**WAYNE STATE UNIVERSITY**

**Professional Record**

NAME: **MARK M. BASKARAN** Date prepared: 14 September 2023

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E-Mail: Baskaran@wayne.edu url:<https://clasprofiles.wayne.edu/profile/AG4231>

**DEPARTMENT/COLLEGE:** Geology/Liberal Arts and Sciences

**PRESENT RANK & DATE OF RANK:** Professor – 8/2007-present; Chair, Department of Environmental Science and Geology: 7/1/2018 - present

**WSU APPOINTMENT HISTORY:**

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| --- | --- |
| Year Appointed/Rank  | 1999/Senior Lecturer  |
| Year Promoted to Associate Professor  | 2000  |
| Year Awarded Tenure  | 2004  |
| Year Promoted to Full Professor  | 2007  |

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| --- | --- |
| **PLACE OF BIRTH:**   | Watrap, Tamilnadu (India)  |
| **CITIZEN OF:**  | United States  |

**EDUCATION** (Give name of institution, place and date of degree)

|  |  |
| --- | --- |
| **Baccalaureate:**   | V.H.N.S.N. College, Virudhunagar, India, Physics (Major) Chemistry and Mathematics (Minor), May 1977.  |
| **Graduate:**   | M.S. Madurai-Kamaraj University, Madurai, India, Physics, May 1979. Ph.D. Physical Research Laboratory, Ahmedabad, India, Isotope Geochemistry, August 1985.  |
| **Postdoctoral:**  | Physical Research Laboratory, Ahmedabad, India, August 1985-July 1987. University of Alaska, Fairbanks, AK, August 1987-September 1988.  |

**APPOINTMENTS AT OTHER INSTITUTIONS (Years):**

Research Scientist, Texas A&M University at Galveston (TAMU-G) 1/1995-6/1999.

Senior Lecturer, Texas A&M University at Galveston, 9/1992-5/1999 Lecturer, Texas A&M University at Galveston, 10/1988-8/1992.

**CONSULTANCIES:**

* IAEA, Technical Consultant, 9-13 July 2018 Monaco Marine Environmental Radioactivity Laboratory
* Radiation Expert, Citizens Group in Southern Georgia, 2016-2017
* International Atomic Energy Agency (IAEA): Technical Working Group for **Thorium in the Environment** (5/2012 – 2013)
* Radiation Measurement Consultant, U.S. Geological Survey, 2008
* Radiation Expert, Talus Resources, Houston, Texas, 2008-2010
* Radiation Monitoring Consultant, APIA, Anchorage, Alaska, 2006-2008
* Served as a Radiation expert to the “*Concerned Citizens of Lake Township*” group on the Industrial Excess Landfill, Uniontown, Ohio (2005-2006)
* Selected as an Independent Consultant to assess the data on the Mixed Waste Landfill adjoining Sandia

National Laboratory, New Mexico and to make recommendations for the future of the Landfill (yr-2000)

**PROFESSIONAL SOCIETY MEMBERSHIP(S) and EDITORSHIP:** 

* American Association for the Advancement of Science (2019-present)
* Associate Editor – Journal of Environmental Radioactivity (2016 –2022)
* Associate Editor – Estuarine, Coastal and Shelf Science (2014 - present)
* Indian Society for Radiation Physics – 2015 - lifetime member
* Geochemical Society 2010-present
* American Geophysical Union, 1988-present
* Sigma-Xi, 1987-1988

**HONORS/AWARDS:**

* *Distinguished Graduate Faculty* award, Wayne State University 2023
* Member, *Honors and Recognition Committee*, AGU 2022-2023
* Elected to *Wayne Academy of Scholars* 2021-lifetime
* Member, Fulbright National Screening Committee 2019-2021
* Chair*, Devendra Lal Memorial Medal* selec.comm. *–* Union-level Medal at AGU 2017-2021
* *Senior Fulbright U.S. Scholar*, Turkey (September – December 2015) 2015
* *Distinguished Visiting Professor*, East China Normal University 2014 - 2016
* *Board of Governors Faculty Recognition* award, Wayne State University 2013
* *Board of Governors Distinguished Faculty Fellow*, Wayne State University 2010-2012
* Elected as *Visiting Research Fellow,* St. Anne’s College, Oxford University 2009
* Valedictorian, awarded Gold Medal, M.Sc. 1977-1979
* Valedictorian awarded Gold Medal, B.Sc. 1974-1977

**BIOGRAPHICAL CITATIONS** (National/Regional or Professional Directories):

* Listing: WHO’S WHO in South and Southwest 1996/1997 onwards;
* WHO’S WHO in Science and Engineering 1996/1997 onwards;
* WHO’S WHO in America 1996/1997 onwards;
* WHO’S WHO in the World 1997 onwards

I. **TEACHING**

1. Since Fall 1999
2. Years at Other Colleges/University (Please list): 11 years at Texas A&M University **C.** Courses Taught at Wayne State in Last Five Years

**1. Undergraduate**

* GEL-1000 - Geology and the Environment
* GEL 1010 - Geology: The Science of the Earth
* GEL-1050 – Oceanography (Online Course)
* GEL-1370 - Meteorology: The Study of Weather (Online Course)
* GEL 4850 - Research in Geology
* GEL-5993 - Writing Intensive

**2. Graduate**

* GEL-5080 – Environmental Isotope Geochemistry.
* GEL-5120 – Environmental Geochemistry
* GEL-5510 – Environmental Fate and Transport of Pollutants
* GEL-6400 – Geochronology/Nuclear Geology/
* ESG-6400 – Isotopes: Applications in Geological and Environmental Sciences
* GEL-7970 – Research in Geology
* GEL-7990 – How to Build a Habitable Planet – Directed Study

3. Graduate Professional School: None

**D.** Essays/Theses/Dissertations Directed

1. Students by Name, Level, Title of Project, Year **Wayne State:**

**Master’s thesis mentored to graduation:**

Daphne McNeary, M. S. thesis (Dept. of Geology - Chair), 4/5/2002, entitled: “The Depositional Characteristics of 7Be, 210Pb, and 210Po in Southeastern Michigan.”

Sarah Trimble, M. S. thesis (Dept. of Geology - Chair), 5/13/2003, entitled: “The Distribution of uranium and thorium series radionuclides in the Canada Basin, Arctic Ocean.”

Elizabeth Garver, M. S. thesis (Dept. of Geology - Chair), 7/29/2003, entitled: “Mechanisms of release of uranium and thorium-series radionuclides from a suite of natural minerals.”

Jason Jweda, M.S. thesis (Department of Geology – Chair), entitled: “Short-lived radionuclides as tracers of particle dynamics in a river system in Southeast Michigan.” August 2007.

Marty Eakin, M.S. (Dept. of Geology, June 2014; co-chair), entitled: “Radon loss from zircon: Emanation and diffusion as a function of grain size, temperature, and fission track density.”

Ayowale Emmanuel Ayodele, M.S. (Dept of Geology, June 2014; Chair), entitled: “Changes in the lead concentration in air and soil during house desconstruction and demolition: case study from Springwells, Detroit, Michigan.”

Jenna Hage-Hassan, M.S. (Dept of Geology, June 2015, Chair), entitled: “Impacts of anthropogenic watershed activity on the sedimentary records of dams from the Midwestern United States: A case study from Michigan and Indiana.”

John Niedermiller, M.S. (Dept of Geology, April 2017, Chair), entitled: “Comparison of the scavenging intensities, remineralization and residence time of 210Po and 210Pb at key interfaces (Biotic, sediment-water interface and hydrothermal) of the GEOTRACES East Pacific Zonal Transect.”

Katie Krupp, M.S. (Dept of Geology, July 2017; Chair), entitled “Using 210Po/210Pb disequilibria to characterize the biogeochemistry and quantify the dynamics of sea ice in the Arctic.”

Dawn Niedermiller, M.S. (Dept of Geology, December 2019; Chair).

Kristina Vanchick (Revels), M.A. (Dept of Geology, December 2019; Chair)

Max Denny, M.S. (Department of Environmental Science and Geology, May 2021; Chair)

Gozde Alper, M.S. (Department of Environmental Science and Geology, August 2021; Chair)

Denada Planaj, M.S. (Department of Environmental Science and Geology, November 2022; Chair)

Paul Manion, M.S. ((Department of Environmental Science and Geology, August 2020-present; Chair)

**Incomplete thesis/dissertation:**

Thomas Novell (Incomplete thesis work; M.S.)

Lynn Katrib, Ph.D. (Co-Chair, discontinued from her Ph.D. program in Civil and Environmental Engineering)

**Member in master thesis committees:** Curt Lichy, Andy Frahm, Shannon Molaroni, Lauren Bugdalski,

Brenden O’Leary, Mary Carnegie, Laura Robles, Brittany Watling

**Member in Ph.D. thesis committees:** Anton Puvirajah (Education), David Brackney (Education), Allison

Muhamed (Anthropology), Rajalakshmi Mudbidre (Co-advisor, Oakland University), Joydeep Roy (Physics), Sahar Ghazawi (Education, currently enrolled, 2018)

**Undergraduate students mentored:** Andrea Bartlett, Linda Fah, Max Denny, Kenneth Nash,

Vanessa Ibrahim, Michelle Blundell, Andrew Camilleri, Sabrina Good, Marie Muhammed, Emily Seifert, Pedor Pacheco, Katie Krupp, Jack Press, Noor Soboh

**External Examiner for Ph.D. Thesis outside United States:**

 Selvaraj, M., Ph.D. Madras University, India 1998

 Jonathan, M.P., Ph.D. Madras University, India 1999

 Kannan, V., Ph.D. Anna University, India 2002

 Ramachandran, S., Ph.D. Anna University, India 2005

 Kumar, A. Ph.D., Anna University, India 2007

 Nitika Chauhan, Ph.D., NIT, Kurukshetra, India 2015

 Silvia Perez-Moreno, University of Huelva, Spain 2017

1. **Course or Curriculum Development**

GEL 5080 - 3 Credit Course - Environmental Isotope Geochemistry GEL-6400 - 4 Credit Course – Geochronology

GEL-5510 - 4 Credit Course – Fate and Transport of Contaminants

GEL-1370 - Online Meteorology Course (jointly with American Meteorological Society) GEL-1050

– Online Oceanography Course (jointly with American Meteorological Society)

1. Course Materials Unpublished - None

II. **RESEARCH**

1. **Research in Progress, Not Funded**

1. **Funded Research:**

**Wayne State University:**

* PI: “Geochronological study of sediment cores using excess Pb-210”, **$ 39,500**, 12 November 2021 – 31 May 2022, Anchor QEA, Seattle, Washington.

* PI: “Investigation of Rn-222 and its progeny (Pb-210 and Po-210) in Environmental samples in proximity to the gas development industry in Southern Pennsylvania”, **$ 48,000**, 21 February 2021 – 20 February 2023, Physicians for Social Responsibility, Pennsylvania.

* PI: “Assessment of sources and accumulation rates of sediments accumulating in a range of aquatic environments using Be-7, Pb-210 and Po-210”, **$ 55,692**, January 2020 – September 2021, USACE.

* PI: “RAPID: Investigating the incorporation of elements into ice in Lake St. Clair during extreme weather conditions: an analogy for chemical cycling in the Arctic Ocean”, Co-PI: Gi-Hoon Hong, **$ 117,336**, 1 March 2019 – 28 February 2022, National Science Foundation.

* PI: “Dating of Lake sediments using Pb-210”, **$ 23,200**, University of California – Berkeley (contract work), September 2018 – December 2019.

* PI: “GEOTRACES Arctic section: Application of 210Po and 210Pb distribution at contrasting interface regimes of Western Arctic”, $ **297,060**, October 15, 2014 – September 30, 2019, National Science Foundation.

* Co-PI: “Sediment Yield and Dam Capacity in the Great Lakes Watershed”, **$ 487,180** (Geology portion: **$ 277,320**), PI: Carol Miller, USACE, September 2014 – April 2016.

* PI: “Acquisition of a low-level beta counter’, $ **39,180**, 1 January, 2015 – 31 December, 2015, Research Equipment Program, Office of the Vice-President for Research, Wayne State University.

* PI: “Assessment of Changes in the Environmental Lead levels from Demolition of Houses from a Systematic Sampling of Air and Soil at Demolition Sites”, **$ 90,254**, September 12, 2013 – 30 June 30, 2014, NextEnergy Center.

PI: “Workshop to Assess the Recent Changes in the Biogeochemistry of the Great Lakes System (BOGLS)”, **$ 25,000**, February 1, 2013 – January 31, 2014, National Science Foundation.

* PI: “Dating of Sediments from Lake Huron and Saginaw Bay” $ **30,000**, March – December 2013, CILER (NOAA via University of Michigan).

* PI: ‘Collaborative Research: GEOTRACES – 210Po and 210Pb distribution at Eastern Pacific Interface Regimes”, **$ 189,844**, August 1, 2012 – July 31, 2015 – National Science Foundation.

* PI: “Geophysical Parameters Optimization in Oil-Well Industry”, **$ 19,000**, Co-PI: Nagesh Kulkarni, June 29, 2012 – December 31, 2012, QARC.

* Co-PI: “Sediment Yield and Dam Capacity in the Great Lakes Watershed: Reconnaissance and Laboratory Analysis”, **$ 428,147** (Geology portion: **$ 157,291**), PI: Carol Miller, USACE, September 2010 – August 2012.

* PI: “Acquisition of Additional Counting Instruments for Radiochemical Research at Wayne State University”, **$ 30,700**, August 31, 2010 – August 31, 2011 – National Science Foundation.

* PI: “Collaborative Research: GEOTRACES-Application of 210Pb and 210Po distribution at North Atlantic Interface regimes”, **$ 101,284**, April 1, 2010 – March 31, 2014 - National Science Foundation.

* PI: “Collaborative Research: GEOTRACES-Methods development and Intercalibration for the 210Pb and 210Po radionuclide pair”, **$ 85,000**, July 15, 2009 – July 31, 2012 - National Science Foundation.

* PI: “Source Identification of Lead Using its Isotopic Ratios: Implications to the Children’s Health Issue in an

Urban Laboratory”, **$ 20,979**, June 15, 2009 – November 15, 2010, President’s Research Enhancement Program

– Urban Research, Wayne State University. PI: “Assessment and Compilation of Data for the Digital Library for Urban Environmental Data and Watershed Management”, **$ 9,950**, November 11, 2008 – November 10, 2009, Office of Vice- President for Research, Wayne State University.

* PI: Observatory of Submerged Sinkhole Ecosystems in Thunder Bay National Marine Sanctuary, Lake

Huron: Habitat Exploration, Life Inventory, and Hydrologic Monitoring, National Oceanic

Atmospheric Administration, **$ 32,256** (Total funding: $ 285,551; jointly with NOAA-GLERL, Grand Valley State University, University of Wisconsin, University of Michigan), 5/2008-4/2010.

* PI: Developing a New Online Course: Introduction to Oceanography”, **$ 5,000**, April 24, 2008 – April 23, 2009, Educational Development Grant, Wayne State University.

* PI: United States Geological Survey, ‘Analytical Services: Radiochemical Analysis of sediment and water samples’, **$ 9,860,** 9/2007 - 7/2008.

* PI: PSI Consulting (Funding from the Department of Environment, State of Florida), ‘Tracer Investigations to Identify the Source(s) of Contaminants at the Sub-Surface Contaminated Site at Fuller Heights, Mulberry, Florida’, **$ 63,204,** 11/2006 - 10/2007.

* PI: Aleutian/Pribilof Islands Association Inc., Anchorage, Alaska, ‘Radiochemical investigations on subsistent food chain in the Arctic and sub-arctic regions’, **$ 12,000,** 06/2006 - 5/2007.

* PI: U.S. Civilian Research and Development Foundation, ‘Estimation of Submarine Groundwater Discharge of Groundwater and Nutrients in the Coastal Waters off the Caspian Sea, Adjoining Azerbaijan, Using Ra and Rn isotopes’, **$ 9,100** (Total amount $45,500, jointly with Geology Institute of Azerbaijan), 10/2005 - 9/2007.

* PI: United States Geological Survey (Co-operative Agreement), ‘Characterization of Submarine Groundwater Discharge in Tampa Bay, Florida, Using a set of Radiochemical Tracers’, **$ 90,500,** 5/2003 - 9/2007.

P.I: United States Geological Survey, ‘Analytical Services: Radiochemical Analysis of sediment and water samples’, **$ 15,000,** 9/2004 - 10/2005.

* P.I: United States Geological Survey, ‘Radiochemical Analysis of sediment samples’, **$ 10,000,** 9/2003 - 9/2004.

* PI: Oakland University (US EPA-Funded), ‘Clinton River AOC Preparation for sediment remediation- chemical and radiochemical analysis,’ **$ 24,500,** 3/2004 - 9/2005.

* P.I: Michigan Department of Environmental Quality (through Wayne County Department of Environment), ‘Quantification of the Reduction in Nutrient Loading and Development of New Diagnostic Tracers in the Elimination of Illicit Connections in the Ecorse Creek Watershed’, **$ 108, 787**, 9/2002 - 12/2004.

* PI: Open University, U.K., ‘Analysis of Radium and radon Isotopes in groundwater samples from a sandy aquifer in Australia’, **$ 4,025,** 04/2004 - 08/2004.

* P.I: United States Geological Survey, ‘Analytical Services: Radiochemical Analysis of sediment and water samples,’ **$ 12,000,** 9/2003 - 9/2005.

* PI: CALTECH, ‘Analysis of radium in groundwater samples’, **$3,000,** 06/2003 - 12/2003.

* P.I: AMEC Earth and Environmental Inc. (supported by Electric Power Research Institute), ‘Geochronological and sedimentological investigations on Lake sediments from Georgia, USA’, **$ 48,196,** 12/2001 - 12/2003.

* P.I: City of St. Clair (Macomb County), ‘Dating Sediment cores from Lake St. Clair, Michigan’, **$ 5,000,** 11/2002 - 6/2003.
* P.I: CALTECH, ‘Measurements of radium and radon in groundwater samples from South Dakota’, **$ 3,000,** 8/2002 – 7/2003.

* P.I: National Science Foundation, ‘The behavior and distribution of particle-reactive radionuclide tracers in particulates, colloids and solution in the Canada Basin of the Arctic Ocean’, **$ 120,163,** 07/99 - 04/2002.

* P.I: University of Alaska, Fairbanks, ‘Dating of sediment core from Elson Lagoon in the Northern Alaska’, **$ 2,000,** 12/2001 - 02/2002.

* P.I: CALTECH, ‘Measurements of radium and radon in groundwater samples from New Mexico’, **$ 6,000,** 03/2001 - 11/2001.

* P.I: Alaska Department of Fish and Game, ‘Radiochemical Investigations on Caribou and Muskox tissues from Alaska’, **$ 8,000**, 05/2001 - 11/2001.

* P.I.: Aleutian/Pribilof Islands Association, Inc., Anchorage, Alaska, ‘Radionuclide Analyses of Sea Otter skull tissue – A pilot Study to investigate the sources of radionuclides to areas adjoining Amchitka Island’, **$ 12,240,** 07/1999 - 04/2000.

* P.I.: University of Alaska, Fairbanks, AK, ‘Dating of Alaskan Lake sediments using 210Pb and 137Cs. University of Alaska’, **$ 6,000,** 7/00 - 6/2001.

* Various Sources: Radiochemical Analytical Work **$ 8,000** ($2,000 from University of Alaska (02/2002); $1,000 from Stockholm University (12/2001); $5,000 from U.S. Geological Survey (at various times from 1/2000 - 8/2002).

**At Texas A&M University at Galveston:**

* PI: National Science Foundation, ‘The behavior and distribution of particle-reactive radionuclide tracers in particulates, colloids and solution in the Canada Basin of the Arctic Ocean’**,** 11/97 to 06/99, **$186,004**.

P.I.: Aleutian/Pribilof Islands Association, Inc., Anchorage, Alaska, ‘Radionuclide Analyses of Sea Otter skull tissue – A pilot Study to investigate the sources of radionuclides to areas adjoining Amchitka Island’, 12/98- 06/99, **$ 9,792**.

* P.I.: University of Alaska, Fairbanks, ‘Dating of Alaskan Lake sediments using 210Pb and 137Cs’, 8/97–6/00, **$ 26,000**.

* P.I: National Science Foundation, ‘Acquisition of State-of-the-Art High-Efficiency, High Resolution, Gamma Ray Detector’, 2/98-1/99, $ **30,000**.

* P.I.: California Institute of Technology, ‘Aquifer transport of Th, U, Ra and Rn in solution and on colloids, Subcontract from California Institute of Technology (DOE Grant)’ - 11/96-10/99, $ **25,000**.

* P.I: Office of Naval Research, ‘Fate and mobility of naturally occurring and anthropogenic radionuclides in the Barents and Kara Seas’, 6/93-11/96, $ **330,000**.

* P.I.: “A molecular and carbon isotopic carbon isotopic record of ecosystem response to changes in water availability and CO2 levels, 7/95-6/96, $ (subcontract amount: $**15,000**), total grant: $ 128,000.

* Co-P.I: Department of Energy, ‘The production of colloids in the benthic boundary layer and particle-particle interactions, 6/92-5/97, $ **1,368,260**.
* Co-P.I.: ‘Historical contamination of Mississippi River delta and Galveston Bay sediments’ 9/93-12/94, $ **55,000**, National Oceanic Atmospheric Administration.

* PI: Reconstruction of historical contamination in San Francisco Bay, 7/93-6/94, U.S. Geological Survey, **$10,725**.

* P.I.: Plant pigments and radionuclides as tracers of organic carbon flux in the Sabine-Neches estuary. 1/92 – 8/94, **$ 98,000** (jointly with Tom Bianchi), Advanced Research Grant, State of Texas.

* Co-P.I.: Processes which control the cycling of the toxicant lead in Galveston Bay, Texas Sea-Grant, 9/91 – 8/93, **$ 105,147**.

* Co-P.I: ‘The production of colloids in the benthic boundary layer and particle-particle interactions’, 07/91-06/94, **$ 531,654** National Science Foundation.

1. **Fellowships/Grants/Special Awards:**
	* + - 1. Graduate Research Assistantship for Daphne McNeary (1999-2001)
				2. Excellence in Research - $10,000 award from the office of the Vice-President for Research for the purchase of Gamma Ray Detector, $5,000 from the Dean of the College of Science (2000).
				3. Board of Governors Distinguished Faculty Fellowship Award $ 6500/year for two years.
				4. Graduate Research Assistantship for Lynn Katrib (2013-2014)

1. **Pending Grant Proposals:** None
2. **VISITING SCIENTISTS HOSTED:**
	* Ms. Juan Du, East China Normal University, China (6/1/16 – 30/11/2016; 2/6/2017-2/7/2018)
	* Mr. Jinlong Wang, East China Normal University, China (2/14/15-2/14/16)
	* Ms. Zhou, Jing, East China Normal University, China (3/1/15-9/1/15)
	* Mr. B. Ramalingeswara Rao, National Institute of Oceanography, Goa (6 November – 6 December, 2013)
	* Prof. Jinzhou Du, East China Normal University, China (1-5 December 2013)
	* Prof. Luis Barbero, University of Cadiz, Spain (1 March – 30 April, 2012)
	* Gi-Hoon Hong, Professor, Korea Ocean Research and Development, Ansan,

S. Korea (August 2008 – July 2009)

* + - * Ma Qiang, Visiting Scholar, Xiamen University, China (October 2008-

October 2009)

* + - * Profs. Chingiz Aliyev and Akper Fazeyullah, Geological Institute, National Academy of Azerbaijan
			* Ms. Huseynova Sevinj Tariverdi, Geological Institute, National Academy of Azerbaijan
			* Dr. D. V. Borole, National Institute of Oceanography, Goa, India
			* Sandra Domatto from IPEN-Sao Paulo, 6-months visit on an IAEA Fellowship

1. **Ocean Expeditions**
	* + - Participant, BERINGIA-2005 in Ice-Breaker ODEN,-Leg-II, Arctic Ocean, July 20-August 18, 2005
			- Chief Scientist, USCGC POLAR STAR, AWS-2000, 2 weeks in the Western Arctic Ocean, 2000.
			- Participant, USCGC POLAR STAR, 4 weeks in the Western Arctic Ocean, 1998.
			- Chief Scientist, R/V GYRE 93G12 in the Gulf of Mexico, 1993.
			- Chief Scientist, R/V GYRE 92G7 in the Gulf of Mexico, 1992.
			- Chief Scientist, R/V GYRE 91G4 in the Gulf of Mexico, 1991.
			- Participant, R/V GYRE 90G7 in the Gulf of Mexico, November 1990.
			- Participant, R/V GYRE 89G15 in the Gulf of Mexico, Novmber 1989.
			- Participant, R/V Sagar Kanya in the Arabian Sea, May 1986.
			- Participant, R/V SURVEYOR, Chuckchi Sea, Bering Sea, August-September 1987. Participant, R/V METEOR, North Sea, 6 weeks (Analysis of Cs and Am onboard), 1982.
			- Participant, Geophysical Cruise in the Baltic Sea (from Kiel), one week, 1982.
			- Participant, R/V Gaveshani, Training Cruise for students, Bay of Bengal, 1981.

III. **PUBLICATIONS**

 **A. Scholarly Books Published**

1. *Radon: A Tracer for Geological, Geophysical and Geochemical Studies* – Springer, M. Baskaran – August 2016 (Book DOI: 10.1007/978-3-319-21329-3; ISBN: 978-3-319-21328-6; ISBN 978-3-319-213329-3 eBook).
2. Co-Authored: None

* + 1. **Chapters Published:** (included in the publication list below)

* + 1. **Editorships of Books/Proceedings:**

*Handbook of Environmental Isotope Geochemistry* – Springer, Mark Baskaran (Editor) – 2- set Volume with 40 articles, ranked in the top 25% of all the books published by Springer in this field consistently since 2011 to present. Edited Proceedings from Mangalore Conference (2013), Turkey conference (2015), and Shanghai Conference

* + 1. **Journal Volumes Edited:**

Marine Chemistry (2007)

Journal of Environmental Radioactivity (2014)

Journal of Environmental Radioactivity (2017)

Estuarine, Coastal and Shelf Science (2020)

Journal of Environmental Radioactivity (2020)

* + 1. **Journal Articles Published:** **Refereed Articles:**

**Published peer-reviewed research articles (Journals and Book Chapters): 162** (Cumulative Science

Citation Index - WebofScience): 6,518 (on 14 September 2023); h-index: 47; Google Scholar: Cumulative Citations: 10,589; h-index: 61 (14 September 2023)) (key: graduate students from WSU: G ; outside: O

* 1. **Baskaran, M.**, M. M. Sarin, and B. L. K. Somayajulu (1984). Composition and mineral fractions of the Narbada and Tapti estuarine particles and the adjacent Arabian Sea sediments off Western India. Chem. Geol. 45: 33-51.

* 1. Krishnaswami, S., **M. Baskaran**, S. W. Fowler and M. Heyraud (1985). Comparative role of Salps

and other zooplankton in the cycling and transport of selected elements and natural radionuclides in Mediterranean Waters. Biogeochemistry 1: 353-360.

* 1. **Baskaran, M.** and B. L. K. Somayajulu (1986). Mineralogy of Saurashtra Miliolites. J. Geol. Soc. 27(1): 63-89.

* 1. **Baskaran, M.**, S. Krishnaswami and N. Bhandari (1986). The Geochemical significance of uranium and thorium in the salt lakes and adjacent groundwaters of Rajasthan. J. Geol. Soc. 27: 90-101.

* 1. **Baskaran, M.**, A. R. Marathe, S. N. Rajaguru and B. L. K. Somayajulu (1986). Geochronology of Paleolithic cultures in the Hiran Valley, Saurashtra, India. J. Arch. Sci. 13: 505-514.

* 1. **Baskaran, M.**, B. Sahai, R. K. Sood and B. L. K. Somayajulu (1987). Geochronological studies of strandline miliolites of Saurashtra, India, detected by remote sensing techniques. Int. J. Remote Sensing 8(2): 169-176.

* 1. Fisher, N. S., J. L. Teyssie, S. Krishnaswami and **M. Baskaran** (1987). Accumulation of Th, Pb, U and Ra in marine phytoplankton and its geochemical significance. Limnol. Oceanogr. 32(1): 131-142.

* 1. **Baskaran, M.**, S. V. Deshpande, S. N. Rajaguru and B. L. K. Somayajulu (1989). Geochronology of Miliolite Rocks of Kutch, Western India. Jour. Geol. Soc. 33: 588-593.

* 1. Chakrabarti, A. and **M. Baskaran** (1989). Biogenic Fecal Pellet Mounds in Quaternary Miliolites of Saurashtra, India. Paleogeogr., Paleoclimatol., Paleoecol. 73: 311-315.

* 1. **Baskaran, M.**, G. Rajagopalan and B. L. K. Somayajulu (1989). 230Th/234U and 14C Dating of the Quaternary Carbonate Deposits of Saurashtra, India. Chem. Geol. 10(1): 65-82.

* 1. Gosink, T. A., **M. Baskaran** and D. F. Holleman (1990). Radon in the Body from Drinking Water. Health Physics 59(6): 919-924.

* 1. **Baskaran, M.** and B. L. K. Somayajulu (1990). Clay Mineral Distributions in Dated Miliolites of the Late Quaternary from Saurashtra and Kutch, Gujarat. Jour. Geol. Soc. 35: 471-479.

* 1. Chakrabarti, A., **M. Baskaran** and B. Kumar (1991). Do surface textures of quartz grains always indicate the final depositional environments?:A case study from the miliolitic rocks of Saurashtra, Gujarat, India. Geol. Soc. Special Publication No. 16: 77-83.

* 1. **Baskaran, M.**, J. J. Kelley, A. S. Naidu and D. F. Holleman (1991). Environmental Radiocesium in Subarctic and Arctic Alaska following Chernobyl. Arctic 44(4): 346-350.

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**Non-refereed Journals: None**

 **E. Papers Published in Conference Proceedings and Submitted Reports:**

1. **Baskaran, M.** and J. Bratton and Steering Committee Members (2014). A Report of the Workshop entitled “Recent Biogeochemical Changes in the Biogeochemisry of the Great Lakes System (BOGLS)”, pp. 42. Available at:<http://bogls.science.wayne.edu/>
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1. **Translation of Other Authors Published: None**

* 1. Books: None

* 1. Articles or Creative Works: None

1. **Abstracts Published in Academic Journals**

***Abstracts/Papers Presented in National and International Meetings:***

**Baskaran, M. Invited Paper:** Presented at Goldschmidt 2023, Lyon, France July 10-14, 2023, entitled: “Investigations of Incorporation of Elements into ice in Lake St. Clair, SE Michigan, During Extreme Weather Conditions: An Analogy for Chemical Cycling in the Arctic Ocean.”

**Baskaran, M.** and M. Denny (2023). A novel technique to date road sediment using 210Po:210Pb disequilibria: Case study from an urban area, Detroit, MI. Paper presented at the Joint 72nd Annual Southeastern/58th Annual Northeastern Section Meeting, 17th March, 2023.

**Baskaran, M.** (2019). Lead-210 and Polonium-210: Applications as Tracers and Chronometer in

Environmental Systems – Past, Present and Future. Keynote address presented at 4th International Conf.

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GiHoon Hong, S.-H. Kim and **M. Baskaran** (2019). On the role of 210Bi in the apparent disequilibrium of 210Pb-210Po at sea. Same as above, Abstract IT-05.

Wang, Jinlong, Q. Zhong, **M. Baskaran** and J.Z. Du (2019). Variations in the partitioning behavior of 210Pb, 207Bi and 210Po during sorption to a wide range of marine particles. Same as above, IT-07.

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**Baskaran, M.** (2015). Pushing the detection limits of measurements of environmental radioactivity: Case studies from the applications of radon in atmospheric studies – Lessons learned and Future Challenges. Invited talk presented at the 20th Radiation in the Environment National Symposium, 26-29th October, Mangalore University, India.

**Baskaran, M.** (2015). Po-210-Pb-210-Ra-226 disequilibria in the Global Oceans – a review. Invited talk presented at the 3rd International Conference on Po and Radioactive Pb isotopes’, Kusadasi, Turkey, 11-14 October, 2015.

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Abstract OS22A-06 presented at the Fall-2013 AGU meeting in San Francisco, 8-13 December 2013. Eakin, M., S.J. Brownlee, **M. Baskaran**, L. Barbero and C.N. Walsh (2013). Radon loss from zircon:

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Hong, G.H., H.M. Lee, **M. Baskaran**, S.H. Kim, Y.I. Kim and C.J. Kim (2013). Distribution, fluxes in the water column and early diagenesis in the bottom sediments of 210Po and 210Pb in the sea. Paper presented at Goldschmidt2013, Florence, Italy August 26-30, 2013, doi:10.1180/min/mag.2013.077 .5.27.

Eakin, M., S. Brownlee and **M. Baskaran** (2012). Radon emanation from zircon as a function of grain size, temperature and track density. Paper presented at the Fall-2012 AGU Meeting, San Francisco, CA. Rigaud, S., T.M. Church, **M. Baskaran**, G. Stewart (2012). 210Po and 210Pb along North Atlantic US GEOTRACES sections to assess bioactive and particle active scavenging and export rates. Paper presented at the Fall-2012 AGU Meeting, San Francisco, CA.

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Bratton, J.F., M**. Baskaran** (2012) Recent advances in understanding of biogeochemical and hydrological processes in the Great Lakes Basin using natural and anthropogenic tracers. Paper presented at the 55th International Association for Great Lakes Research Conference (IAGLR), Cornwall, ON Canada, May 13-17, 2012.

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**Baskaran, M**., A. Kumar, R.L. Heichel, C.M. Miller, J.P. Selegean and C.T. Creech (2012).

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**Baskaran, M.,** T. Church, and L. Hill (2006). Export of Particulate Organic Carbon Using 210Po as a Metric – A

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Hill, C., **M. Baskaran**, and T. Church (2006). Export of biogenic particulate matter as traced by preferential scavenging of 210Po at the Bermuda Atlantic Time Series. Paper OS15B-16, presented at the Ocean Sciences Meeting, Honolulu, HI, 20-24 Feb. 2006.

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Sediment chronology from 210Pb, 137Cs, 239,240Pu, 234Th activity profiles. Paper presented at the Ocean Sciences Meeting at San Diego, California. EOS 75(3) O52M-4, p. 233.

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Santschi, P. H. and **M. Baskaran** (1991). The role of particles and colloids in the transport of radionuclides and trace metals in estuarine and coastal environments. Paper presented at Second Int. Sympo. on the Biogeochemistry of Model estuaries: Estuarine Processes and Global change, Jekyll Island, Georgia, USA, April 14-20, 1991.

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Landsat imagery studies of coastal deposits. Natl. Seminar, NMRS, Hyderabad, India.

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**Baskaran, M.**, M. M. Sarin, and B. L. K. Somayajulu (1981). Narbada and Tapti estuarine suspended matter and sediments: major and trace metal composition of different fractions. Estuaries Symposium, Goa, India.

1. **Book Reviews Published**
	1. Academic Journals: None
	2. In Magazines/Newspapers: None
2. **Creative Shows/Exhibits** None
3. **Creative Performances**: None

1. **Instructional Materials Formally** **Published:** None

* + 1. Textbooks
		2. Study Guides/Laboratory Workbooks
		3. Other Published Materials: Revision of Instructor’s Manual and Test Bank Questions for Physical Geology Text Book (Chernicoff and Whitney, 4th Ed.).

1. **Papers Presented**

1. **Invited and/or Refereed Internationally or Nationally**

All the relevant information is given in Papers presented section. Some of the papers listed above are refereed and most of them are presented in National/International meetings.

1. Invited and/or Refereed

Locally/Regionally. (Information given above)

 **M. Invited Seminars/ Lectures Presented and Workshops Attended:**

* **Invited Seminar:** Delivered a seminar at the *Indian Institute of Technology*-Gandhinagar, India on 21st July 2023
* **Invited Seminars:** Delivered a colloquium at the *Physical Research Laboratory* (PRL) at Ahmedabad, India on 19th July 2023, entitled: “82\_PRL Ka Amrut Vyakhyan.” ; Second talk delivered at PRL on 20th July 2023
* **Invited Seminar:** Delivered a talk at the *Indian Institute of Science Education and Research* (IISER) at Pune, India on 17th July 2023
* **Invited Seminar:** Delivered a talk at the *Indian Institute of Tropical Meteorology*, Pune, India 0n 14th July 2023
* **Invited Seminar:** Delivered three seminars, one each day during 27-29 May 2019 at the Indian Institute of Science, Bengaluru, India.
* **Invited:** Conducted GIAN (*Global Initiative for Academic Networking*, Government of India)

Workshop for 2 weeks (14 – 24 May 2019) entitled “Applications of Nuclear Technniques in the

Investigation of Monsoon Dynamics and Atmospheric Pollutants” at Mangalore University, India, with 28 participants from different parts of India (sponsored by the Government of India).

* **Keynote Speaker:** ‘4th International Conference on Po and Radioactive Pb Isotopes’, East China Normal University, Shanghai, China, 8-11 April 2019.
* **Invited Workshop:** “Expert Meeting on capacities gap analysis and action planning for assistance in sustainable marine and coastal management to LAC”, 9-13 July 2018, MEL-IAEA, Monaco.
* **Invited Seminar:** Delivered three seminars, 27 June 2018, Stellenbosch University, Cape Town, S. Africa
* **Keynote Speaker:** 13th Annual AfricaArray Workshop, 24-27 June 2018, The University of the Witwatersrand, Johannesburg, S. Africa
* **Invited Seminar:** Delivered two talks: i) Guest lecture in “*Environmental Oceanography*” course (for undergraduates); and ii) College-wide seminar to all the students/faculty/staff, College of Earth and Environmental Sciences, Seoul National University, South Korea, Dec. 4-5, 2017.
* **Invited Seminar at the International Seminar on Ocean Science and Technology:** Korea Ocean Science and Technology Institute (KIOST), Dec. 4-5, 2017, Busan, Republic of Korea.
* **Invited Seminar:** Department of Earth and Environmental Science, University of Michigan, Ann Arbor, 10 November 2017.
* **Invited Talk:** ECSA 2017 Conference, 16-20 October 2017, Shanghai, China.
* **Invited Workshop:** “Data Synthesis Workshop, Miami, FL, 23-26 October 2017.
* **Invited Seminar:** Institute of Earth and Environment – Chinese Academy of Science, Xi’an, China, 29th July 2017.
* **Keynote Speaker at the International Seminar**: *New Ocean Observation Initiatives and New Applications of Ocean Sciences for Sustainable Development*, Nov. 30 – Dec. 02, 2016, KIOST, Ansan, Republic of Korea.
* **Invited Workshop:** “SKLEC 3rd International Consultation Meeting and the Workshop on Estuarine and Coastal Research, Shanghai, China (October 19 – 21, 2016).
* **Invited Workshop:** “GEOTRACES: Alaska-Tahiti Planning Workshop, La Jolla, CA, 5-7, 2016.
* **Invited Workshop:** “GEOTRACES: Data Synthesis Workshop, New York, August 1-4, 2016.
* **Invited Seminar:** National Institute of Oceanography, Dona Paula, Goa, 30th October, 2015.
* **Invited Talk:** 20th Radiation in the Environment National Symposium, Mangalore University, India, 2629th October.
* **Invited Talk:** ‘3rd International Conference on Po and Radioactive Pb Isotopes’, Kusadasi, Turkey, 1114 October, 2015.
* **Invited Talk:** ENVIRAD2015, Thessaloniki, Greece, 21-25 September 2015.
* **Invited Seminar:** Health Physics Society of the Great Lakes Chapter, Dearborn, Michigan, September 4, 2015.
* **Invited Talk:** State Key Laboratory for Estuarine and Coastal Research Institute, East China Normal University, Shanghai, China, August 4, 2014.
* **Invited Talk:** Goldschmidt2014, Sacramento, CA, 8-13 June, 2014.
* **Invited Seminars:** Delivered 3 seminars at Ege University, Izmir, Turkey (one each at Nuclear Science Institute; Center for Environmental Studies; and Science and Technology Research Center)
* **Plenary Session Speaker** at the Second International Conference on Po and Radioactive Pb isotopes, 1113 February 2013, Mangalore, India.
* **Invited Talk:** Two seminars at the Department of Geology, Anna University, Chennai, India on 8th Feb. 2013.
* **Invited Talk:** Case Western Reserve University – Earth and Environmental Science Department, Ocotber 5, 2012.
* **Invited Workshop:** “GEOTRACES: Arctic Implementation Plan Workshop, Arlington, VA, June 13-15, 2012.
* **Invited Workshop:** “GEOTRACES: Arctic Implementation Workshop,” Arlington, VA, June 12-10, 2010.
* **Invited Seminar:** Universitad de Huelva, Spain on July 27, 2010 (*Nuclear Clocks: Major Advances in Earth Sciences*).
* **Invited Seminar:** Universitad de Cadiz, Spain on July 21, 2010 (*Applications of U-Th-Isotopes as Tracers and Chronometers in Marine System*).
* **Invited Workshop:** “GEOTRACES: Intercalibration Workshop,” Norfolk, VA, March 8-10, 2010.
* **Plenary Session Speaker** at the International Topical Conference on Po and Radioactive Pb isotopes, 2628 October 2009, Seville, Spain.
* **Invited International Workshop:** “GEOTRACES: Arctic Ocean Planning Workshop,” Dormenhorst, Germany, June, 2009 and served as a Rapporteur for one of the three working groups.
* **Invited Seminar:** Oxford University (Department of Earth Sciences) on March 11, 2009
* **Invited Seminar:** Swedish Museum of Natural History (University of Stockholm) on March 8, 2009
* **Invited Seminar:** Anna University, Chennai, India (Department of Earth and Environmental Science) on August 25, 2008.
* **Invited Seminar:** Indian Institute of Science, Bangalore, India (Center for Earth Sciences and Center for Ocean and Atmospheric Sciences), Two seminars on August 21, 2008.
* **Invited Seminar:** Physical Research Laboratory, Ahmedabad, India on August 19, 2008.
* **Invited Workshop:** “GEOTRACES: Intercalibration Workshop,” San Francisco, CA, December 8-9, 2007.
* **Invited International Workshop:** “GEOTRACES: Indian Ocean Planning Workshop,” Goa, India, October 24- 26, 2007 and served as a Rapporteur for one of the three working groups.
* **Invited National Workshop:** “AMS/NOAA/NSF Online Weather Studies MSI Faculty Workshop,” Kansas City, MO, May 21-25, 2007.
* **Invited National Workshop:** “Arctic System Synthesis Workshop: New Perspectives through Data Discovery and Modeling” (workshop sponsored by the National Science Foundation through ARC SS Science Management

Office), 2-4 April, 2007 at the Bell Harbor Conference Center, Seattle.

* **Invited Seminar:** Department of Geology, University of Toronto, Canada, on October 5, 2006.
* **Invited National Workshop:** “Ocean Carbon Biogeochemistry” 10-13 July 2006, Woods Hole Oceanographic Institution, Woods Hole, MA and presented a Poster.
* **Invited Talk at the public forum at Uniontown, Ohio:** “Evidence for Anthropogenic Activity at the Industrial Landfill, Uniontown, Ohio” 23rd May, 2006.
* **Invited National Workshop:** Bering Sea Drilling Workshop, June 20-22, 2005, Fairbanks, Alaska; presented a paper (workshop sponsored by Joint Oceanographic Institution Inc.).
* **Invited National Workshop:** “Paleoenvironmental reconstruction using Clam Shells” 7th July 2005 at St. Petersburg, Florida (sponsored by U.S. Geological Survey).
* **Invited Seminar:** College of Marine Studies, University of Delaware (Newark) on May 6th, 2005 (Title: Role of Colloids in the Removal of Particle-Reactive Radionuclides in the Arctic Ocean).
* **Invited Seminar:** Annis Water Resources Institute, Grand Valley State University, Muskegon, MI, on March 17th, 2005 (Title: Applications of short-lived radionuclides as tracers and chronometers in a freshwater system).
* **Invited National Workshop:** “Sea Ice Mass Balance in the Arctic Ocean (SIMBA)” – NSF-Sponsored Meeting, Applied Physics Laboratory, University of Washington, Seattle, 28 Feb.-2 March, 2004.
* **Invited Seminar:** Western Michigan University on 15th November 2004 (Title: Role of colloidal and particulate matter in thorium scavenging in the Canada Basin of the Arctic Ocean).**Invited Seminar:** Chemistry

Department in Oakland University on 27th October 2004 (Title: Short-lived Radionuclides as Tracers of Atmospheric Processes).

* **Invited International Workshop:** “Future Applications of 234Th in Aquatic Ecosystems Workshop” – NSF Sponsored Workshop at Woods Hole Oceanographic Institution, Woods Hole, MA, August 16-19, 2004.
* **Invited Seminar:** Indian Institute of Technology (Madras) on 5th August 2004, entitled “Radionuclides as Tracers and Chronometers in Environmental Problems.”
* **Invited Seminar:** National Institute of Oceanography, Goa (India) on 29 July 2004, entitled “Scavenging of Particle Reactive Radionuclides in the Arctic Ocean”.
* **Invited National Workshop:** “The Amerasian Basin and its Margins” – NSF-Sponsored Meeting, Washington D.C., at the Joint Oceanographic Institutions, 8-9 June, 2004.
* **Invited Seminar:** Korea Oceanographic and Developmental Research Institute (KORDI) on March 6, 2003.
* **Invited Presentation:** The American Chemical Society, Analytical Chemistry Division, Detroit, Michigan, Two presentations on 21 November 2002.
* **Invited Workshop:** University of Alaska, Fairbanks, AK – Amchitka Island Long-term Stewardship Workshop, Fairbanks, AK, presented three talks, February 12-14, 2002. Served as a Reporter for one of the three Technical Working Groups (Marine Science and Radioecology).
* **Invited National Workshop:** Arctic Research Workshop – NOAA - Presented a paper entitled “Reconstruction of historical contaminants and particle flux in the Arctic Ocean” in the Arctic Research Workshop held at the NOAA Headquarters in Washington D.C. on July 25-26, 2001.
* **Invited Talk:** Oakland University, Rochester, Michigan, November 13, 2001.
* **Invited presentations:** American Chemical Society, Analytical Chemistry Division, Detroit, Michigan, Two presentations on 16 November 2000.
* **Invited Talk:** Barrow Arctic Science Consortium, Barrow, Alaska – Invited to present a paper at the

National Press Conference for Women, sponsored by the National Science Foundation, August 2000.

* **Invited talks** – Two talks at the Korea Oceanographic and Developmental Research Institute (KORDI) on March 14 & 15, 2000.
* **Invited Seminar:** Institute of Marine Science, University of Delaware, April 1999.
* **Invited Seminar:** Department of Geology, University of Nevada, January 1999.
* **Invited Seminar:** Pacific Northwest National Laboratory, March 1999.
* **Invited Seminar:** Savannah River Ecological Laboratory March 1999.
* **Invited Seminar:** Idaho Engineering National Laboratory, February 1999.
* **Invited Seminar:** Western Michigan University, March 1999.
* **Invited Seminar:** Center for Environmental Research and Monitoring, State University of New Mexico March 1999.
* **Invited Seminar:** Universidade Estadual Paulista, Rio Claro, Brazil, October 1997.
* **Invited Conference:** 5th International Congress of the Brazilian Geophysical Society, Sao Paulo, Brazil October 1997.
* **Invited Seminar:** Kalpakkam Atomic Research Center July 1996.
* **Invited Seminar:** Madras University, July 1996.
* **Invited Seminar:** Anna University, July 1996.
* **Invited Seminar:** Madurai University, July 1996.
* **Invited Seminar:** A series of Invited Talks at the Korea Oceanographic and Developmental Research Institute, Seoul, Korea, (June 3-14, 1996).
* **Invited Seminar:** California Institute of Technology, December 1994.
* **Invited Speaker:** International Symposium Conference on Plutonium at Ottawa, Canada, as a speaker and International Expert, (1994).
* **Invited Seminar:** Center for Nuclear Waste Regulatory Analyses, Southwest Research Institute, San Antonio, Texas (1994).

**Talks given at Wayne State University (outside the Department only):**

* 1. Seminar entitled “Energy, Sustainability and Impacts of Nuclear Accidents on Human Society”,
	2. Seminar entitled “Tracking the Sources, Pathways, and Transport of Lead in the Environment Using Lead Isotopes: A Case Study from Detroit, Michigan” Wayne State University, 6th March, 2013.
	3. Seminar entitled “Connecting Worlds: Untrodden Paths of Geology Through Physics” delivered at the 6th Undergraduate Physics Research Conference at Wayne State University, 16 Nov., 2012.
	4. Seminar entitled “Anatomy of Fukoshima Nuclear Accident: Source Tracking and Atmospheric Transport of Radionuclides” Wayne State University, 11 January, 2012.
	5. Delivered a talk entitled “Lead Isotopes and Source Determination” at the Institute of Environmental Health Science Research on 07 January 2010.
	6. Delivered a Colloquium entitled “Nuclear Clocks: Major Advances in Earth Sciences” at the Physics Department, Wayne State University, January 15, 2009.
	7. Delivered a Seminar entitled “How Old the Humans and Earth Are? – A Divisive Line Among the Christians” at the Religion-Science Conference, Wayne State University, April 21, 2006.
	8. Applications of U-Th series radionuclides as Geochronometers: An Overview. Colloquium given on November 21, 2002 at the Physics Department, Wayne State University.
	9. Applications of short-lived radionuclides in Earth Sciences – A Review. Seminar delivered on 24 September at the Chemistry Department, Wayne State University.

III. **SERVICE**

1. **Administrative Appointments at Wayne State in Last Five Years: N/A**

1. **Administrative Appointments at Other College/University in Last Five Years: N/A**

1. **Committee Assignments in Last Five Years**

 1. University Committees Chaired: None

1. University Committee Membership:

Selection committee for the *Board of Governors Faculty Recognition* Award (2014, 2016, 2018, 2019) Reviewer, UROP Proposals at Wayne State University, 2015.

Selection committee for the *Board of Governors Distinguished Faculty Fellow* award (2011) Academic Senate (2004-2007); FSST - Senate sub-committee (2004-2007).

1. College/Department Committees Chaired: Chaired two search committees in 2001 and 2002.
	1. Have been serving as the contact-person for the Department since July 1, 2001; responsibilities include scheduling off-campus (2001- present), and on-campus courses (2001 – present), assigning part-time instructors for teaching the courses (2001 – present), assignments for Geology- 1010 lab instructors (with Dave Lowrie – 2001-2008), evaluation of transfer of credit applications (2001 – Sept. 2013).
	2. Coordination with Geology faculty on the outreach program, and arranging field courses for the specialized geology courses (2001 – 2008).
	3. Graduate Advisor in the Department (August 2001 – September 2008).
	4. Undergraduate Advisor in the Department (August 2001 – September 2013).
	5. Faculty liaison (1999-2001) for the Geology Club, run mainly by the students.
	6. Served as the search committee Chair for two faculty positions (Ed van Hees and Larry Lemke).

**College/Department Committee Membership**

* + - Chair, English Department Chair search committee, February-April 2019 - Promotion and Tenure (2012-2018) - College of Liberal Arts & Sciences Committee - Faculty Council, College of Liberal Arts and Sciences, 2008-2011.
		- Invited to participate College of Science Retreat (October 2001) and shared my vision for our department, to develop an active research-oriented, environmental science program.
		- Served as a member in the Strategic Plan Workshop (College of Science) – Facilities core group on December 16, 1999.
		- Department salary committee (1999-present)

1. **Positions Held in Professional Associations in Last Five Years None**

1. **Memberships/Offices Held in Public or Private Agencies Related to Discipline in Last Five Years.** American Geophysical Union, American Chemical Society, Geochemical Society

 **3. Testimony before Public Bodies:**

Two presentations were made to the Public on the Radiation issue at the Mixes Waste Landfill site in Uniontown, Ohio; Two presentations were made at Albuquerque, New Mexico in 2000 on the radiation issue in the Mixed Waste Landfill adjoining Sandia National Laboratory, Albuquerque, New Mexico.

1. **Consulting to Public Agencies, Foundations, Professional Associations.**
	1. Volunteer Teaching 2nd Year College-level Physics to upper Middle and High School students at the Indus Center of Academic Excellence, a non-profit organization, on Saturdays, every week (2004- 2013).
	2. Served as a Board Member (2005-2009) at the Indus Center of Academic Excellence, a non-profit organization to promote excellence in Science and Math in Southeast Michigan (**website: www.icae.org**) iii) Served as a Volunteer for the Concerned Citizens of Lake Township on the Industrial Excess Landfill, Uniontown, Ohio on the nuclear contamination in the groundwater system. My interview appeared in the NBC-Cleveland, Ohio as well in the local newspapers, and radio station from November 01- February 02.
2. **Consulting to Private Enterprises:** Quarkonics (2012-2015)

1. **Journal/Editorships**
	1. Associate Editor: i) *Estuarine, Coastal and Shelf Research* (2014-present);
	2. ii) Journal of Environmental Radioactivity (2016-2022)

* 1. Editor, ***Handbook of Environmental Isotope Geochemistry***, Springer-Verlag, 2-Set Volume with 40 Articles – Publication Date: September 2011.

* 1. Editorships: Served as a Guest Editor to the following: i) *Journal of Environmental Radioactivity* (special volume entitled: “Special issue of journal of Environmental Radioactivity of 2nd International Conference on

Po and radioactive Pb isotopes” – published in December 2014 (jointly with N. Karunakara, Mangalore

University, India); ii) *Journal of Environmental Radioactivity* (special volume entitled: “Special issue of

Journal of Environmental Radioactivity of 4th International Conference on Po and radioactive Pb isotopes – Published in July 2017 (jointly with Aysun Ugur); and iii) *Marine Chemistry* (Special volume entitled:

“*Biogeochemical Cycling in Tampa Bay, Florida*” – published in spring 2007 (jointly with Peter W. Swarzenski, U.S. Geological Survey, St. Petersburg, Florida).

1. **Other Professionally Related Service:**

**Served as a Reviewer for the following Professional Journals:**

Nature, American Mineralogist, Applied Radiation and Isotopes, Aqueous Geochemistry, Atmospheric Environment,

Chemical Geology, Continental Shelf Research, Deep-Sea Research, Earth and Planetary Science Letters, Earth

Surface Processes and Landforms, Environmental Science and Technology, Environmental Monitoring and

Assessment, Estuaries, Geochemical Journal, Geophysical Research Letters, Geochimica et Cosmochimica Acta,

Journal of Geophysical Research, Marine Chemistry, Marine Geology, Marine Pollution Bulletin, Progress in Oceanography, Science of the Total Environment, Solar and Terrestrial Physics, Tellus, Water Resources Research **I typically review 12-15 papers/year to professional journals in my field.**

**Served as a Reviewer for the following Funding Agencies:**

National Science Foundation – Chemical Oceanography, National Science Foundation – Earth System Science,

Atmospheric Science, Hydrology, Office of Polar Programs., U.S. Civilian Research and Development Foundation

(CRDF), DOE and NOAA, Sea Grant (Texas, New York and Wisconsin Sea Grant Programs), National Research Council – UK, National Research Council, Canada., Israel Science Foundation (2017), National Science Foundation in Poland (2016), Romania (2016), Japan (2017), Kuwait (2018). **I typically review 2-5 proposals/year.**

**Other Professionally Related Service:**

* Convened at Townhall Meeting (BOGLS; with Val Klump and Ostrom Nathaniel) at Fall-2013 AGU in San Francisco on 12 December, 2013
* Convened a Community Forum (BOGLS; with Greg Dick) at Goldschmidt2013 (Geochemical Society Meeting) in Florence, Italy on 28th August, 2013
* Convened a Community Forum at the International Association of the Great Lakes Research (IAGLR) on 5th June, 2013 at Purdue University at West Lafayette, Indiana
* Convened a National Workshop entitled “Recent Changes in the Biogeochemistry of the Great Lakes System” where about 70 researchers from mostly Great Lakes States attended (11-13 March 2013)
* Served as an External Reviewer for the selection of candidates for the *Indian National Science Academy Fellows, August 2010.*
* Served as a Reviewer for three Physical Geology Text books: 1) Physical Geology – 10th, 11th and 12th Editions, Plummer, McGeary and Carlson, McGraw Hill Publisher; 2) Geology – 4th Edition, Chernicoff and Whitney, Pearson Eduction/Prentice Hall; and 3) The Essential Earth – Jordan and Grotzinger, Freeman Publisher.
* Convened a session at the first Asia Oceania Geosciences Society Meeting at Singapore entitled “Biogeochemical Cycling in Estuaries and Coastal Waters” July 5-9, 2004.
* Have served as an expert to several public organizations and citizens groups on the Environmental Radioactivity. Ids:

1) Web of Science Researcher ID: [AAN-2253-2020](https://publons.com/researcher/AAN-2253-2020/)