term OR Employment Have Increased Risk of COPD https://www.medscape.com/viewarticle/960433 (released October 8, 2021)

CUNY TV Simple Science: Climate Change Special https://tv.cuny.edu/show/simplyscience/PR2010149 (Aired on April 7, 2021)

The Gothamist, NYC Subway Station Air Not Great For Breathing, Study Finds. The PATH Is Even Worse, https://gothamist.com/news/nyc-subway-air-not-specifically-too-good-study-says (released February 14, 2021)

The Poynter Institute, Peoples-Stokes' assurances on medical marijuana vaping are too broad, https://www.politifact.com/factchecks/2019/nov/02/crystal-peoples-stokes/peoples-stokes-assurances-medical-marijuana-vaping/ (released November 2, 2019)

Policygenious.com, How an e-cigarette crackdown could affect your wallet, (released November 15, 2018)

5. Tenure Upon Appointment, Dr. Vadim Levin

For Approval

Presented by David Russomanno

The University of Memphis Board of Trustees

For Approval

Date: December 12, 2023

Committee: Academic, Research and Student Success Committee

Presentation: Tenure Upon Appointment: Dr. Vadim Levin, Director of the Center for Research and Information (CERI)

Presented by: Dr. David Russomanno, Executive Vice President for Academic Affairs and Provost

Background:

Dr. Vadim Levin is coming to the University of Memphis from Rutgers University, where he currently serves as a tenured professor of earth and planetary sciences. He is a nationally recognized scholar with over 80 peer-reviewed publications in respected journals. He has co-designed and maintains open-source software for seismological data analysis and has operated portable arrays of seismographs in the Appalachians and the Apennines, Kamchatka and Tibet, Quebec and Costa Rica. He has an impressive commitment to open-access observational seismic data, having helped design the Advanced National Seismic System and the Earthscope project. He has earned over $1.7 million dollars in external funding as either sole investigator or as part of a multi-investigator team. The credentials of Dr. Levin have been reviewed at the departmental and college level and he has been unanimously recommended to be awarded tenure upon appointment as professor.

Recommendation:

The Academic, Research, & Student Success Committee recommends approval of tenure for Dr. Levin upon his appointment as professor and Director of the Center for Earthquake Research and Information (CERI).

THE UNIVERSITY OF MEMPHIS

TIMELINE ADJUSTMENT FOR PROMOTION AND/OR TENURE

(formerly known as "Tenure Reduction Form")

FACULTY INFORMATION

NAME: Vadim (FIRST) Levin (LAST) **U-NUMBER:** U00123456

COLLEGE/SCHOOL: College of Arts & Sciences

DEPARTMENT: CERI

PLEASE CHECK ONE (1):

- ☑ **TENURE UPON APPOINTMENT****
- ☐ **PROMOTION TIMELINE** **TIMELINE REDUCTION** _____ **YEAR(S)**
- ☐ **TENURE TIMELINE *** **TIMELINE REDUCTION** _____ **YEAR(S)**
- ☐ **TENURE & PROMOTION TIMELINE *** **TIMELINE REDUCTION** _____ **YEAR(S)**

* WILL THIS REDUCTION RESULT IN A CHANGE IN THE INDIVIDUAL'S MID-TENURE REVIEW TIMING? ☐ YES ☐ NO

IF YES, INDICATE THE ADJUSTED MID-TENURE YEAR: _____
(YEAR ONLY – 20XX)

JUSTIFICATION REQUIRED

PLEASE SUBMIT YOUR CV AND JUSTIFICATION, ALONG WITH THIS FORM TO PROVOST@MEMPHIS.EDU.

**Please reference Section 4.9.3A in the Faculty Handbook regarding procedures for Tenure Upon Appointment

RECOMMEND APPROVAL

		RECOMMENDED
Mitch Withers CHAIR SIGNATURE	10/20/2023 DATE (MM/DD/YYYY)	☑ YES
Abby Parrill DEAN SIGNATURE	11/02/2023 DATE (MM/DD/YYYY)	☑ YES

APPROVAL

		APPROVED
David Russomanno PROVOST SIGNATURE	11/01/2023 DATE (MM/DD/YYYY)	☒ YES

***ADJUSTED TENURE AND/OR PROMOTION APPLICATION:** _____ (SEMESTER) _____ (YEAR – 20XX)
**COMPLETED BY PROVOST*

THE UNIVERSITY OF MEMPHIS

PROMOTION AND/OR TENURE RECOMMENDATION FORM

(FORMERLY KNOWN AS "T&P RECOMMENDATION SIGNATURE FORM")

FACULTY INFORMATION

NAME: Vadim (First) Levin (Last) U-NUMBER: U00123456

COLLEGE/SCHOOL: College of Arts & Sciences

DEPARTMENT: CERI

INDIVIDUAL APPLYING FOR:

☐ PROMOTION ☑ TENURE ☐ TENURE & PROMOTION EFFECTIVE: Fall 2024

DEPARTMENT PROMOTION AND/OR TENURE COMMITTEE

RECOMMENDATION: ☑ POSITIVE ☐ NEGATIVE VOTE BREAKDOWN: 4 POSITIVE 0 NEGATIVE 0 ABSTAIN 0 ABSENT

Charles A. Langston — DEPARTMENT COMMITTEE CHAIR

October 20, 2023 — DATE

DEPARTMENT CHAIR RECOMMENDATION

RECOMMENDATION: ☑ POSITIVE ☐ NEGATIVE

[signature] — DEPARTMENT CHAIR

10/20/23 — DATE

COLLEGE PROMOTION AND/OR TENURE COMMITTEE

RECOMMENDATION: ☑ POSITIVE ☐ NEGATIVE VOTE BREAKDOWN: 5 POSITIVE 0 NEGATIVE 0 ABSTAIN 1 ABSENT

Robin Lennon-Dearing — COLLEGE COMMITTEE CHAIR

11/2/23 — DATE

COLLEGE DEAN RECOMMENDATION

RECOMMENDATION: ☑ POSITIVE ☐ NEGATIVE

[signature] — COLLEGE DEAN

11/2/23 — DATE

REVISED MARCH 2023

College of Arts & Sciences

Scates Hall 107
Memphis, Tennessee 38152-3370

Dean's Office: 901.678.3067
CAS Advising: 901.678.5454
Interdisciplinary Studies: 901.678.3550
Fax: 901.678.4831

www.memphis.edu

October 20, 2023

Dr. Vadim Levin
Department of Earth and Planetary Sciences
Rutgers University
Piscataway, NJ. 08854

Dear Dr. Levin,

It is my pleasure to offer you the position of Director of the Center for Earthquake Research and Information (CERI), with appointment at the rank of Professor, effective January 1, 2024, conditional upon confirmation of your academic degrees. You will also hold the rank of Professor, with tenure upon appointment to be recommended by the President to the University of Memphis Board of Trustees at their next meeting. The Director of CERI reports to the Dean and has primary responsibility for providing leadership to and administering CERI. As director, your academic year base salary will be $150,000.00, which includes a seven percent administrative supplement. Should you transition to a regular 9-month faculty position prior to completion of 8 years as director, you will relinquish the 7% administrative supplement. Additionally, you will receive 5/32 of your base academic salary for administering the center during the summer, for a total salary of $173,437.50 annually. The initial term of the director appointment is 5 years, after which you and the Dean of CAS may agree to a three-year extension.

As a nine-month faculty member, you will be eligible for summer compensation from external grants and contracts, with total summer compensation limited to no more than one-third of your academic year base salary. You will also be eligible for additional incentive pay based on a percentage of buy-out time from externally funded sponsored research.

You will be provided startup funding totaling $300,000 to be divided between three fiscal year, with $60,000 in the 2023-2024 fiscal year (FY24), $140,000 in FY25, and $100,000 in FY26. We will also provide $8,000 to help cover some of your moving, relocation and short-term housing expenses.

I am excited about your acceptance of this position. I am confident that that the considerable talents, vision, and experience you bring will advance the mission, facilitate increased scholarly productivity and external funding success amongst the faculty, and enhance the overall success and impact of CERI.

Sincerely,

Abby L Parrill, Dean

Application: Vadim Levin

Posting number: FAE1341
Posting: Associate/Professor Director, CERI (Full-Time Faculty & Academic Executive)
Form: No References Faculty
Submitted: June 17, 2023 at 06:10 PM (CDT) (confirmation number: CN000441018)

Personal

Personal Information

Preferred Salutation	Dr.
First Name	Vadim
Middle Name	L
Last Name	Levin
Suffix	
Preferred Name	
Street Address	555 North Avenue #25F
City	Fort Lee
State	NJ
Country	United States of America
Zip Code	07024
County	
Length of Residence	
Primary Phone Number	201-658-2357
Type of phone	Mobile
Secondary Phone Number	
Type of phone	
E-Mail Address	vadim.seismo@gmail.com
Select your highest level of education completed	Doctoral Degree
School of Highest Degree	Columbia University
Discipline	Geophysics / Seismology
If degree is not a terminal degree, are you ABD?	
If Yes, when do you expect to graduate?	
Total Years Experience in Higher Education	27

Are you legally authorized to work in the United States?	Yes
Will you now or in the future require sponsorship for employment visa status (e.g., H-1B visa status)?	No
Do you have relatives currently employed or share a primary residence with any individuals currently employed at this University?	No
If yes, please list name(s), relationship, and department.	
How did you hear about this position?	From a U of M Employee
Other Website Name	
If you selected U of M employee, please list the employee(s) and department(s)	Prof. Charles Langston, Center for Earthquake Research and Information

Acknowledgements

Fair Credit Reporting Act Disclosure and Authorization

I have read the full text of the FCRA Disclosure and Authorization and I authorize and consent to the release of consumer reports to the University of Memphis.	I authorize

Background Check Disclosure and Authorization

I have read the full text of the Background Disclosure and Authorization and I authorize University of Memphis, through its independent contractor, to procure a consumer report and/or investigative consumer report on me.	I authorize

SACS Criteria

SACS Criteria	Yes

Supplemental Questions

Required fields are indicated with an asterisk (*).

Optional & Required Documents

Required Documents

Kind	Name	Conversion Status
Curriculum Vitae	Curriculum Vitae 06-17-23 18:04:40 (CDT)	PDF complete
Cover Letter	Cover Letter 06-17-23 18:02:25 (CDT)	PDF complete
Teaching Philosophy	Teaching Philosophy 06-17-23 17:46:51 (CDT)	PDF complete
Other Document 1	Other Document 1 06-17-23 17:50:08 (CDT)	PDF complete
Other Document 2	Other Document 2 06-17-23 17:48:36 (CDT)	PDF complete
References List	References List 06-17-23 17:47:19 (CDT)	PDF complete
Unofficial Transcript	Unofficial Transcript 06-17-23 17:47:53 (CDT)	

Optional Documents

No optional documents added.

Certification

In compliance with federal law, all persons hired will be required to verify identity and eligibility to work in the United States and to complete the required employment eligibility verification document form upon hire. I certify that the answers given on this application are true and complete to the best of my knowledge. I understand that, if employed, falsified information, omission of facts on this application, or failure to provide proof of educational requirements (including original transcripts) shall be considered sufficient cause for dismissal. It is also a Class A misdemeanor to misrepresent academic credentials. The Southern Association of Colleges and Schools criteria require that each faculty member teaching credit courses leading to the baccalaureate degree, must have completed at least 18 graduate hours in the teaching discipline and hold at least a master's degree, or hold the minimum of a master's degree with a major in the teaching discipline. Faculty teaching graduate courses must hold a degree commensurate to the teaching level. Authorization is given to conduct pre-employment checks.

[X] I certify that I have read and agree with these statements.

VL Please enter your initials to verify your identity.

Submitted on June 17, 2023 at 11:10 PM (UTC) by Vadim Levin

Vadim Levin

web: https://sites.rutgers.edu/vadim-levin Earth and Planetary Sciences, Rutgers University
voice: (201) 658-2357 (mobile) e-mail: vadim.seismo@gmail.com 610 Taylor Rd., Piscataway, NJ, 08854

EDUCATION

1996	**Ph.D**., Seismology, Columbia University
1988	**Diploma with honors** (M.E. equivalent), Exploration Geophysics, Gubkin Russian State University of Oil & Gas

RESEARCH INTERESTS

Earth's crust and upper mantle structure, origin and evolution of continents, subduction zone processes, seismic wave propagation in anisotropic medium, seismic data analysis methods

PROFESSIONAL EXPERIENCE

2016 – present	**Professor**, Rutgers University, Dpt. of Earth and Planetary Sciences
2009 – 2016	**Associate Professor**, Rutgers University, Dpt. of Earth and Planetary Sciences,
2002 – 2008:	**Assistant Research Professor**, Rutgers University, Dpt. of Geological Sciences,
2001 – 2002:	**Research Scientist**, Yale University, Dpt. of Geology and Geophysics
1997 – 2001:	**Associate Research Scientist**, Yale University, Dpt. of Geology and Geophysics,
1996 – 1997:	**Postdoctoral Research Associate**, Yale University, Dpt. of Geology and Geophysics,
1990 - 1996:	**Graduate Research Assistant**, Columbia University, Dept. of Geological Sciences,
1989 - 1990:	**Senior Research Staff Assistant**, Lamont-Doherty Geological Observatory

FIELDWORK EXPERIENCE:

2018 - 2021	Costa Rica Operation of six broadband seismographs with the University of Costa Rica.
2012 - 2017:	Maine, Quebec and Nova Scotia Deployment, operation, recovery of broadband Earthscope FlexArray
2007, 2011:	Western Tibet deployment and retrieval of 30-element portable broad band seismic array.
2005:	Costa Rica: deployment of 3-element portable broad-band passive array.
2004, 2006:	Northern Apennines, Italy Survey, installation, and retrieval of 25-node broadband passive array.
2000:	Long Island, NY broadband data acquisition feasibility experiment
1997, 1998:	Kamchatka, Russia site survey, deployment of 15-node passive broadband seismic array
1994 - 1995:	Vermont, Maine operation of 4 portable broad band seismic stations;
1994:	Krafla volcano, Iceland, active/passive source short-period seismic array deployment;
1989 - 1991:	Shumagin Islands, Alaska short-period seismic network maintenance, geodetic measurements

HONORS:

2018 Undergraduate Academic Affairs Service Award, Rutgers University
1995 Heezen Prize, Department of Geological Sciences, Columbia University

SOCIETIES: American Geophysical Union, Seismological Society of America, Earthscope Consortium (Rutgers University representative);

TEACHING: Earthquakes and Volcanoes (460:201 – live, hybrid, online asynchronous versions); Introduction to Geophysics (460:306); Structure and Formation of the Earth (460:506); Geodynamics (460:507); Geophysics I: Seismology (460:555); Graduate seminars: seismological theory, observational seismology, seismic anisotropy; Survey seminars on earthquakes and society ("Political Earthquakes"; "When Foundations are Shaken") and volcanoes ("Volcanoes of Costa Rica" – traveling seminar).

PROFESSIONAL SERVICE: *Incorporated Research Institutions for Seismology:* 2014 Electromagnetic Advisory Committee, 2015 – 2018 Data Services Standing Committee; *Earthscope:* 2011-2014, USArray Advisory Committee; *Americal Geophysical Union,* 2010 – 2016 Associate Editor, Jour. of Geoph. Res. - Solid Earth; *Tectonophysics*, 2005-2012, editorial board member; *National Science Foundation*: 2015, 2017 panelist

UNIVERSITY SERVICE:

2018 – 2023 Faculty Director, Aresty Research Center for Undergraduates; 2016 - 2022 Language Requirement Task Force, Language Engagement implementation committee; 2017 - 2018 Learning Management System Task Force; 2013 - 2018 Online Education Steering Committee, School of Arts & Sciences; 2009 – 2012 Appointments and Promotions Advisory Committee for non-tenured faculty, Math & Physics, School of Arts & Sciences;
2012-2015; 2021 Undergraduate Program Director, Dept. Earth and Planetary Sciences

SELECTED PUBLICATIONS (since 2000; * denotes papers authored by my students and postdocs)

Full publication list: https://sites.rutgers.edu/vadim-levin/publications/

* Bourke, J., V. Levin , I. Arroyo, and L. Linkimer, (2023) Evidence for Caribbean Plate subduction in Southern Costa Rica, *Geology, accepted 12/22/22, online 03/02/23, https://doi.org/10.1130/G50796.1*

Levin, V., H. Yuan & A. Hynes, (2022) Continents never forget: seismological record of lithospheric deformation 1 billion years ago, *Geological Society of London Special Publications, online 28 October 2022, https://doi.org/10.1144/SP531-2022-164*

* Chen, X., Levin, V., & Yuan, H. (2021c). Small shear wave splitting delays suggest weak anisotropy in cratonic mantle lithosphere. *Geophysical Research Letters*, 48, e2021GL093861 https://doi.org/10.1029/2021GL093861

* Y. Li, V. Levin, A. Nikulin, X. Chen, (2021) Systematic Mapping of Upper Mantle Seismic Discontinuities Beneath Northeastern North America, G-cubed, DOI *10.1029/2021GC009710*

* Chen, X., Levin, V., Yuan, H., Klaser, M., & Li, Y. (2021b). Seismic anisotropic layering in the Yilgarn and Superior cratonic lithosphere. *Journal of Geophysical Research: Solid Earth*, 126, e2020JB021575. https://doi.org/10.1029/2020JB021575

* Chen, X., Park, J. & Levin, V. Anisotropic Layering and Seismic Body Waves: Deformation Gradients, Initial S-Polarizations, and Converted-Wave Birefringence. (2021a). *Pure Appl. Geophys.* **178,** 2001–2023 https://doi.org/10.1007/s00024-021-02755-6

* Bourke, J., Levin, V., Linkimer, L., & Arroyo, I. (2020). A recent tear in subducting plate explains seismicity and upper mantle structure of southern Costa Rica. *Geochemistry, Geophysics, Geosystems*, 21, e2020GC009384. https://doi.org/10.1029/2020GC009300

Levin, V. S. Elkington, J. Bourke, I. Arroyo and L. Linkimer, (2020) Seismic anisotropy in southern Costa Rica confirms upper mantle flow from the Pacific to the Caribbean., Geology, *accepted* Bastille Day (July 14) published September 4, 2020; DOI 10.1130/G47826.1

* Li, Y., V., Levin, S. Elkington, J. Hlavaty, (2019) Localized Anisotropic Domains Beneath Eastern North America, *G-cubed,* 20, 5499– 5521. https://doi.org/10.1029/2019GC008518

* Chen, X., Y. Li and V. Levin, (2018) Shear Wave Splitting Beneath Eastern North American Continent: Evidence for a Multi-layered and Laterally Variable Anisotropic Structure, G-cubed, *published August, 02, 2018* https://doi.org/10.1029/2018GC007646

Levin, V., M. D. Long, P. Skryzalin, Y. Li, and I. Lopez ,(2017), Seismic evidence for a recently formed mantle upwelling beneath New England , Geology, https://doi.org/10.1130/G39641.1

Levin, V., Servali, A., VanTongeren, J., Menke, W., and Darbyshire, F., (2017), Crust-mantle boundary in eastern North America, from the (oldest) craton to the (youngest) rift, in Bianchini, G., Bodinier, J.-L., Braga, R., and Wilson, M., eds., The Crust-Mantle and Lithosphere-Asthenosphere Boundaries: Insights from Xenoliths, Orogenic Deep Sections, and Geophysical Studies: Geological Society of America Special Paper 526, p. 107-131, doi:10.1130/2017.2526(06).

Menke, W., P. Skryzalin, V. Levin, T. Harper, F. Darbyshire, and T. Dong (2016), The Northern Appalachian Anomaly: A modern asthenospheric upwelling, Geophys. Res. Lett., 43, 10,173–10,179, doi:10.1002/2016GL070918.

Park, J. and V. Levin, (2016) Anisotropic shear zones revealed by back-azimuthal harmonics of teleseismic receiver functions, Geophys. J. Int., first published online August 26, 2016 doi:10.1093/gji/ggw323

Park, J., and V. Levin, (2016) Statistics and frequency-domain moveout for multiple-taper receiver functions, Geophys. J. Int., 207, 512-527, doi:10.1093/gji/ggw291 .

Levin, V., J. A. VanTongeren, and A. Servali (2016), How sharp is the sharp Archean Moho? Example from eastern Superior Province, Geophys. Res. Lett., 43, LINK, doi:10.1002/2016GL067729

* Razi, Ayda S., Roecker, Steven W., Levin, Vadim, (2016) The Fate of the Indian Lithosphere beneath western Tibet: Upper mantle elastic wavespeed structure from a joint teleseismic and regional body wave tomographic study *Physics of the Earth and Planetary Interiors*, pp. 11-23, DOI: 10.1016/j.pepi.2015.12.001

Levin, V., S. Droznina, M. Gavrilenko, M. Carr, S. Senyukov, (2014), Seismically active sub-crustal magma source of the Klyuchevskoy volcano in Kamchatka, *Geology*, 42(11):983, doi:10.1130/G35972.1

Yuan, H., V. Levin, (2014), Stratified seismic anisotropy and the lithosphere-asthenosphere boundary beneath Eastern North America, *J. Geophys. Res*., 119-4, pp. 3096-3114, doi: 10.1002/2013JB010785

*Shokoohi Razi, A., V. Levin, S. Roecker , G.-C. Dino Huang, (2014), Crustal and uppermost mantle structure beneath western Tibet using seismic traveltime tomography, *Geochem. Geophys. Geosyst*., 15, pp. 434-452, doi: 10.1002/2013GC005143

Levin, V., G. Huang and S. Roecker, (2013), Crust-mantle coupling at the northern edge of the Tibetan plateau: evidence from focal mechanisms and observations of seismic anisotropy, *Tectonophysics*, Volume 584, pp. 221–229, doi:10.1016/j.tecto.2012.05.013

*Nikulin, A., V. Levin, M. Carr, C. Herzberg, M. West, (2012), Evidence for two upper mantle sources driving volcanism in Central Kamchatka, *Earth and Plan. Sci. Lett.*, vol. 321-322, pp. 14-19 doi: 10.1016/j.epsl.2011.12.039

*Huang, G., S. Roecker, V. Levin, (2011), Intermediate-depth earthquakes in the West Kunlun range, *Geoph. Res. Lett.*, vol. 38, L01314, 5 pp., doi:10.1029/2010GL045893

*Nikulin, A., V. Levin, A. Shuler, M. West, (2010), Anomalous seismic structure beneath the Klyuchevskoy Group, Kamchatka, *Geophys. Res. Lett.*, vol. 37, L14311, doi:10.1029/2010GL043904

*Nikulin, A., Levin, V. and Park, J., (2009), Receiver function study of the Cascadia megathrust: evidence for localized serpentinization, *Geochem. Geophys. Geosyst.*, vol. 10, Q07004, doi:10.1029/2009GC002376

Piana Agostinetti, N., V. Levin and J. Park, (2008), Crustal structure above a retreating trench: Receiver function study of the northern Apennines orogen, *Earth and Plan. Sci. Lett.*, vol. 275, Issues 3–4, pp. 211–220, doi:10.1016/j.epsl.2008.06.022

Levin, V., Roecker, S., Graham, P. and Hosseini, A., (2008), Seismic Anisotropy Indicators in Western Tibet: Shear Wave Splitting and Receiver Function Analysis, *Tectonophysics*, vol. 462, Issues 1–4, pp. 99–108, doi:10.1016/j.tecto.2008.03.019

Levin, V., J. Park, F. P. Lucente, L. Margheriti, S. Pondrelli, (2007), The end of subduction in Northern Apennines confirmed by observations of quasi-Love waves from the great 2004 Sumatra-Andaman earthquake. *Geophys. Res. Lett.,* vol. 34, L04304, doi:10.1029/2006GL028860

Levin. V., D. Okaya and J. Park, (2007), Shear wave birefringence in wedge-shaped anisotropic regions. *Geoph. Journ. Int.,* vol. 168 (1), pp. 275–286, doi: 10.1111/j.1365-246X.2006.03224.x

Levin, V., A. Henza, J. Park and A. Rodgers, (2006), Texture of mantle lithosphere along the Dead Sea Rift: recently imposed or inherited? *Phys. Earth Planet. Int.*, vol. 158, pp. 174-189, doi:10.1016/j.pepi.2006.05.007

Levin, V., N. M. Shapiro, J. Park, M. H. Ritzwoller, (2005), The Slab Portal Beneath the Western Aleutians , *Geology*, vol. 33, No. 4, pp. 253-256, doi: 10.1130/G20863.1

Shapiro, N. M., M. H. Ritzwoller, P. Molnar and V. Levin, (2004), Thinning and Flow in Tibetan Crust Constrained by Seismic Anisotropy, *Science,* vol. 305, pp. 233-236, DOI: 10.1126/science.1098276

Levin, V., D. Droznin, J. Park, E. Gordeev, (2004), Detailed mapping of seismic anisotropy with local shear waves in southeastern Kamchatka, *Geoph. J. Int.*, vol. 158, pp. 1009-1023 doi: 10.1111/j.1365-246X.2004.02352.x

Menke, W. and V. Levin, (2003), The cross-convolution method for interpreting SKS splitting observations, with application to one and two-layer anisotropic earth models, *Geoph. J. Int.*, vol. 154, pp. 379-392, doi: 10.1046/j.1365-246X.2003.01937.x

Levin, V., L. Margheriti, J. Park, and A. Amato, (2002), Anisotropic seismic structure of the lithosphere beneath the Adriatic coast of Italy constrained with mode-converted body waves, *Geophys. Res. Lett.,* vol. 29, pp. 15-1-15-4, doi:10.1029/2002GL015438

Levin, V., N. Shapiro, J. Park and M. Ritzwoller, (2002), Seismic Evidence for Catastrophic Slab Loss Beneath Kamchatka, *Nature*, vol. 418, pp. 763-767, doi:10.1038/nature00973

Park, J. and V. Levin, (2002), Seismic Anisotropy: Tracing Plate Dynamics in the Mantle, *Science*, vol. 296, pp. 485-489, doi: 10.1126/science.1067319

Menke, W. and V. Levin, (2002), Anomalous seaward dip of the lithosphere-asthenosphere boundary beneath northeastern US detected using differential-array measurements of Rayleigh waves, *Geoph. J. Int.*, vol. 149, pp. 413-421, doi: 10.1046/j.1365-246X.2002.01652.x

Levin, V., J. Park, J. Lees, M. T. Brandon, V. Peyton, E. Gordeev, and A. Ozerov, (2002), Crust and Upper Mantle of Kamchatka from Teleseismic Receiver Functions, *Tectonophysics*, vol. 358, pp. 233-265, doi:10.1016/S0040-1951(02)00426-2

Peyton, V., V. Levin, J. Park, M. Brandon, J. Lees, E. Gordeev, A. Ozerov, (2001), Mantle Flow at a Slab Edge: Seismic Anisotropy in the Kamchatka Region, *Geophys. Res. Lett.*, vol. 28, pp. 379-382, doi: 10.1029/2000GL012200

Levin V. and J. Park, (2000), Shear zones in the Proterozoic lithosphere of the Arabian Shield and the nature of the Hales discontinuity, *Tectonophysics*, vol. 323, pp 131-148, doi:10.1016/S0040-1951(00)00105-0

Park, J., and V. Levin, (2000), Receiver functions from multiple-taper spectral correlation estimates, *Bull. Seis. Soc. Am.*, vol. 90, pp. 1507-1520, doi: 10.1785/0119990122

Levin, V., W. Menke and J. Park, (2000) No Anisotropic Domains in Northeastern US Appalachians, *Journ. Geoph. Res.*, vol. 105, pp. 19029-19042, doi: 10.1029/2000JB900123

Levin,V., J. Park, M. Brandon and W. Menke, (2000), Thinning of the upper mantle during the late Paleozoic Appalachian orogenesis, *Geology*, vol. 29, pp. 239-242, https://doi.org/10.1130/0091-7613(2000)28<239:TOTUMD>2.0.CO;2

ADVISING

Graduate students:

Alissa Henza (MS, HP Billiton) 2005; Alex Nikulin (PhD, Assoc. Professor, SUNY Binghamton) 2011; Ayda Shokoohi Razi (PhD) 2016, Benjamin Dunham (MS, USGS, CA) 2016, Yiran Li (MS; PhD candidate, SUNY Bighamton) 2019, Xiaoran Chen (PhD, software industry, California) 2020, James Bourke (PhD candidate, current),

Service on committees

Mark Baum (Rutgers PhD; Exxon) 2006, Brian Zurek (Lehigh PhD, Exxon) 2008, Isabelle Hong (Rutgers, 2019), Zhongxiong Cui (Lehigh PhD) 2020, Cong Li (UMass Amherst PhD), 2020, Alex Burky (Princeton PhD) 2022,

Postgraduate-Scholar Sponsor: Guochin (Dino) Huang, 2007-2011 (now at Texas Seismic Network); Xiaoran Chen (2020-2021, now in software industry, California)

Undergraduate Advisees at Rutgers (independent research, honors, Aresty Research Assistants):

Peter Graham (Colorado School of Mines, MS; Golder Associates, NJ), Benjamin Marshall (IT industry, NJ), Helen Janiszewski (Assist. Prof; Univ. of Hawaii, Manoa), Maria Shakhnovich (software start-up, California), Michael Klaser (Rutgers MS 2017; environmental consulting, NJ), Andrea Servali (data analytics industry, California), Yiran Li (Rutgers MS; Binghamton PhD program), Peter Skryzalin (US Army), Janine Hlavaty (environmental consulting, NJ), Steven Elkington (environmental consulting, NJ), Mariya Galochkina (PhD candidate, MIT), Joyce Franco (environmental consulting, NJ), Renée Ghosh.

NSF FUNDING HISTORY

Principal Investigator at Rutgers since 2003

EAR-2147426 2022-2025 Collaborative Research: How have orogenesis, rifting, and recent mantle dynamics shaped the lithosphere beneath the New England Appalachians? **177K**

EAR-1735912 2017-2020 Collaborative Research: Seismic and geologic constraints on the lithosphere structure and evolution of the northern Appalachians ***164K***

OISE-1658648 2018-2020 **IRES**: Geoscience Research At the Cordillera Talamanca (GREAT) ***248K***

EAR-1147831 2012-2017, Deep Structure of Three Continental Sutures in Eastern North America ***~$290K*** **+ $6500** REU+$8000 REU

EAR-1015422 2010-2014, Deep structure controls on magmatic output of Klyuchevskoy volcanic group, Kamchatka ***$63720 + $7500*** REU supplement

EAR 0911350 2009-2011 Strength of continental lithosphere in western China from seismic body wave studies ***$133K***

EAR-0844023 TROPICS Science Plan Development Workshop at Rutgers University ***$5K***

OISE 0645826 US/Costa Rica: Planning Visit at the University of Costa Rica, January 2007-December 2007 ***$17.5K***

EAR 0545698 2006 – 2010 Seismic anisotropy and rock texture within the Cascadia megathrust zone ***$130K***

EAR 0440062 2006 -- 2011 (no-cost extended) Collaborative Research: Imaging the Upper Mantle Beneath the Western Tibetan Plateau ***$239K***

OISE 0437181 2003-2007 U.S.-Costa Rica Dissertation Research: Operation of Seismic Array at Cerro Mercedes, Costa Rica ***$10K***

EAR 0242291 2003 – 2009 (no-cost extended) Collaborative Research: Retreating-trench, extension and accretion tectonics in Northern Apennines; ***$268K***

I present my application for the open position of the Director of Center for Earthquake Research and Information. This complex and demanding job is extremely appealing to me. Please consider my qualifications for the tasks it entails and my vision for how to perform them.

The job of leading the Center of Earthquake Research and Information at the University of Memphis will have my career come full circle to its beginnings. I started my professional life in the U.S. as a seismic network analyst for the Shumagin Islands network operated by the Lamont-Doherty Geological Observatory. I helped maintain equipment for it, and for the regional networks in the eastern U.S., using their data in my PhD work at Columbia University. Over the years I worked with regional seismic monitoring networks in Russia, Italy, China, Canada and Costa Rica. I participated in the planning efforts for the Advanced National Seismic System and in the design of the USArray, and served on governing bodies of the USArray and the Incorporated Research Institutions for Seismology Data Management System.

I am currently a tenured professor at the Department of Earth and Planetary Sciences of Rutgers University. Prior to joining the tenured faculty in 2009 I held research positions at Rutgers and Yale universities. I specialize in studies of seismological structure of the Earth with an emphasis on the crust and the upper mantle. My primary expertise is in complex and creative analysis of seismological observations. I co-designed and maintain open-source software for seismological data analysis and for simulation of seismic wave propagation in complex anisotropic media. Of particular importance to me are the opportunities to collect new seismic data. I had the fortune to operate portable arrays of seismographs in the Appalachians and the Apennines, Kamchatka and Tibet, Quebec and Costa Rica.

Over two decades of teaching at Rutgers, a large diverse public university, I covered a spectrum of Earth science courses from fundamental seismology to surveys of large-scale planetary structure to applied geophysics. A special place in my teaching portfolio belongs to courses considering earthquakes in the context of their impact on society. In seminars with titles like “Political Earthquakes” and “When Foundations are Shaken” I lead students through topics of earthquakes as an agent of human history, the possibility and reality of risk mitigation, the responsibility for societal safety.

While my career included a lot of research and teaching experience, I rarely had opportunities to use my understanding of seismic hazards for tangible contributions to society’s wellbeing. To date these were limited to teaching, episodic media engagements when a notable earthquake happens, public lectures on my research when I could promote the value of science education and importance of preparedness, and a brief episode of intense media exposure in 2017-2018 when a paper I wrote went viral.

What attracts me most in the position of the Director of CERI is the concrete and specific way this role has for promoting hazard awareness, fostering the culture of preparedness at different levels of society. At the current stage of my career, I value above all the opportunity to give back to the scientific community through robust observatory efforts, and to the society in general by improving its resilience.

In addition to this letter, I enclose my CV, statements of research and teaching philosophy, a discussion of leadership and diversity, and a list of professional references.

I appreciate your consideration of my application.

Sincerely,  Vadim Levin

Teaching experience.

Over two decades at Rutgers, a large public university with one of the most diverse student bodies in the US, I taught at all levels, from overview earth science courses for non-science majors to focused seminars in my narrow specialty (seismology). I developed and ran small-group seminars for first-year students aimed at introducing them to the concept of academic research, built modules for asynchronous online courses taught repeatedly by a team of alternating instructors, and explored cutting-edge research with graduate students in hands-on interactive activities designed to hone their skills as rising research professionals.

At the introductory level I taught both in-person and online (asynchronous, or else hybrid) basic Earth Science courses with emphasis on earthquakes, volcanoes, their hazards, and their impact on society. At the level of undergraduate concentration I developed and repeatedly taught "Introduction to Geophysics", an exercise-rich course aimed at future professionals, and covering a broad range of topics, from whole-Earth structure to methods for shallow subsurface exploration. At the upper-undergraduate / introductory graduate levels I taught overview courses on the structure and evolution of the Earth and other rocky planets, on the dynamics of the solid Earth interior, and on fundamental seismological theory. With students involved in seismological research I conducted workshop-style study sessions blending theory, latest research, and practical exercises, and typically focused on specific research techniques employed by my group. In the following I review key principles I strive to follow in my teaching at the graduate level.

Student-centered instruction.

Graduate studies in Earth Science draw in students with a broad range of backgrounds, levels of preparation and topics of interest. Consequently, at the onset of each graduate-level class I undertake a survey of students' backgrounds and interests and adapt syllabi and tasks so that all participants of these (typically small) courses would feel invested and see connections between the material and their own education and professional goals. A standard practice in my courses is to leave open slots towards the end of the semester and to invite student input on the topics to cover, based on the initial stages of the class. This practice tends to make me work extra-hard as the topics chosen by the students often go beyond my comfort zone, however the rewards of this approach in terms of student's sense of investment in the material have been high. To test students' mastery of the material I favor assignments that allow multiple paths to the solution, so that each student could attempt their own approach. In evaluating such assignments I put students' ability to explain their reasoning above the precise correctness of answers, and work with them interactively in refining and adjusting their approaches. I find that this builds both comprehension and students' confidence in their abilities to solve complex problems.

Hands-on learning and use of primary data.

Abundance of publicly available data about our planet facilitates teaching about the subject with practical exercises drawn from real observations. I view the skills of discovering, extracting, and manipulating the data that are available at public data centers as essential for future practicing research professionals. A typical task in a graduate class will have students perform primary data

analysis that has led to a fundamental advance in Earth Science (e.g., discovery of the crust-mantle boundary, mapping of magnetic anomalies across a mid-ocean ridge). Working with real data students discover the complications that are typically not discussed in textbooks, build an appreciation for the amount of effort it takes to advance the level of knowledge, and develop essential data manipulation skills.

In courses focused on practical applications of geophysics I require students to collect their own data, and to develop arguments about Earth structure on the basis of subsequent analysis. These exercises are aimed first and foremost at building fundamental professional skills of data-oriented research, stressing the importance of preparation, the responsibility for collecting enough data and for documenting the process, the clarity with regards to what may and may not be observed, and to what constitutes success. Among the most challenging concepts for students to work through is the lack of the precise "right" answer in most geophysical studies, and the need to make arguments on the basis of external constraints from other fields of knowledge. Tolerance for uncertainty and an ability to formulate meaningful statements on the basis of partial data are skills that take up a large fraction of my effort when teaching such courses.

Communication

An ability to communicate one's knowledge, to explain what that knowledge is based on, and to define the limitations of what is known are all essential for a practicing scientist. I strive to model these aspects when lecturing or leading class discussions, and I build into my courses varied opportunities for students to practice communicating their acquired knowledge. Communication can take a form of a written report which I review and seek corrections for, simulating a publication effort. Alternatively, it may be in the form of an oral presentation of research task results, or else a review of a research publication, offering students an opportunity to become better public speakers, and for those not speaking – to become better members of an engaged audience. Respectful informed debate is a valuable skill that all future researchers will need. I encourage students to explore means of communicating knowledge mediated with technology and social media tools. I seek to constantly learn from my students which approaches to communication are organic and natural for them and their peers. Regardless of the means they use for communicating knowledge, I stress the fundamental importance of clarity with regards to what they can be certain about, what they speculate on, and where the limit of their knowledge is, and I work with students to develop the confidence necessary for drawing and articulating these distinctions.

Collaborative learning.

I view every class I lead as a collaboration between me and my students that will fulfill its potential only if all are engaged and committed. I believe that in the third decade of the XXI century the primary role of an instructor is not in delivering specific factual information or in presenting digested knowledge – students will readily obtain them on their own. Rather, I see my role in explaining why specific facts are essential and how they can be established and verified, in demonstrating connections between different known facts and the logic used to establish them, in modeling how to assemble facts and rules into new knowledge. In essence, I see myself more as a guide than a source of information, and I continuously stress to my students that they are as

capable of establishing the links and detecting the patterns and advancing the knowledge. It sometimes even helps to be wrong, and to have students catch a mistake, as it brings home to them the idea that their instructor, aged and experienced, is not special in any way that they cannot be, too.

Another aspect of collaborative learning that I strongly encourage is near-peer instruction. Either through study groups or the general class interaction, I strive to facilitate mutual teaching by students who have different backgrounds and skills, or different levels of preparation. This form of interaction is mutually beneficial to those who learn (as their instructors are well-placed to convey the knowledge in the most organic way) and those who teach (as they transform what they have themselves learned into what others can understand).

Contributions to teaching at CERI.

Among the courses offered by CERI I would be most comfortable teaching courses "Intermediate- and Global Seismology", "Introduction to Global Geophysics", "Exploration Seismology", "Near-Surface Geophysics", and would be happy to contribute to "Geodynamics" and "Data Analysis in Geophysics". My narrow specialty – anisotropy of seismic properties – would make a good topic for an advanced seismology seminar. I would also be interested in developing, in collaboration with other parts of the University of Memphis, an interdisciplinary course combining understanding of earthquakes with knowledge of their past and potential future impacts on society, and with ideas on risk reduction policy development.

Research Philosophy.

A key element of my research philosophy may be stated as the "primacy of observations". I pursue studies of properties and processes within the Earth that rely on collecting, analyzing, and interpreting records of seismic waves propagating through it. With few exceptions, my research is focused on data from earthquakes. Many of my studies relied on data distributed by seismological data archives. In turn, over three decades I have contributed to these archives the data sets I collected myself in various regions of the world. I strongly believe in the paramount importance of open access to observational data, a concept I promoted while participating in the design of the Advanced National Seismic System, helping plan and execute the Earthscope program, serving on the IRIS Data Services Standing Committee, performing review and editorial tasks for Earth science research publications, and (most challengingly) while pursuing international collaborations in countries where data openness is not an accepted norm. In working with seismological data I maintain a clear separation between what the data are (observations, measurements, results of specific clearly defined processing steps) and what my interpretations of them may be. My experience taught me that the former may become a durable contribution to the overall body of knowledge about the Earth, while the latter is liable to change as our understanding of it evolves.

Another organizing principle of my research is the concept of a "natural experiment". Working with earthquake data, I am not at liberty to position the sources of energy at a desired location, nor am I able to choose the time when energy will be released. Therefore, only by adapting data collection strategies, selecting tools for data analysis most suitable to the likely observations, and patiently waiting can an experiment in its classical sense be performed in seismology. Also, working with earthquake data it is essential to anticipate the unexpected and to be ready for serendipity, as exciting discoveries often come from observations that are not in the original plan of an experiment.

Finally, I strongly believe that research is a cooperative and collegial endeavor, and that multiple points of view, differences in technical expertise and variations in regional knowledge make for better science. While frequently challenging, the efforts invested into developing common understanding with scientists from countries where I operated seismic arrays, and with colleagues from other disciplines of Earth Science have all been exceptionally rewarding.

Thematically, my research may be divided into a few broad topics that I discuss in turn below. I follow this discussion with an outline of some ongoing efforts as well as ideas for new efforts I would like to undertake at CERI.

Field Campaigns.

My research is driven by primary observations thus the regional focus of my work followed the data I was collecting. In chronological order, I deployed seismic observatories in New England (1994-95); Kamchatka (far-eastern Eurasia, 1998-99); central Apennines (between Pisa and Bologna, 2004-06); Costa Rica – Nicaragua border (2005-2006); westernmost Tibetan plateau (2007-11); central Quebec, northeastern Maine, and Canadian Maritimes (2012-17); and in southern Costa Rica (2018-21).

Research methods

Most of my research is based on analysis of body waves from distant earthquakes that traverse the upper layers of the Earth in near-vertical direction. Observations of times and shapes of these waves provide information on vertical and lateral changes in seismic properties within the Earth. They also reveal directional changes (anisotropy) in seismic properties that are especially useful for understanding past and ongoing deformation in the Earth interior. Over the course of my career I explored theoretical and computational aspects of seismic body wave propagation in an anisotropic medium (e.g. Levin et al., 1996;1999, 2007a; Levin and Park, 1997, 1998; Park and Levin, 2016ab; Chen et al., 2021a; Park et al., 2023), and contributed to the development of methods for data analysis (e.g., Park and Levin, 2000; Menke and Levin, 2003; Levin et al., 2016; Xie et al., 2020; Chen et al., 2021b). I make available and maintain codes for data analysis and synthetic seismogram computations:

https://seiscode.iris.washington.edu/projects/recfunk09-pick ,

https://seiscode.iris.washington.edu/projects/rfsyn ,

https://doi.org/10.5281/zenodo.7850744 .

My work on vertical stratification of anisotropic properties in the Earth influenced such broadly used methods as the receiver function analysis (originated by Prof. Langston) and the shear-wave birefringence (splitting) analysis. In both cases systematic directional variations in results these methods produce offer additional constraints on Earth interior structure, but also can lead to erroneous findings if ignored. The need to constrain directional variations in observed teleseismic body waves has a practical impact on the design of observational campaigns, primarily in terms of how long data need to be acquired to guarantee that enough earthquakes occur in different parts of the world so that the analysis can be performed.

Observations of surface waves are a less frequent subject of my work, however these data yielded some of the highlights of my research, including a serendipitous recording of a quasi-Love wave from the 2004 Sumatra earthquake that provided an unanticipated insight into the nature of upper mantle deformation beneath the Apennines (Levin et al., 2007b).

Also, I used body wave tomographic imaging techniques to investigate the crust and the upper mantle of northeastern North America (Levin et al., 1995ab) and western Tibet (Razi et al., 2014, 2016), measurements of body wave attenuation to probe the crust of Iceland (Menke & Levin, 1994), source mechanisms of earthquakes to test crust-mantle coupling along the northern border of the Tibetan plateau (Levin et al., 2013), and records of local earthquakes to assess the depth of a magma chamber beneath Klyuchevskoi volcano in Kamchatka (Levin et al., 2014).

Convergent Margins

A significant fraction of my research to date focused on structure and processes at convergent margins. Together with my students and colleagues I investigated crustal and upper mantle structure of Kamchatka, Costa Rica, Apennines, Cascadia and the India-Asia collision zone. Receiver function studies yielded constraints on crustal thickness and properties in areas not sampled previously in Kamchatka (Levin et al., 2002) and Costa Rica (Linkimer et al., 2010; Bourke et al., 2020, 2023), mapped abrupt lateral changes in crustal thickness beneath the Apennines (Piana et al., 2008), and suggested that the megathrust of Cascadia is lined with serpentinite (Park et al., 2004; Nikulin et al., 2009). Tomographic imaging of western Tibet (Razi

et al., 2014) constrained the location of India-Asia plate boundary at depth and localized an area where underplating of India crustal material likely takes place.

Studies of shear wave splitting identified areas where upper mantle material flows around the side edges of subducting slabs in Kamchatka (Peyton et al., 2001) and Costa Rica (Levin et al., 2020), and mapped small-scale lateral variations in mantle deformation along Kamchatka (Levin et al., 2004) and the Apennines (Salimbeni et al., 2007, 2008) convergent margins. Tomographic imaging showed that Indian lithosphere descends under Asia as a vertical column, suggesting viscous gravitational instability (Razi et al., 2016), that a large opening exists in the descending Pacific lithosphere at the junction of Kamchatka and Aleutian arcs (Levin et al., 2002; 2005), and that Adriatic lithosphere hangs vertically beneath the Apennines (Benoit et al., 2011).

Continents.

Structure, formation, and evolution of Earth's unique continents (no other planet in our Solar System has such features) is the dominant theme of my research. I used receiver function analysis to probe seismic properties of the crust in Tibet (Levin et al., 2008) and North America (Levin et al., 2016, 2017). In my thesis I used tomographic imaging to show that the upper mantle beneath the stable eastern part of North America (New York and New England) has as much lateral variation as that of the actively deforming western part (Levin et al., 1995), a (then) surprising result. I suggested differences in anisotropic velocity at depth as the cause of this variation (Levin et al., 1996). Gratifyingly, small-scale lateral differences in upper-mantle anisotropy were confirmed much more recently with measurements of shear wave splitting utilizing USArray data (Levin et al. 2018). I used shear wave splitting measurements to investigate (and promote the importance of) layering of anisotropic properties in North America and Eurasia (Levin et al., 1999, 2000a) and proposed that Paleozoic-time delamination could explain the configuration observed in the Appalachians (Levin et al., 2000b). Later work combining shear wave splitting and receiver function analysis (Yuan and Levin, 2014) provided additional support for this scenario. On the other hand, research by my graduate student (Li et al., 2019) showed that splitting patterns are regionalized, not uniform, in northeastern North America, negating conclusions from my year 2000 paper, and providing an excellent example of observations being much more durable than interpretations. I used shear-wave splitting observations to argue that the crust and the upper mantle are coupled beneath the Altyn Tagh Fault bounding the Tibetan plateau from the north (Levin et al., 2013), and that the strike of the Dead Sea Rift is aligned with the texture within the lithosphere and thus may be an example of tectonic inheritance (Levin et al., 2006). With my recent graduate students we have interpreted major differences in shear wave splitting observations between older (Archean and Proterozoic) and younger (Paleozoic) regions of eastern North America as evidence for the extent of the oldest lithosphere (Chen et al., 2018), and argued that very small values of shear wave birefringence are a characteristic trait of Archean cratons (Chen et al., 2021b). We also used receiver function analysis sensitive to anisotropy gradients to show that Archean cratons in North America and Australia are composed of uniquely layered terranes that must pre-date their formation (Chen et al., 2021c), and developed a highly detailed characterization of the vertical extent and the internal layering of the lithosphere in northeastern North America (Li et al., 2021). Illustrating the power of modern data analysis methods, in a study published last year (Levin et al., 2022) I used advanced receiver function techniques to identify a fossil shear zone at the 1 Ga old Grenville Front in central Quebec.

Ongoing research and ideas for new efforts at CERI.

A global survey of continental lithosphere properties. In a recently established collaboration I work with Sergei Lebedev (Cambridge) and Javier Fullea (Madrid) on joining insights from regional studies of the lithosphere that I develop with their integrated geophysical-petrochemical models of the upper mantle (https://zenodo.org/record/5771863). A proof of concept for eastern North America is undergoing final review in JGR Solid Earth (preprint here: https://drive.google.com/file/d/1-zFTvwUVsIGYzaoQOO2CEtEdv-GBSjyl/view?usp=share_link). It showed excellent agreement between estimates of lithosphere thickness based on temperature profiles constrained by multiple data sets and on layering of anisotropic seismic properties of the upper mantle mapped using receiver functions. I intend to expand this work to other regions where data from permanent observatories are open, eventually developing a representative sampling of the lithosphere globally, and also plan to work on integrating regional constraints on lithospheric structure into the next generation of multi-parameter inversions. The promise of this approach is in providing a robust description of the Earth's interior consistent with composition, seismic observations, gravity, topography and heat flow. If developed with sufficient data density, such description will significantly enhance the understanding of lithosphere strength, give better sense of likely forces acting on it and reveal potential regions of strain localization – all essential aspects for understanding earthquake potential of continental regions. I plan to seek funding for this work from the NSF Cooperative Studies of Earth Interior program in the Fall 2023 cycle.

New data from Western Australia. Another planned effort is an outgrowth of my long collaboration with Dr. Huaiyu Yuan (Geological Survey of Western Australia, GSWA). He is a lead seismologist on the recently initiated ambitious effort to survey the western half of the Australian continent at the scale of 40 km or less in the coming decade (http://www.dmp.wa.gov.au/Geological-Survey/WA-Array-30572.aspx). It will yield an unprecedented wealth of new data in a region similar to stable North America in terms of geologic conditions and seismic activity. I plan to participate in the analysis of these data and in conducting studies of the region. Moreover, in 2022 I developed a proposal to the Geophysics division of NSF for a multiyear seismic array deployment that would densify regional coverage and extend duration of data collection at strategic locations in Western Australia. Reviewed positively, and deemed "competitive" by the panel, the project ultimately did not receive funding in this cycle. I strongly believe that basing it at CERI will enrich and strengthen the project, and plan to resubmit it within a year. Participation in WArray effort will serve as a foundation for a long-term strategic partnership with a preeminent geoscience research center in Australia, serving both research and educational needs of CERI. Reciprocally, Dr. Yuan indicated to me that GSWA is planning an expanded effort in seismicity monitoring that would benefit greatly from expertise CERI possesses.

Nascent plate tectonics of Central America. One possible effort that I would like to develop at CERI would build on my well-established collaborative relationship with the University of Costa Rica and the national seismic monitoring network it operates (https://rsn.ucr.ac.cr). A study co-authored with operators of the network argued for an episode of recent subduction initiation beneath eastern Central America (Bourke et al., 2023). This unique setting deserves further study, both due to its scientific importance, and due to its capacity for major earthquakes like the 1991 Mw=7.7 event near Limon, Costa Rica. Another topic where combined expertise of CERI researchers may find a worthy challenge is the Central Costa Rica Deformed Belt, a zone of

complex distributed seismic activity crossing the Central American isthmus that is viewed as an evolving plate boundary, and where a large fraction of Costa Rica's population is concentrated.

The next Big Thing – uniform high-resolution description of the lithosphere beneath eastern North America.

In the last decade a vast quantity of new seismological observations became available in eastern North America. With initial analyses published and data in public domain the stage is set for advancing the knowledge of our continent to the next qualitative level. The uniform sampling provided by USArray offered a way to trace previously known features of the upper mantle structure over large distances, and yielded discoveries of new ones where they were not expected. However, the 75 km spacing of USArray was not sufficient to resolve structures on the scale that would directly connect with geologically recognized features, and thus impact issues of seismicity and hazard assessment in the stable continent. Focused dense deployments (SESAME, OIINK, NELE, MAGIC, SEISConn, QMIII etc.) yielded fine resolution in locations chosen because good targets to study were already anticipated. The rest of the continent remains known less well, leaving the possibility that important aspects of its structure have not been found yet. So, while the plank of overall knowledge of the lithosphere in eastern North America was raised dramatically, in many places we still do not know what we do not know.

As a strategic goal for myself, and for CERI, I envisage the building of a continental-scale geophysical characterization of the lithosphere with resolution at least as high as that being developed in Western Australia (40 km) but ideally, eventually, twice as fine. The key motivation for this, from the point of view of seismic hazard of stable continental interiors with buried ancient structures is to search for features in the crust that look similar to areas of known seismic activity, but presently have none. Another is to provide sufficiently detailed constraints for predictive modeling of forces acting on the lithosphere, and the distribution of strength within it. And then there is serendipity – every large effort to study Earth interior yielded surprises, and I fully anticipate them to wait, patiently, to be found.

This very ambitious goal obviously requires new data sets, as well as a robust inventory of existing ones. It requires cooperation with regional academic institutions, with national funding agencies, and hopefully with state agencies tasked with managing the risks of natural hazards. Most of all, it requires the collective wisdom and intellectual leadership of CERI researchers. I am truly excited to commit my energy to this effort.

Center for Earthquake Research and Information has a number of mandates and ensuring that all of them are fulfilled to the highest standards is the ultimate goal I will work for as the Director of the Center. In the following sections I outline my current ideas on how I can do this well. I am nevertheless fully aware of the likelihood that there will be issues that I cannot anticipate at present, and I am eager to learn on the job. I can only hope to succeed by relying on the collective experience, wisdom, and vision of all members of the CERI team. I can only view my role as fulfilled if all CERI members, faculty, staff, post-docs, and students, feel included and invested in the success of the entire Center. I intend to promote a work environment conducive to open and candid discussion of all issues pertinent to the realization of CERI vision of creative research and impactful service. I consider it essential to recognize, and embrace, the diversity (demographic, educational, national, professional) of CERI members and stakeholders. I strongly believe that the diversity of backgrounds and experiences is a source of strength in research and teaching endeavors, and that cultural awareness and appreciation of the circumstances of target audiences are crucial for the success of service tasks performed by the Center.

I will discuss service, research, and education mandates of CERI, as I see them, in turn below. However, it is my strong belief that these are inter-dependent mutually complementary activities, and the order does not signify priority. Only by maintaining excellence in all can CERI fulfill its Center of Excellence charge of expanding the research base and increasing the national and international stature of the state of Tennessee.

Service

Monitoring of seismic activity is the foundational task of CERI. It involves operating, maintaining, and continuously upgrading the complex ecosystem of equipment, both remote and centrally located at CERI, that together registers, transmits, records, preserves and archives ground motion signals. It involves routine determination of earthquake parameters and rapid response to events of special interest. It involves efficient sharing of information with national and international data centers, and dissemination of earthquake-related information to a range of stakeholders with different needs and levels of expertise. At present, these tasks are performed for a service area encompassing all or parts of multiple states.

The monitoring system operated by CERI is a unique large-scale scientific instrument that both serves the hazard mitigation needs of the immediate region it covers and produces critical data for the advancement of earthquake science globally. Operating it successfully is only possible thanks to the expertise, dedication, knowledge, experience of the current staff. A set of skills required of a network operator is unique and diverse, ranging from carpentry and electronics to cultural diplomacy and programming of custom-made computers.

As a Director of CERI, I do not envisage inserting myself into the immediate operations of the smoothly functioning monitoring network lead by Dr. Withers. Rather, I see my role in ensuring that the network has all necessary resources to operate, and to (hopefully) grow, as I discuss below. Most of all I would be working to make sure the monitoring group at CERI is an excellent workplace worthy of its highly skilled staff.

To maintain the long-term health of the monitoring effort I foresee the need to conduct regular audits of existing commitments and the corresponding sources of funding for them. I envisage a need to continuously seek necessary support from existing sources such as national and state

agencies tasked with hazard mitigation, as well as additional sources, such as utilities, insurance industry, community development and resilience organizations etc. I foresee the need for continuous review and update of service products, especially those addressed to stakeholders outside academic and applied research circles: policy makers, emergency services, community leaders, the general public. I anticipate an effort to adapt the modes of disseminating seismic risk reduction information to the changes in tools and methods of communication. I strongly believe in the importance of cultural awareness and recognition of diverse circumstances and backgrounds of the likely audiences of CERI seismic monitoring service products. I look forward to engaging with faculty and students of the Department of Communications and Film at the University of Memphis to raise the visibility and bolster the impact of informational materials produced by CERI.

To safeguard long-term health of the monitoring network work force, and to further strengthen the connection of CERI to its host region I would like to explore a viability of an apprenticeship or an internship program that would invite college students from the area to work under the guidance of network staff. Designed with an emphasis on attracting members of the underrepresented groups and fist-generation college attendees, such a program will provide a venue for mastering various transferrable skills and will help identify potential future members of the network team.

Recent changes in the configuration of seismic monitoring activities in the US present CERI with a unique opportunity that I strongly believe is worth pursuing. At the present time, CERI is the only research center east of the Mississippi explicitly dedicated to the task of monitoring seismic activity. Unlike networks supported by states of Oklahoma, Texas, or Pennsylvania it serves an area defined by the monitoring needs, not administrative boundaries. Also, some previously operating monitoring networks, especially in the northeast, did not receive the stable institutional support and had to shut down. The residual sparser monitoring network is presently supported by ANSS as a part of the national effort. This leaves much of the eastern US without a locally rooted authoritative source on earthquake-related matters. As there are fundamental differences in the nature of seismic activity, associated hazards, and attendant risks in the dynamic western and the stable eastern parts of the continent, a repository of technical knowledge specific to the region, and with authority to communicate this knowledge, is clearly needed.

I believe it would be a natural role for CERI to assume. Upon consultation and with advice from current CERI membership, I intend to vigorously advocate for the expansion of operational range and the increase in attendant resources for CERI's monitoring network to the leadership of the Advanced Seismic Monitoring System and to any national or state entities that have a stake in long term resilience of the region.

Research.

I contemplate the prospect of leading the research endeavor at CERI with equal measures of excitement and humility. I see the main role for myself in the Director capacity as that of facilitator, advocate, and supporter for all the varied research efforts already underway. This is especially true with respect to CERI members in the early stages of their academic careers. Lightening their load of mundane tasks and removing barriers so as to bolster their research productivity are the key roles Director can perform. As a researcher, I hope to continue my ongoing efforts, mainly aimed at understanding Earth's continents, but am especially excited by

the prospect of developing new ideas, projects, and collaborations with CERI colleagues. I am especially keen to explore ways CERI can take advantage of larger-scale research funding opportunities, such as the NSF Frontier Research in Earth Sciences program, to name one.

In view of the recent release of the University of Memphis Strategic Plan for 2023-28 I believe it would be essential for the research group at CERI to undertake an internal review and planning exercise. One purpose of the exercise would be to coach CERI research activities and plans in terms that closely align with Strategic Plan goal of "strengthening research enterprise" and address its overall intent of "conducting research with high societal impact". Another would be to identify additional competencies and expertise that are lacking at present, and that would contribute to the overall mission of understanding the causes and consequences of earthquakes and the structure and evolution of the continental lithosphere.

Two broad areas which I would like to maintain and further bolster at CERI are the geophysical observational capabilities and international collaborations.

By "observational capabilities" I mean the instruments for geophysical observations that could be deployed by members of CERI to address research questions they are interested in pursuing; the support system for equipment maintenance; and resources for getting the instruments to where they need to be (and back, of course). Resource sharing with the monitoring effort of CERI is implicit in this vision, although I anticipate the need to sequester some equipment to be available for regional monitoring needs only. At the first glance, after three decades of large-scale use of communal geophysical equipment pools of IRIS and UNAVCO the notion of a private research observatory resource may appear outdated. I contend that it is not, for the following reasons. First, the ready availability of observational tools offers CERI members, including post-docs and students, much more flexibility to explore ideas they have, especially high-risk high-return ones that tend to not fare well in proposal reviews. Second, an ability to commit one's equipment is often a winning argument in seeking funding for a large project. Finally, with ongoing reorganization of the instrument pools available in the US the rules and costs involved in their use may evolve in ways that will make in-house equipment advantageous. Additional value of in-house instruments for educational purposes will be discussed below.

The science of earthquakes has been global from its inception, and international reach of CERI research is self-evident. To already existing links I will add my own currently active collaborative connections to Europe, Central America, and Australia. In the long term I hope to revive presently dormant connections in China and Russia. In pursuing international collaborations, I strongly believe in adhering to principles of equity, mutual respect, and reciprocity. One big benefit of working with international partners is the access to data archives that are not publicly open (e.g., the portable arrays data in Australia; the national seismic monitoring network data in Costa Rica, etc.). Ensuring that US-based researchers are respectful of data ownership and simultaneously advocating for adoption of open data standards are essential elements of each international project. By maintaining open data standards while collaborating with international partners, CERI researchers can play a leadership role in enhancing the global practice of Earth science. Another big advantage of having robust international links is the ability to conduct field observations in other countries. I would like to ensure that CERI always had a solid base of experience in operating abroad, something that can only be learned by doing. And reciprocally, I believe it is highly important to promote the monitoring network and other research facilities CERI has as a resource for global science, so that our international colleagues would want to

explore their ideas using CERI as a base and would come to Memphis to learn best practices from CERI's faculty and professional staff.

Education.

Preparation of the next generation of research professionals is an essential element of CERI's activity. It invigorates research work conducted by the faculty. It is an important contribution to the overall standing of the University of Memphis as a recently designated R1 institution. Most of all, it is a concrete way in which CERI can contribute to the all-important task of expanding participation of underrepresented groups in academic and applied research work. Success of graduate students will be close to, or right on top of priority list of my work as a Director of CERI. I define success broadly to include professional growth, ability to balance work and life priorities, and a universal sense of belonging for all students choosing CERI as their intellectual home. I anticipate closely coordinating my efforts on student success with Prof. Hill, Chair of the Earth Sciences Department, and Prof. Pezeshk, Chair of the Civil Engineering department.

At present the graduate students of CERI are almost exclusively international. I view this as a great asset as these rising scholars bring with them different perspectives and cultural experiences. At the same time, I believe that attracting more applicants from populations within the US that are underrepresented in the geosciences would be of significant importance to the overall mission of the University of Memphis.

To bolster awareness of CERI among the undergraduate students considering further education I intend to engage with programs at the University of Memphis serving the target populations, such as TRiO STEM and Tennessee LSAMP. To recruit students nationally, I would like to promote a strategic initiative of summer internships at CERI. A number of existing programs in geophysics already sponsors summer interns (e.g., URISE and RESESS administered by the newly constituted EarthScope Consortium) and CERI would do well to host one or more per year, with hopes of having them return as graduate students later. More long-term, I would advocate a development of an REU Site NSF proposal that would sponsor multiple students per year over three to five years. In my mind, having undergraduate students engage in collecting new geophysical data is the surest way to have them return for graduate studies. As I discussed in the previous section, availability of in-house data collection equipment is a big strength of CERI and I hope to expand it further.

With its existing suite of public education activities (tours, speaker visits) CERI plays an important role in addressing a strategic goal of strengthening the pipeline of students entering University of Memphis who would consider research a viable career choice. I would like to understand the experience of these activities better, and to explore additional long-term efforts of reaching out to regional / state schools that would take advantage of the general interest in earthquakes and fascination with disasters to deliver educational content and to promote the perception of research being an option for everyone. A strategic engagement with faculty of the College of Education may be helpful in identifying the best venues and modalities for outreach to the K-12 student population. Engaging University of Memphis students, graduate and undergraduate, in the development and delivery of culturally and age-appropriate content based on the topics of natural hazards would be a source of professional growth for them as well.

A closing note.

I am very excited by the prospect of joining a team of colleagues dedicated to the studies of our planet, to education of the next generation of diverse globally connected researchers, and to service aimed at making human society more resilient in the face of natural hazards. I commit to putting all my energy towards the success of the Center, and to promoting an environment where all feel included and valued.

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6. Additional Business

Presented by Jeffrey Marchetta

7. Adjournment

Presented by Jeffrey Marchetta