



Professor of Physics, Astronomy, Mathematics,
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1. Education History

Year	Degree	Major	Institution
1988	Ph. D.	Major: Space Physics Minor: Astronomy & Astrophysics Thesis: Global Zones of Particle Precipitation	Louisiana State University, Baton Rouge, LA, USA
1980	M. S. (A. B. D.)	Nuclear Physics	American University of Beirut
1974	M. Sc.	Major: Nuclear & Particle Physics Thesis: A Dissertation on Properties of Hyperfragments and Other Fragments Produced in Nuclear Emulsion Exposed to 3.0 GeV/c K^- - Meson Monenta Minor: Electronics	Rajshahi University, Bangladesh
1972	B. Sc. (Honors)	Major: Physics Minor: Chemistry & Mathematics	Rajshahi University, Bangladesh

1968	Higher Secondary Certificate	Major: Science	Rajshahi College, Bangladesh
1966	Secondary School Certificate	Major: Science	Puthia High School

1. 1. Graduate Courses at Rajshahi University (RU), American University of Beirut (AUB), and Louisiana State University (LSU)

- Electricity & Magnetism I & II,
- Classical Mechanics,
- Quantum Mechanics I & II,
- Statistical Mechanics,
- Mathematical Physics I & II,
- Nuclear Physics,
- Nuclear Reactor Physics,
- Nuclear Radiation Detection Physics,
- Electronics,
- Particle Physics,
- Cosmic Ray Astrophysics,
- Astronomy,
- Astrophysics – Stars,
- Physics Seminars,
- Cosmology (Audit),
- Laser Physics (Audit), and
- Group Theory (Audit).

Cumulative GPA at LSU: 3.80

2. Employment History

Year	Position	Department	Duties Performed	Institution
1995-current	Full Professor of Physics, Astronomy, Transboundary Water Resources, Climate	Chemistry & Physics	Teaching, research, advising, mentoring, committee activities, community	University of Arkansas at Pine Bluff (UAPB), Pine Bluff, AR

	Change, and Environmental Science		activities	
2008-2012	Adjunct Professor of Statistics	School of Business and & Management	Teaching Statistics	UAPB
1994	Tenured Professor of Physics, Astronomy, Mathematics, and Environmental Sciences	Mathematics & Physics	Teaching, research, advising, mentoring, committee activities, community activities	UAPB
1992	Graduate Faculty of Physics, Astronomy, Mathematics, and Environmental Sciences	Mathematics & Physics	Teaching, research, advising, mentoring, committee activities, community activities	UAPB
1990	Associate Professor of Physics, Astronomy, Mathematics, and Environmental Sciences	Mathematics & Physics	Teaching, research, advising, mentoring, committee activities, community activities	UAPB
1988	Assistant Professor of Physics, Astronomy, Mathematics, and Environmental Sciences	Mathematics & Physics	Teaching, research, advising, mentoring, committee activities, community activities	UAPB
1983-88	Graduate Research Assistant	Department of Physics & Astronomy	Research on Space Physics	Louisiana State University (LSU), Baton Rouge, LA, USA
1980-83	Graduate Teaching Assistant	Department of Physics & Astronomy	Teaching labs, Consultation, Tutoring	LSU
1978-80	Graduate Teaching Assistant	Department of Physics	Teaching labs, Tutoring	American University of Beirut (AUB), Lebanon
1978-80	Lab Instructor	Department of Engineering	Teaching labs	Beirut University College (BUC),

				Beirut, Lebanon
1977-78	Assistant Professor	Department of Physics	Teaching, Research, Mentoring, Committee Works	Rajshahi University (RU), Bangladesh
1977-78	House Tutor/Warden	SHR Dormitory	Student Supervision	RU, Bangladesh
1975-77	Lecturer	Department of Physics	Teaching, Research, Mentoring, Committee Work	RU, Bangladesh
1975-77	House Tutor/Warden	SHR Dormitory	Student Supervision	RU, Bangladesh
1974-75	Research Fellow	Atomic Energy Center	Nuclear Reaction Study in Emulsion Plates	Dhaka, Bangladesh
1972-74	Research Student	Department of Physics	Identification of Nuclear Hyperfragments in Emulsion Plates	RU, Bangladesh

3. Multidisciplinary Research Achievements

- Upstream water piracy creates domino effects in downstream including climate change,
- Using the fundamental laws of electricity found that the best posture of a human body for the safest protection against lightning strikes,
- Using the fundamental nature of lightning and atmospheric electricity **discovered** the best posture and a device for cattle to have the safest protection against lightning strikes,
- **Discovered** an edible vegetable plant that ward off pests from other vegetable plants and fruit plants,
- Found that date trees in the palm family, **Arecaceae**, are the best trees to catch lightning strikes,
- Found that widely spreading water bodies in agricultural irrigation add to more water vapor in the atmosphere favoring proliferation of thunder cloud formation and lightning strikes, and thence increased fatalities,
- Found that trapped radiation belts' particles precipitated at low atmospheric altitudes (below about 300 km) exhibits 5th power of altitude in the altitude range,
- Found a geometric method for the efficiency calculation for a conical-shaped particle detector onboard a spacecraft,
- Developed Fortran algorithm extensively for satellite data refining and analysis, pertaining to different epochs,

- Established the global peak flux of the precipitated particles along the minimum geomagnetic field equator,
- Established the spatial (latitude, longitude, and altitude) and temporal (daily and solar maximum and minimum condition-dependence) features of the low-altitude particle flux,
- Determined the cosmic ray background radiation that a quasi-trapped charged particle detector can experience,
- Studied space weather - solar proton event, solar electron event, geomagnetic field variation, 10.7 cm solar radiation – and their impacts upon the earth,
- Studied the incineration of chemical weapons and its impact upon the environment – air, water, and soil medium,
- Under land use and land cover changes, studied flood models and the watershed of the Bayou Bartholomew,
- Studied the downstream impact of the Great Ring of Dams and Barrages around the downstream country constructed by the upstream country,
- Under the upstream water piracy, studied the occurrences of extreme events at the upstream,
- Under the upstream water piracy, studied the downstream extreme cooling and heating and proliferation of people's sufferings and loss of lives following the depletion of surface water resources at the downstream,
- Studied decades of downstream climate data via short-interval binning of temperature, precipitation, humidity, and solar radiation pertaining to pre- and ongoing-water piracy periods to establish the onset of heating and cooling time as surface water bodies were gradually depleting,
- Studied the generation of environmental diseases in the downstream in the wake of upstream water piracy with onsite door-to-door data acquisition,
- Studied the invalidity of the internationality of the economic health index GDP because of the resource piracy by the upstream country,
- Studied the loss of fish production, the only and the cheapest source of calcium and animal proteins, and thence sufferings from nutritional deficiency for the bulk of the downstream population as result of the upstream water piracy,
- Studied displacement and international migration of people due to the loss of livelihood following upstream water piracy,
- Studied the impact of the upstream country's procrastination over the fair sharing of river discharges for the downstream county,
- Studied the impact upon the aquatics and human dimension following surface water depletion in the wake of upstream water piracy,
- Studied the generation of the world's worst man-made disaster the arsenic contamination of Bengal basin groundwater because of upstream water piracy,
- Collaborated in the devise of the filter for arsenic removal from water,
- Studied the result of the environmental pollution following the indiscriminate disposal of arsenic sludge on land and in water bodies,

- Studied the problem of integrated water management in urban areas in the downstream country following the upstream water piracy,
- Studied astronomical distance scale in Vatican Observatory,
- Studied stellar classification at LSU,
- Studied atomic spectra at LSU,
- Studied heat transfer between two concentric cylinders in the gravitational wave detection lab at LSU, and
- Studied path lengths of nuclear fragments in nuclear emulsion for the identification, and thereby through momentum and charge balancing determined the parent nucleus in the study of hyperfragments, Rajshahi University, Bangladesh.

4. Multidisciplinary Teaching Performance (1975- Current)

- Environmental Science,
- Energy Conversion,
- College Algebra,
- Pre-Calculus,
- Calculus,
- Differential Equations,
- Statistics,
- Physical Science,
- Climate Change,
- Astronomy,
- College Physics,
- University Physics,
- Space Physics,
- Plasma Physics,
- Acoustics,
- Astrophysics,
- Classical & Analytical Mechanics,
- Electromagnetic Theory,
- Optics,
- Modern Physics,
- Mathematical Physics,
- Quantum Mechanics,
- Thermodynamics,
- Nuclear Physics,
- Solid State Physics,
- Advanced Environmental Science (for high school teachers),
- Advanced Physics (for high school teachers),
- Atomic Physics,
- Nuclear Reactor Physics,
- Physics Labs,

- Astronomy Lab,
- Climate Change Lab, and
- Physical Science Lab.

5. Multidisciplinary Courses Development (1999-Curent)

- Environmental Science (PHYS 4365),
- Advanced Environmental Science (GPHY 5365),
- Astronomy (PHYS 1345),
- Climate Change (PHYS 1355),
- Astrophysics (PHYS 4338),
- Nuclear and Particle Physics (PHYS 4343),
- Space Physics (PHYS 4346),
- Plasma Physics (PHYS 4356),
- Quantum Mechanics (PHYS 4347),
- Advanced Physics (GPHY 5331),
- Astronomy Lab (1145), and
- Climate Change Lab (PHYS 1155).

6. Multidisciplinary Publications Accomplished

- 2024** Adel, M. M. South Atlantic Anomaly Region: EXOS-C Observation During 1984-86 (pending)
- 2024** Adel, M. M. EXOS-C Observed Global Zoned of Particle Precipitation (pending)
- 2023** Adel, M. M. [Plant-Based Pesticide](https://www.patentguru.com/assignee/adel-miah-muhammad), <https://www.patentguru.com/assignee/adel-miah-muhammad>
- 2023** Adel, M. M. Rests Repellant Fruit Vine, <https://www.patentguru.com/assignee/adel-miah-muhammad>
- 2023** Adel, M. M. Religion-Scientific Study of Solar Resting Phase and Solar-Lunar Finality Solar Resting Phase and Solar-Lunar Finality, Vol. 1 No. 2 (2023): *Classical and Modern Islamic Thought*, (<https://al-ikhsan.my.id/index.php/i/article/view/38>)
- 2023** Adel, M. M. Holy Kaaba Circumambulation in The Predominant Motion, Journal for Islamic Studies 7(1):11-27.ISSN:2550-2042 - <https://journal.unisza.edu.my/mjis/index.php/mjis/article/download/213/103/>
- 2023** Adel, M. M. Water Exploitation-Induced Climate Change, *African Journal of Environmental Science and Technology*. Vol. 17(9), pp. 219-244, September 2023 DOI: 10.5897/AJEST2023.3177 Article Number: EC67A8D71193 ISSN: 1996-0786 Copyright ©2023 Author(s) retain the copyright of this article <http://www.academicjournals.org/AJEST>

- 2022** Adel, M. M. M'raj Consistency with Scientific Laws, *Malaysian Journal for Islamic Studies (MJIS)*, Vol 6 No 2 (2022), pp. 73-81; published on 2022-12-17
- 2022** Adel, M. M. Physical Reasons and Mitigation Strategies for Increased Lightnings in Bangladesh. *American Journal of Environmental Sciences*, 18(1), 1-19. <https://doi.org/10.3844/ajessp.2022.1.19>
- 2019** M. M. Adel, Inland Water Resources Depletion Under CO₂ Accusation, *Arabian Journal of Geosciences (AJGS)* (accepted), 2019.(Delayed due to COVID-19) (**Hydrometeorology**)
- 2018** M. M. Adel, The Angelic Pace Night Journey Ever Made, *Environmental Analyses and Ecological Studies*. 3(4). EAES.000569.2018. DOI: 10.31031/EAES.2018.03.000569 (**Space Physics & Biophysics**)
- 2018** M. M. Adel, Hegemonic Attitude Blocks Fair Sharing of Transboundary Water. Manuscript ID: EAES-18-RA-520, *Environmental Analyses and Ecological Studies*, 1(2). EAES.000509.2018. (**Transboundary Water Politics**)
- 2018** M. M. Adel, Lightning Generation Correlation with Widespread Irrigation and Means of Protection, *ISABB Journal of Health and Environmental Sciences*, vol. 5(2), pp.9-27, February 18, DOI: 10.5897/ISAAB-JHE2017.0037 (**Lightning Physics & Irrigation Science**)
- 2018** M. M. Adel, The Uttarakhand 2013 and Jammu-Kashmir 2014 Disasters - Upstream Effects of Water Piracy, *African Journal of Environmental Science & Technology*, vol. 12(1), pp. 21-68. (**Extreme Events & Statistical Thermodynamics**)
- 2017** M. M. Adel, Upstream Natural Resource Piracy-Caused Universality-Lost Economic Health Index GDP, *American Research Journal of Biosciences* ISBN (online) 2379-7959, vol. 3, 2017, 32 pages. (**Environmental Economics**)
- 2016** M. M. Adel, Whether the Regional Cooperation of the Water Sharing Problems are in Cold Storage, *Academy of Social Science Journal*, vol. 1, No. 2 (2016) 60-66. (**Transboundary Water Sharing Problems**)
- 2016** M. M. Adel, Inference and Implication from a Lightning Observation, *American Research Journal of Physics*, ISBN (online) 2380-5714, vol. 2, 2016, 16 pages (**Lightning Physics, Biophysics, Environmental Science**)
- 2015** M. M. Adel, Fifth-Power Altitude Dependence of Particle Precipitation at the Minimum Geomagnetic Field Position, *American. Research Journal for Physics.*, vol. 1, no. 1, 2016, pp. 26-35. www.arjonline.org (**Atmospheric & Space Physics: Atmospheric Model, Radiation Belts, Interaction Cross-sections**)

- 2014** M. M. Adel, M. R. Hossain, and S. F. Hossain, Climatic Severity Victims of Upstream Water Piracy Strongly Evidencing Inland Water Depletion-Caused Global Warming Vis-a-Vis Cooling, *American Journal of Environmental Science*, vol. 10, no. 2, 2014, pp. 171-198, ISSN: 1553-345X ©2014 Science Publication; DOI:10.3844/ajessp.2014.171.198 Published Online 10 (2) 2014. (<http://www.thescipub.com/ajes.toc>) (**Climate Change/Global Change**)
- 2013** M. M. Adel, S. F. Hossain, and H. Johnson, Favored Zodiac for Celebrity Births, *Journal of Social Sciences*, vol. 9, no. 4, 2013, pp. 164-170. DOI:10-3844/jssp.2013.164.170 Published Online 9(4) 2013. (<http://www.thescipub.com/jss.toc>) (**Astrology**)
- 2013** M. M. Adel, Upstream Water Piracy Impact Upon the Aquatic World and Human Dimension - Some Water Piracy Curses, *Environment and Ecology Research Journal*, vol. 1, no. 4, 2013, pp. 161 -195. DOI:10.13189/eer.2013.010401 (**Environmental Science: Ecology**)
- 2013** M. M. Adel, Upstream Water Piracy the Strongest Weapon to Corner a Downstream Nation, *Environment and Ecology Research Journal*, vol. 1, no. 3, 2013, pp. 85-123. DOI: 1013189/eer.2013.010301 (**Water Politics**)
- 2013** M. M. Adel, Cunning Strategy for Upstream Water Piracy and Its Remedial Measures, *Environmental Justice*, vol. 6, no. 4, 2013, pp. 145-162. DOI: 10.1089/env.2013.0005 (**Water Politics**)
- 2013** M. M. Adel, Environmental Pollution Through Indiscriminate Arsenic Waste Disposal, *Journal of Ecological Science Research*, vol. 1, no. 1, 2013, pp.1-26; Online: <http://www.projournals.org/JESR> (**Environmental Science**)
- 2013** M. M. Adel, Upstream Water Piracy Contaminates Downstream Water, *Environmental Justice*, vol.6, no. 3, 2013, pp. 103-114. Mary Ann Liebert, Inc. DOI: 10.1089/env.2013.0008 (**Environmental Science**)
- 2013** M. M. Adel, Farakka Barrage, the Greatest Ever Riparian Bluff for Upstream Water Piracy, *Academia Journal of Environmental Sciences*, vol. 1, no. 3, 2013, pp. 036-052. (**Water Politics Over Transboundary Water Resources**)
- 2013** M. M. Adel, Rotation Matrix Method for Calculation of a Detector Telescope's Response Function, *Projournal of Physical Science Research*, vol. 1, no. 2, 2013, pp. 14-30; Online: <http://www.projournals.org/PPSR> (**Space Physics Instrumentation, Radiation Belts, Geomagnetic Field Models, Computational Physics**)
- 2012** M. M. Adel, Superiority of Prostration as a Protection from Lightning, *Physics International*, vol. 3, no. 1, 2012, pp. 9-21 (**Lightning Physics, Biophysics & Environmental Science**)

- 2012** M. M. Adel, Absolute Flux Comparison of Magnetospheric Particles, *Physics International*. 3, 2012, pp. 1-8; DOI: 10.3844/pisp.2012.1.8; URL: <http://thescipub.com/abstract/10.3844/pisp.2012.1.8> (**Atmospheric & Space Physics**)
- 2012** M. M. Adel, Downstream Ecocide from Upstream Water Piracy. *American Journal of Environmental Sciences*, vol. 8, 2012, pp. 528-548. DOI: 10.3844/ajessp.2012.528.548 (**Environmental Science: Ecology**)
- 2012** M. M. Adel, Ecosystems Sustainability Challenges from International River Water Plunderage, pp. 58-66. in S. Rab ed. *Proceedings of the 3rd ABC Convention*, Astoria World Manor, Astoria, Queens, NY, June 23-24, 2012. (**Water Politics & Ecology**)
- 2010** M. Husain, M. M. Adel, et al., Freedom Water Filtration System-A Solution to the Arsenic and Pathogen Contaminated Water Crisis in Bangladesh and Other Underdeveloped Nations, 4th International Conference on Water Resources & Arid Environments (ICWRAE-4), 184-213, [http://www.icwrae-sipw.org/images/stories/2010/Water Resources/21/index.html](http://www.icwrae-sipw.org/images/stories/2010/Water%20Resources/21/index.html) *International Journal of Water Resources & Arid Environments* (2010). (**Environmental Science: Water Contamination**)
- 2009** M. M. Adel, Growing Sugarcanes in Home Gardens, *Arkansas Environmental, Agricultural, & Consumer Sciences Journal*, vol. 9, 2009, pp.18-20. (**Agricultural Science**)
- 2008** M. M. Adel, International Migration of Gangetic Fishermen in South Asia, International Conference on Environment, Forced Migration & Social Vulnerability, Bonn, Germany, 9-11 October 2008. <http://www.efmsv2008.org/files/International+Migration+of+Ganges+fishermen+In+South+Asia+?menu=12> (**Environmental Economics**)
- 2008** M. M. Adel and M. Husain, Sono Filter Waste Disposals Contradict Safe Environmental Regulations, UNESCO-Sponsored International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, University of California at Irvine, California, 1- 5 December 2008. http://www.groundwater.conference.uci.edu/files/chapter1/2008_conf_AR (**Environmental Science: Environmental Pollution**)
- 2008** M. M. Adel, Natural River Flow Obstruction Risks Groundwater Arsenic Contamination, UNESCO-Sponsored International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, University of California at Irvine, California, 1-5 December 2008. http://www.groundwater.conference.uci.edu/files/chapter1/2008_conf_AR (**Water Politics Leading to Groundwater Contamination**)

- 2008** M. M. Adel, Ordeals to Have Due Share of Trans-Boundary River Water, UNESCO-Sponsored International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, University of California at Irvine, California, 1-5 December 2008.
http://www.groundwater.conference.uci.edu/files/chapter2/2008_conf_AR
(Transboundary Water Politics)
- 2008** M. M. Adel, A Detector Telescope's Pitch Angle Sampling of Magnetospheric Particles, *Earth, Planets, and Space*, vol. 60, 2008, pp.753-761 (**Space Physics Instrumentation, Geomagnetic Field Models, & Computational Physics**)
- 2007** M. M. Adel, Growing Plantain Plants in Home Gardens, *Arkansas Environmental, Agricultural, & Consumer Sciences Journal*, vol.7, 2007, pp.14-16. (**Agricultural Science**)
- 2005** M. M. Adel, Background State Leading to Arsenic Accumulation in the Bengal Basin Groundwater, *Journal of Water and Health*, vol. 3, no. 4, 2005, pp. 435-452. (**Environmental Chemistry**)
- 2005** M. M. Adel and M. T. Hossain, Environmental Impact from a Giant Retail Store Supercenter Construction by the Bayou Bartholomew, *Management of Environmental Quality: An International Journal*, vol. 6, no 3, 2005, pp. 198-210. (**Land use and Land Cover Changes**)
- 2005** M. M. Adel and S. A. Hasnath, Background State of the Biosphere, in Environmental Monitoring, from *Encyclopedia of Life Support System (EOLSS)*, developed under the auspices of the UNESCO, Eolss Publishers, Oxford, UK
[<http://www.eolss.net> (**Invited Encyclopedia Article**) (**Global Change**)
- 2004** M. M. Adel, Chemical Agents' Incineration Exhaust Fallout and Effects, *Management of Environmental Quality: An International Journal*, vol. 15, no. 6, 2004, pp. 629-655. (**Incineration & Air Pollution**)
- 2004** M. M. Adel, Impacts from Transboundary Water Rights Violations in South Asia, pp. 205-214 in R. Murray, M. K. Jacobson, and S. Anderson, eds., *Proceedings of the 2004 Water Management Conference: Water Rights and Related Water Supply Issues*, Salt Lake City, Utah. (**Environmental Science: Water Politics**)
- 2004** M. M. Adel, Upstream Water Diversion Constructions on Transboundary Rivers, pp. 547-556. in R. Murray, M. K. Jacobson, and S. Anderson, eds., *Proceedings of the 2004 Water Management Conference: Water Rights and Related Water Supply Issues*, Salt Lake City, Utah. (**Land use and Land Cover Changes: Water Politics**)
- 2003** M. M. Adel, Biosphere III: The Site of the Unprecedented Ecocide in the Ganges Basin, pp. 59-79. In J. Ahmed, ed., *National Documentation on the Problems of Arsenic and*

Farakka, published by the International Farakka Committee, Inc. New York, NY
(**Environmental Science: Ecology**)

- 2002** M. M. Adel, Man-Made Climatic Changes in the Ganges Basin, *International Journal of Climatology*, vol. 22, 2002, pp. 993-1016. (**Climate Change**)
- 2001** M. M. Adel, Effects on Downstream Water Resources from Upstream Water Diversion in the Ganges Basin, *Journal of Environmental Quality*, vol. 30, 2001, pp.356-368.
(**Environmental Science: Water Politics**)
- 2000** M. M. Adel, Microlevel Climate Change in the Ganges Basin, *Journal of the Arkansas Academy of Sciences*, vol. 53,2000, pp. 83-91. (**Climate Change**)
- 2000** A. Ghanem, J. Smith, M. Elzey, T. S. Sorens, M. M. Adel, and G. Thomas, Locating NAPLS in Groundwater Using Partition Fluorescent Dyes, *Journal of the Arkansas Academy of Sciences*, vol. 53, 2000, pp.55-62. (**Environmental Science: Environmental Chemistry**)
- 2000** M. M. Adel, Arsenic Contamination in the Groundwater of Biosphere III: Causes and Remediation, pp.71-80. In H. Inyang and V. Ogunro, eds., *Proceedings of the Fourth International Symposium on Environmental Geotechnology and Global Sustainable Development*, Boston, MA. (**Environmental Science: Water Contamination**)
- 1999** M. M. Adel, The Impact of Climatic Extremes and Water Shortage Upon Human Health, *World Resource Review*, vol. 11, no. 4, 1999, pp. 576-601. (**Climate Change and Environmental Diseases**)
- 1999** M. M. Adel, Integrated Investigation of the Arsenic Episode in Bangladesh, *Indian Journal of Environmental Protection*, vol. 19, no. 9, 1999, pp. 652-660.
(**Environmental Science: Water Contamination**)
(Former last name was Miah)
- 1996** M. A. Miah and M. A. Samad, History of the Environment of Bangladesh, pp. 214-227, in W. Schroder and W. Calocino, eds., *Global Change and History of Geophysics*, Bremen- Roennebeck, Germany. (**Environmental Science**)
- 1996** M. A. Miah, Farakka Barrage: An Unprecedented Environmental Disaster in the Ganges Basin, pp. 18-31, in T. S. Rehman, ed., *Perspectives of the Thirty-Year Water-Sharing Treaty*, Bangla Bazar Publisher, Dhaka, Bangladesh, (**invited article**). (**Water Politics Creating Environmental Problems**)
- 1996** M. A. Miah, The Water Crisis in Bangladesh: A Challenge to Integrated Water Management in Urban Areas, *Environmental Research Forum*, vol. 3-4, 1996, pp. 69-86.
(**Upstream Water Politics Creating Downstream Water Resources Management Problems**)

- 1994** M. A. Miah, EXOS-C Project at UAPB, *UAPB Research Journal*, vol. 1, 1994, pp.17-25 (**Space Physics**)
- 1994** M. A. Miah, Phoenix-1 Observation of Storm-Time Precipitation of Ring Current Particles, *UAPB Research Journal*, vol.1, 1994, pp.45-54 (**Space Weather**)
- 1994** M. A. Miah, Significant Variation of Proton Precipitation in Equatorial Thermosphere, *Advances in Space Research*, vol.14, no. 9, 1994, pp.229-235 (**Space Weather**)
- 1993** M. A. Miah, Solar-Induced Variation of Proton Precipitation Near the Equator, *Journal of Atmospheric and Terrestrial Physics*, vol.55, no. 9, 1993, pp.1295-1301 (**Space Weather**)
- 1993** M. A. Miah, Solar Cycle Dependence of Equatorial Protons in the Thermosphere, vol. 2, 1993, p. 721, in Hruska, Shea, Smart, and Heckman, eds., *Proceedings of the SolarTerrestrialPredictions - IV Workshop*, Montreal, Canada (**Space Weather**)
- 1993** et al., and M. A. Miah, Sources and Sinks of Methane, vol. 13, 1993, pp. 457- 466, in M. A. K. Khalil, ed., *NATO ASI Series in Atmospheric Methane: Sources, Sinks, and Role in Global Change*, Portland, Oregon. (**Global Warming**)
- 1992** M. A. Miah, K. Nagata, T. Kohno, H. Murakami, A. Nakamoto, N. Hasebe, J. Kikuchi, and T. Doke, Spatial and Temporal Features of 0.64-35 MeV Protons in the Space Station Environment: EXOS-C observations, *Journal of Geomagnetism and Geoelectricity*, vol. 44, 1992, pp. 9-20. (**Space Weather**)
- 1991** M. A. Miah, Global Proton Peak Flux Profile in the Equatorial Zone, *Indian Journal of Radio and Space Science*, vol. 20, 1991, pp.12-24. (**Space Weather**)
- 1991** M. A. Miah, ONR-602 Experiment to Investigate Particle Precipitation Near the Equator, *Journal of Geomagnetism and Geoelectricity*, vol. 43, 1991, pp.445-454. (**Space Weather**)
- 1990** M. A. Miah, Observation of $Z \geq 1$ Particles Below 300 km Near the Geomagnetic Equator, *Journal of Geomagnetism and Geoelectricity*, vol. 43, 1990, pp. 461-472. (**Space Weather**)
- 1989** M. A. Miah, Observation of Low Energy Particle Precipitation at Low Altitude in the Equatorial Zone, *Journal of Atmospheric and Terrestrial Physics*, vol.51, 1989, pp.541-550 (**Space Weather**)
- 1989** M. A. Miah, J. W. Mitchell, and J. P. Wefel, Magnetospheric Particle Detection Efficiency of a Conical Telescope, *Nuclear Instrumentation and Methods in Physics*

Research, vol. A281, 1989, pp. 622-632 (**Space Weather Instrumentation, Computational Physics**)

- 1988** M. A. Miah, T. G. Guzik, J. W. Mitchell, and J. P. Wefel, Phoenix-1 Observation of the Equatorial Zone Particle Precipitation, pp. 339-345, in J. Shapiro and J. P. Wefel, eds., *A NATO Advanced Series in Genesis and Propagation of Cosmic Rays*, D. Riedel Publishing Co. (**Atmospheric & Space Physics**)
- 1987** T. G. Guzik, **M. A. Miah**, J. W. Mitchell, and J. P. Wefel, Low Energy Protons at the Equatorial Zone, *Journal of Geophysical Research*, vol. 94, 1987, pp. 14-21 (**Atmospheric & Space Physics**)

7. Multidisciplinary Authorship

- 2021** *Parental Memoirs* (in Bengali, manuscript)
- 2021** *Satellite Data Analysis for Particle Precipitation* (manuscript)
- 2021** *Outdoor Shelter from Lightning Strikes* (manuscript)
- 2021** *GDP the Lame Duck Economic Health Index* (in progress). (**Environmental Economics**)
- 2021** *CO₂ Accumulation vs Inland H₂O Depletion in Regional Warming Vis-A-Vis Cooling: An Upstream Water Piracy Effect* (manuscript). (**Global Warming**)
- 2021** *The Dam-Locked Delta* (manuscript). (**Water Politics**)
- 2021** *Treeteo Jibjagat* (in Bengali) meaning Bio-World III. The author presents a case study of the integrated effects of drying rivers at the downstream by the upstream water piracy in the Ganges basin. Publisher Dibbo Prakash, Dhaka, Bangladesh (in press). (**Environmental Science**)
- 2015** *The Dam-Deluged Gaspig Ganges Vol. 1*, published by German Academic Publishing Company Lap Lambert. (**Land Use and Land Cover Changes**)
- 2015** *The Dam-Deluged Gaspig Ganges Vol. 2*, published by German Academic Publishing Company Lap Lambert. (**Land Use and Land Cover Changes**)
- 2015** *The Dam-Deluged Gaspig Ganges Vol. 3*, published by German Academic Publishing Company Lap Lambert. (**Land Use and Land Cover Changes**)
- 2015** English translation *Tsunami* of the Bengali novel *Jaloswas* based on the National Award Winning Radio Play “*Jaloswas*” focusing on 1970 Bhola Cyclone that killed more than

500,000 people, published by German Novel Publishing Company Just!Fiction. **(Fiction Based on an Extreme Climatic Event)**

2015 *Farakka Barrage Vol 1: The Symbol of Bluffing, Blackmailing, Bullying, and Cornering Downstream for Upstream Water Piracy*, published by German Academic Publishing Company Lap Lambert. **(Land Use and Land Cover Changes & Water Politics)**

2015 *Farakka Barrage Vol 2: The Symbol of Bluffing, Blackmailing, Bullying, and Cornering Downstream for Upstream Water Piracy*, published by German Academic Publishing Company Lap Lambert. **(Land Use and Land Cover Changes & Water Politics)**

2013 *Jaladasyupana* (in Bengali) meaning water piracy. Published by Dibbo Prakash, Dhaka, Bangladesh. **(Land Use and Land Cover Changes & Water Politics)**

2013 *Seiday Abasthan Bajraghat Theke Paritran* (in Bengali) meaning prostration gives the safest protection from lightning strikes. Published by Dibbo Prakash, Dhaka, Bangladesh **(Lightning Protection)**

1989 *An International Guide to Crescent Sighting* on lunar astronomy.

1989 *Uttar-Pashchim Bangladesher Charambhabapanna Abhawa* meaning the extreme weather in north-west Bengal basin (in Bengali). **(Land Use and Land Cover Changes and Water Politics)**

1986 A collaborating student author for the chapter on astronomical distance scale in Carnegie Mellon Institute's Instructor Vera Rubin-edited Edwin Hubble's book on galaxies.

8. Multidisciplinary Conference Contributions/Presentations

2021 M. M. Adel, Upstream Water Piracy Collapses Downstream Environmental Normalcy 3rd Euro-Mediterranean Conference for Environmental Integration, 10-13 June 2021, Sousse, Tunisia.

2021 M. M. Adel, Occupation-Based Lightning Victimhood for the 3rd Euro-Mediterranean Conference for Environmental Integration (EMCE 2021I), Sousse, Tunisia, 10-13 June, 2021.

2020 M. M. Adel, Upstream Water Piracy Contributes to Downstream's Climate Change for International Conference on Sustainable Development of Water and Environment (ICSDWE2021) in Bangkok, March 12-13, 2021.

2019 M. M. Adel, Inland Water Resources Depletion vs CO₂ Accusation, 2nd Springer Conference of the Arabian Journal of Geosciences, 25 – 28 November 2019, Sousse, Tunisia.

- 2019** M. M. Adel, Undergraduate Climate Change Course Offering at UAPB, Annual meeting of the American Meteorological Society at Phoenix, AZ, January 6-10, 2019..
- 2016** M. M. Adel, Spatial and Temporal Features of Particle Precipitation in Low- and Mid-Latitude Zones, Second International Conference and Exhibition on Satellite & Space Missions, July 21-23, 2016, Berlin, Germany (**invited speaker**) (**Atmospheric & Space Physics**).
- 2015** M. M. Adel, Invitation to speak on telescopic investigation of the Earth's charged particle environment in the Satellite 2015 International Conference, paper titled "Magnetospheric Particle Sampling Based on the Instrument Response Function to Anisotropic Pitch Angle Distribution", during August 17-19 in Houghton (**invited contributor**) (**Atmospheric & Space Physics, Computational Physics**).
- 2015** M. M. Adel, **Keynote speaker** on South Asian Water Issue at the America-Bangladesh-Canada (ABC) Convention During September 4-7, 2015, in New York. (**Transboundary Water Resource Sharing Problems**).
- 2014** M. M. Adel, Water Aggression, Federation of Bangladeshi Associations in North America (FOBANA) Convention New York. NY. August 29 – September 1, 2014 (**Keynote Speaker**) (**Transboundary Water Resource Sharing Problems**).
- 2013** M. Husain, T. Bridge, M. Zaman, **M. M. Adel**, M. Pisciatte, H. Agrama, F. Alotaibi, and S. Husain, Mukti Water Technology from Household to Community Scale for Reducing Arsenic Risks in Drinking Water, Governor's Conference, Wichita, KS, October 18 (**Water Purification Filter**).
- 2013** M. M. Adel and S. A. Hasnath, Damning the Dams: Effects of Climate Change on the Northwestern Region of Bangladesh: A Micro-Level Analysis, on Environment-Development Relationships in the Context of Bangladesh, Harvard University, April 13, 2013. (**Climatic Changes Following Water Deprivation**)
- 2012** M. M. Adel, Water Aggression from Upstream and Threat to the Lower Riparian Regions, June 23-24, 2012, America-Bangladesh-Canada (ABC) Convention, Astoria World Manor, New York (**Keynote Speaker, invited**) (**Water Politics Leading to Environmental, Economic, and Physical Problems**)
- 2011** M. M. Adel, Downstream Effects from Headstream Interventions, Press Conference, Dhaka Press Club, Bangladesh, December 29, 2011 (**Keynote Speaker, invited**) (**Water Politics**)
- 2011** M. M. Adel, Ecological Responses to Indiscriminate Anthropogenic Actions on Water Resources, Henderson State University, Arkadelphia, Arkansas, 7 March 2011 (**invited**) (**Water Politics**)

- 2011** M. M. Adel, Environmental Reactions to Human Actions, Henderson State University, Arkadelphia, Arkansas, 7 March 2011 (**invited**) (**Environmental Science**)
- 2010** M. Husain and M. M. Adel, Freedom Water Filtration System-A Solution to the Arsenic and Pathogen Contaminated Water Crisis in Bangladesh and Other Underdeveloped Nations, 4th International Conference on Water Resources and arid Environments (2010), Venue: King Saud University in Riyadh, Saudi Arabia, 4-8 December 2010. (**Water Purification Technology**)
- 2010** M. M. Adel and M. Husain, Extent of Arsenic Disaster and Its Mitigation, 2nd America-Bangladesh-Canada Convention, Jackson Heights, New York, 17-18 July 2010 (**invited**). (**Environmental Science: Water Contamination**)
- 2010** M. M. Adel, Survey Results of Drug Abuse Among Students' Peers, Student-Faculty Research Forum, University of Arkansas at Pine Bluff, March 18-19, 2010. (**Social Science: Drug Problem**)
- 2009** M. M. Adel, Farakka's Effects-Based Potential Downstream Effects from the Tipaimukh Dam, International Conference on the Potential Downstream Effects of Tipaimukh Dam on the Barak River in Monipur, Jewish Community Center, Jackson Heights, New York, 28 June 2009 (**invited**). (**Land Use and Land Cover Changes & Water Politics**)
- 2009** M. M. Adel and J. Mesha, Rush Hour Air Pollution from Automobile Exhaust in Metropolitan Pine Bluff, Student-Faculty Research Forum, University of Arkansas at Pine Bluff, March 19-20, 2009 (**Air Pollution**)
- 2008** M. M. Adel, International Migration of Gangetic Fishermen in South Asia, International Conference on Environment, Forced Migration & Social Vulnerability, Bonn, Germany, 9-11 October 2008. (**Environmental Economics: Livelihood Loss**)
- 2008** M. M. Adel, Human Dimension of Regional Environmental Changes in South Asia, *EOS Transaction AGU*, 89(23), Western Pacific Geophysics Meeting, Cairns, Australia, 29 July – 1 August 2008. (**Land Use and Land Cover Changes & Environmental Changes**)
- 2008** M. M. Adel and M. Husain, Sono Filter Waste Disposals Contradict Safe Environmental Regulations, UNESCO-Sponsored International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, University of California at Irvine, California, 1- 5 December 2008. (**Environmental Science: Environmental Pollution**)
- 2008** M. M. Adel, Natural River Flow Obstruction Risks Groundwater Arsenic Contamination, UNESCO-Sponsored International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, University of California at

- Irvine, California, 1-5 December 2008. (**Environmental Science: Environmental Pollution**)
- 2008** M. M. Adel, Ordeals to Have Due Share of Trans-Boundary River Water, UNESCO-Sponsored International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, University of California at Irvine, California, 1-5 December 2008. (**Upstream Country's Transboundary Water Politics**)
- 2008** M. M. Adel, A Geometric Method to Calculate Detector Telescope's Sampling Efficiency for Magnetospheric Particles, *EOS Transaction AGU*, 89(23), Western Pacific Geophysics Meeting, Cairns, Australia, July 29 – August 1, 2008. (**Space Physics Instrumentation, Computational Physics**)
- 2006** M. M. Adel, Instrument Efficiency and Comparison of Magnetospheric Particle Fluxes, AGU Spring meeting, MD, 23-26 May 2006. (**Space Physics Instrumentation, Computational Physics**)
- 2004** M. M. Adel, Impacts From Trans-Boundary Water Rights Violations in South Asia, Water Rights and Related Water Supply Issues, a United States Committee on Irrigation and Drainage (USCID) Water Management Conference, Salt Lake City, Utah, 13–16 October 2004. (**Land Use and Land Cover Changes & Water Politics**)
- 2004** M. M. Adel, Upstream Water Diversion Constructions on Trans-Boundary Rivers, Water Rights and Related Water Supply Issues, a United States Committee on Irrigation and Drainage (USCID) Water Management Conference, Salt Lake City, Utah, 13–16 October 2004. (**Land Use and Land Cover Changes & Water Politics**)
- 2003** M. M. Adel, Water Diversion Effects in South Asia, Silver Jubilee Conference of the Indian National Geography Congress Themed on Land and Water, Gaziabad near New Delhi, India, 27-29 December 2003 (**invited**). (**Land Use and Land Cover Changes & Water Politics**)
- 2003** M. M. Adel, Effects of Dams and Barrages in the Ganges-Brahmaputra-Teesta-Meghna Basins, Global Water System Project – Open Science Conference, Portsmouth, New Hampshire, 7-9 October 2003. (**Land Use and Land Cover Changes & Water Politics**)
- 2000** M. M. Adel, Sea Level Rise as Signatures of Global Warming, Arkansas Academy of Sciences Annual Meeting, Hot Springs, AR, 7-8 April 2000. (**Global Warming**)
- 1999** M. M. Adel, Local Hydrogeology History and Accumulation of Poisonous Element in Groundwater, 51st NGWA Annual Meeting, Nashville, TN, 3-6 December 1999. (**Land Use and Land Cover Changes & Water Contamination**)

1999 M. M. Adel, Arsenic Disaster in Bangladesh: Causes and Remedies, International Conference in Wagner College, NY, December 30 (**invited**). (**Land Use and Land Cover Changes & Water Contamination**)

1999 M. M. Adel, The Arsenic Calamity in the Ganges Delta, Arkansas Academy of Sciences Annual Meeting, Hot Springs, AR, 2-3 April 1999. (**Land Use and Land Cover Changes & Water Contamination**)

(Former last name was Miah)

1998 M. A. Miah, Sources of Health Risks in Using Arsenic-Contaminated Groundwater: A Case Study in the Ganges Basin, 2nd International Conference on Managing Health Risks from Water Contamination: Approaches and Applications, University of Chile, Santiago, Chile, 7-10 September 1998 (**invited, but visa problem arose**). (**Land Use and Land Cover Changes & Water Contamination**)

1998 M. A. Miah, K. Nagata, T. Kohno, H. Murakami, A. Nakamoto, N. Hasebe, J. Kikuchi, and T. Doke, EXOS-C Observation of Off-Equatorial Particle Precipitation, Arkansas Academy of Sciences, UAMS, Little Rock. AR, 3-4 April 1998. (**Atmospheric & Space Physics**)

1998 M. A. Miah, Water Shortage and Water Contamination, Annual Convention of NABIC, Columbus, OH, 13 June 1998 (**invited**). (**Land Use and Land Cover Changes & Water Contamination**)

1998 M. A. Miah, Biosphere III: The Site of Unprecedented Ecocide, the International Conference on Water Resource Management, Arsenic Contamination, and Desertification Syndromes, Dhaka, Bangladesh, November 15-20, (**invited**). (**Land Use and Land Cover Changes & Environmental Changes**)

1998 M. A. Miah, Some Dire Consequences of Water Shortage in the Ganges delta, 7th International Symposium on Society and Resource Management, University of Missouri-Columbia, Missouri, 27-31 May 1998. (**Land Use and Land Cover Changes & Environmental Changes**)

1998 M. A. Miah, Climatic Influences from Surface Features, Arkansas Space Grant Consortium Annual Meeting, UAMS, Little Rock, AR, 19 March 1998. (**Land Use and Land Cover Changes & Climatic Changes**)

1997 M. A. Miah, The Disastrous Effects from River Barrages, 10th Annual Convention of Federation of Bangladeshi Associations of North America (FOBANA), Los Angeles, California, July 5, 1997 (**invited**). (**Land Use and Land Cover Changes & Environmental Changes**)

- 1997** M. A. Miah, Upstream River Barrages or Downstream Environmental Octopuses? International Conference on Water Sharing and Water Treaty, New York, 12 April 1997 (invited). (**Land Use and Land Cover Changes & Environmental Changes**)
- 1997** M. A. Miah, Environmental Consequences of Water Shortage, Arkansas Space Grant Consortium Annual Meeting, Fayetteville, AR, 13 March 1997. (**Environmental Science**)
- 1996** M. A. Miah, Surface Water Depletion and the Environmental Catastrophe, 6th International Symposium on Society and Resource Management, Pennsylvania State University, 18-23 May 1996. (**Land Use and Land Cover Changes & Environmental Changes**)
- 1996** M. A. Miah, Integrated Effects of Water Shortage, Arkansas-Oklahoma-Kansas Chapter of Physics Teachers, Fayetteville, AR, 15 February 1996. (**Land Use and Land Cover Changes & Environmental Changes**)
- 1995** M. A. Miah, The Water Crisis in Bangladesh: A Challenge to Integrated Water Management in Urban Areas, UNESCO - IHP Symposium Integrated Water Management in Urban Areas, Lund, Sweden, 26-30 September 1995. (**Land Use and Land Cover Changes & Environmental Changes**)
- 1995** M. A. Miah, Land-Use and Land-Cover Changes and the Environmental Changes in the Ganges Basin, 21st Plenary Meeting of Geophysics and Environment, University of Colorado at Boulder, 2-17 July 1995 (**unforgettable felicitation from the session chair**). (**Land Use and Land Cover Changes & Environmental Changes**)
- 1995** M. A. Miah, The impact of the Lost Water Resources Upon a Developing Economy, 21st Plenary Meeting of Geophysics and Environment, University of Colorado at Boulder, 2-17 July 1995. (**Environmental Economics**)
- 1995** M. A. Miah, Human-Induced Environmental Changes, 21st Plenary Meeting of Geophysics and Environment, University of Colorado at Boulder, 2-17 July 1995. (**Land Use and Land Cover Changes & Environmental Changes**)
- 1995** M. A. Miah, Integrated Effects of Upstream Water Diversion, 8th Annual Convention of FOBANA, Montreal, Canada, 3-5 September 1995 (invited). (**Land Use and Land Cover Changes & Environmental Changes**)
- 1995** M. A. Miah, Environmental Changes in the Ganges Basin, International Meeting on Global Change, Interpretation, Analysis, and Modeling, Garmisch-Partenkirchen, Germany, 24-29 September 1995. (**Land Use and Land Cover Changes & Environmental Changes**)
- 1994** M. A. Miah, Urban Environmental Diseases in the Ganges Basin, Bangubandhu Medical

University, Dhaka, Bangladesh, August 16, (invited). (**Environmental Diseases**)

- 1994** M. A. Miah, Environmental Research Resources in Biosphere III, COSPAR (Cooperative Space Research) Meeting, Hamburg, Germany, 13-15 July 1994. (**Land Use and Land Cover Changes & Environmental Changes**)
- 1995** M. A. Miah, Telescopic Efficiencies of Particle Detectors, 21st Plenary Meeting of Geophysics and Environment, University of Colorado at Boulder, 2-17 July 1995. (**Space Physics Instrumentation, Computational Physics**)
- 1994** M. A. Miah, Telescope Response Functions, COSPAR Meeting, Hamburg, Germany, July 13-15, 1994. (**Space Physics Instrumentation, Computational Physics**)
- 1994** M. A. Miah, Spatial and Temporal Features of Particle Precipitation in Off-Equatorial Zones, COSPAR Meeting, Hamburg, Germany, July 13-15, 1994. (**Atmospheric & Space Physics**)
- 1993** M. A. Miah, K. Nagata, T. Kohno, H. Murakami, A. Nakamoto, N. Hasebe, J. Kikuchi, and T. Doke, Particle Precipitation at Off-Equatorial Global Zones: OHOZORA observation, IAGA Meeting, Buenos Aires, Argentina, 18-28 August 1993. (**Atmospheric & Space Physics**)
- 1992** M. A. Miah, K. Nagata, T. Kohno, H. Murakami, A. Nakamoto, N. Hasebe, J. Kikuchi, and T. Doke, OHOZORA Observations of Protons Near the Minimum Magnetic Field Equator, AGU Spring Meeting, Montreal, Canada, 17-21 May 1992. (**Atmospheric & Space Physics**)
- 1992** M. A. Miah, K. Nagata, T. Kohno, H. Murakami, A. Nakamoto, N. Hasebe, J. Kikuchi, and T. Doke, Spatial and Temporal Features of OHOZORA-Observed Protons and Electrons in the Low- and Mid-Latitude Global Zones, Western Pacific Geophysics Union Meeting, Hong Kong, August 17-21, 1992. (**Atmospheric & Space Physics**)
- 1991** M. A. Miah and R. D. Jones, South Atlantic Anomaly Region of Particle Precipitation, University of Arkansas Student-Faculty Annual Research Forum, March 14-15, 1991 (**Space Physics**)
- 1990** M. A. Miah, Solar-Induced Variation of Particle Precipitation Near the Equator, URSI Conference, Prague, Czechoslovakia, 28 August-5 September 1990. (**Atmospheric & Space Physics**)
- 1990** M. A. Miah, Temporal Features of Radiation Belt Particle Precipitation Near the Equator, Gordon Conference, New Hampshire, 15-16 October 1990. (**Atmospheric & Space Physics**)

- 1989** M. A. Miah, Quasi-Trapped Protons Near the Equator, Arkansas-Oklahoma-Kansas Section Meeting of the American Association of Physics Teachers, Fayetteville, AR, 16-17 March 1989. (**Atmospheric & Space Physics**)
- 1988** M. A. Miah, J. P. Wefel, and T. G. Guzik, S81-1 Measurements of Low-Latitude MeV Ions, AGU Fall Meeting, San Francisco, California, 13-17 December 1988. (**Atmospheric & Space Physics**)
- 1988** M. A. Miah, J. P. Wefel, and J. W. Mitchell, A Method of Mapping the Pitch Angles of Magnetospheric Particles to Detector Telescope Opening Angle: Detector Efficiency, Yosemite Conference on Solar System Plasma Physics, Yosemite National Park, California, 2-5 February 1988. (**Space Physics Instrumentation, Computational Physics**)
- 1988** M. A. Miah, T. G. Guzik, J. W. Mitchell, and J. P. Wefel, Phoenix-1 Observation of the Equatorial Zone Particle Precipitation, *A NATO Advanced Series in Genesis and Propagation of Cosmic Rays*, Erice, Sicily, Italy, 1-10 June 1988. (**Atmospheric & Space Physics**)
- 1987** M. A. Miah, J. P. Wefel, T. G. Guzik, and J. W. Mitchell, Low Energy Protons at the Equator, Chapman Conference on Plasma Waves and Instabilities in Magnetospheres and Comets, Sendai/Mt. Jao, Japan, 12-16 October 1987. (**Atmospheric & Space Physics**)
- 1987** M. A. Miah, J. P. Wefel, T. G. Guzik, and J. W. Mitchell, Precipitation of Radiation Belt Particles Near the Equator, 3rd International School of Space Simulation, Beaulieu, France, 22-27 June 1987. (**Atmospheric & Space Physics**)
- 1986** M. A. Miah, J. P. Wefel, and T. G. Guzik, Spatial and Temporal Features of the Quasi-Trapped Particles Near the Equator, AGU Fall Meeting, San Francisco, California, 9-13 December 1986. (**Atmospheric & Space Physics**)
- 1985** M. A. Miah, J. P. Wefel, and T. G. Guzik, Observation of 0.5 – 9 MeV Protons at Low Altitude in the Equatorial Radiation Belt, American Physical Society Meeting, Washington, DC, 2-7 December 1985. (**Atmospheric & Space Physics**)

9. Patents (Applied for)

- Pesticide from an Edible Vegetable Plant
- Lightning Protection Device & Technique for Cattle

10. Multidisciplinary Domestic and International Collaborations

2017: One of the key personnel to organize the inaugural international conference of the *Humane Water*, a non-profit, charitable, and scientific organization for global benefits, in Wichita, Kansas, on 28-29 October 2017.

- 2015- Current:** Teamed up with the Catholic University of Belgium as **Co-Investigator** in the analysis and interpretation of Belgium’s PROBA-V/EPT data (**Space Weather**)
- 2013: PI** in the research project on food security and land use changes with participants from India, Australia and Bangladesh (prepared and submitted for **Belmont Forum, Brazil**)
- 2004: One** of the key personnel in the proposal “Global Environmental Change and Human Well-being in the Ganga-Brahmaputra Basin: A Proposed GWSP International Basin Study”, prepared in collaboration with R. B. Singh (University of Delhi, School of Economics), C. Vorosmarty (University of New Hampshire, Institute for the Study of Earth, Ocean, and Space), and R. DeFries (University of Maryland), and submitted to **IGBP**.
- 1998: Coordinator** of the proposal “Arsenic Mitigation in the Bengal Basin”, prepared in collaboration with environmental geologists from USA and Bangladesh, and submitted to **Bangladesh Government**.
- 1996-98: Environmental Advisor** to the Bangladesh Government to track down the reasons of the downstream climate change following upstream water piracy from the Ganges River
- 1993: Coordinator** of the Pilot Project “A Study of the Land-Use and Land-Cover Induced Changes in the Indian Sub-Continent”, prepared in collaboration with investigators from USA, UK, Sweden, Germany, Russia, Japan, Nepal, Bangladesh, and India, and submitted to **International Institute for Applied Systems Analysis, Austria**.
- 1989-92 Team leader** of seven Japanese investigators - K. Nagata (Electrical Engineering, Tamagawa University, Machida, Tokyo), T. Kohno (The Institute of Physical and Chemical Research, Wako, Saitama), H. Murakami (Department of Physics, Rikkyo University, Nishi-Ikebukuro, Tokyo), A. Nakamoto (Department of Physics Rikkyo University, Nishi-Ikebukuro, Tokyo), N. Hasebee (Faculty of General Education, Ehime University, Matsuyama, Ehime), J. Kikuchi (Science and Engineering Research Laboratory, Waseda University, Shinjuku, Tokyo), and T. Doke (Science and Engineering Research Laboratory, Waseda University, Shinjuku, Tokyo) - in the analysis and interpretation of OHOZORA (EXOS-C) data (**Space Weather**)

11. Services (1988-Current)

11. 1. Institutional

11. 1. 1. Departmental Committee Involvement

Curriculum Committee (Chair)

- Prepared Curriculum Committee agendas for monthly meetings.
- Moderated Curriculum Committee meetings.
- Assisted faculty in the development of curriculum proposals – new course introduction, course number change, new course approval process, etc.
- Developed procedures and forms for curriculum materials processing.
- Reviewed all syllabi to make sure inclusion of up-to-date materials.
- Facilitated curriculum training – Blackboard, Live Text, etc. - for committee members.
- Reported to Faculty-Staff Senate on matters of the Curriculum Committee.

Recruitment Committee

- Assisted in the setup of goals and strategies for effective recruitment.
- Assisted in the review of recruitment strategies.
- Paid visits to local high schools for recruitments of students.
- Set up stalls in the Health and Physical Education Building on the High School Days when students from different high schools come to visit the campus.
- Delivered speeches on the Freshman Orientation Day for recruitment in the departmental disciplines.

Library Committee (Chair)

- Made sure for the departmental fund allocation in the central library budget for purchasing the adopted textbooks and reference books and store in the reserve section.
- Made sure for the relevant books, periodicals, and journals subscription in the central library.
- Made sure for the arrangement in place to get articles and books through the inter-library loan services.
- Requested the faculty members to donate their old textbooks in the departmental library.

Promotion and Tenure Committee

- Evaluated the candidates' qualifications for tenure and/or promotion.
- Checked for the fulfillment of the requirements for tenure and/or promotion.
- Checked for the consistency with the departmental, college, and university policies and procedures.
- Verified the stated accomplishments.
- Checked for letters of recommendation.
- Commented and voted in the committee's decision.

Faculty Peer Evaluation Committee

- Visited classrooms to evaluate teaching technique.

- Checked for faculty member's scholarly activities- publications, presentations, proposal development, and articles written.
- Checked for faculty's participation in new/refreshing teaching techniques, research techniques, etc.
- Checked for faculty's participation in community outreach activities.

Faculty Recruitment Committee (Chair)

- Drafted the advertisement and sent to the Human Resources Division
- Collected the applications
- Called the committee meeting
- Selected the candidate(s) with an eye to implementing diversity
- Conducted telephone interviews of selected candidates
- Scheduled and conducted the campus interview
- Recommended the selected applicant(s) to the Departmental Chairperson

11. 1. 2. Arts & Science School-wide

Research Committee

- Brought to the attention of faculty members for the research proposal soliciting agencies.
- Brought to the attention of faculty members of upcoming conferences.
- Announced in the departmental meeting any publications, funded applications, meeting participations, presentations, proposal submissions etc. by any faculty member.
- Assisted in the Annual Student-Faculty Research Forum.
- Mentored students for presentations.
- Solicited abstracts from students and faculty for the forum.
- Assisted in abstract acceptance.
- Assisted in scheduling presentations.
- Acted as a judge in the evaluation of presentations.
- Contributed to fund raising for making awards to the top student presenters.

Promotion and Tenure Committee (Chair)

(Mentioned above.)

11.1. 3. University-wide Committee Involvement

Program Accreditation Committee (Chair and Member)

- Described specific educational goals, objectives, and activities of the program.
- Explained how the program serves the general education program and other disciplinary programs on the campus.

- Documented the market demand and/or state/industry need for careers stemming from the program.
- Documented the student demand for the program.
- Described how the program content parallels current thinking/trends in the field/trade (best practices, advisory committee recommendations, etc.).
- Provided an outline for each program curriculum, including the sequence of courses.
- Stated the degree requirements, including general education requirements, institutional, college or school requirements, and major requirements.
- Indicated the semester/year the major/program courses were last offered.
- Provided syllabi for discipline-specific courses and departmental objectives for each course.
- Outlined the process for the introduction of new courses, including all internal curriculum review processes and the findings.
- Listed courses in the proposed degree program currently offered by distance delivery.
- Described the instructor-to-student and student-to-student interaction for distance courses (prerequisite courses, lab requirements, examination procedures-online/proctored, instructor response to student assignments).
- Provided the curriculum vitae for the program faculty.
- Indicated the academic credentials required for adjunct/part-time faculty teaching major/program courses.
- Described the orientation and evaluation processes for faculty, including adjunct and part-time faculty.
- Provided the average number of courses and the number of credit hours taught for full-time program faculty for the current academic year.
- Described the institutional support available for faculty development in teaching, research, and service.
- Described the professional development of full-time program faculty over the past two years including the institutional financial support provided to faculty for the activities.
- Provided the annual library budget for the program.
- Described the availability, adequacy, and accessibility of campus resources (research, library, instructional support, instructional technology, etc.).
- Provided a list of program equipment purchases for the past three years.
- Summarized institutional policies on the establishment, organization, funding, and management of distance courses/degrees.
- Summarized the policies and procedures to keep the technology infrastructure current..

- Summarized the procedures that assured the security of personal information.
- Described the institutional support services available for students enrolled in distance technology courses/programs in advising, course registration, financial aid, course withdrawal, e-mail account, and access to library resources
- Described the institutional technology support services available to students enrolled in distance technology courses/programs.
- Described the orientation for students enrolled in distance technology courses/programs
- Summarized the institutional policy for faculty course load and number of credit hours taught, compensation, and ownership of intellectual property.
- Stated the number of undergraduate/graduate majors/declared students in each degree program under review for the past three years.
- Described strategies to recruit, retain, and graduate students.
- Provided the number of program graduates over the past three years.
- Described the program assessment process and provided 11/20 outcomes data (standardized entrance/placement test results, exit test results, etc.).
- Described program/major exit or capstone requirements.
- Provided information on how teaching is evaluated, the use of student evaluations, and how the results have affected the curriculum.
- Provided transfer information for major/declared students including the receiving institutions for transfer and programs of study.
- Provided information for program graduates continuing their education by entering graduate school or by performing volunteer service.
- Provided aggregate results of student/alumni/employer satisfaction surveys.
- Described how the program is aligned with the current job market needs of the state or local communities.
- Provided job placement information for program graduates including the number of graduates placed in jobs related to the field of study.
- Listed the strengths of the program.
- Listed the areas of the program most in need of improvement.
- Listed program improvements accomplished over the past two years.
- Described planned program improvements, including a timetable and the estimated costs.
- Identified program improvement priorities.

Promotion and Tenure Committee

(Discussed above)

Research Advisory Committee

(Discussed above under Research Committee)

Grievance Committee (Matters may include grades, personal behavior, policy and procedure breakage, rules disobedience, etc.)

- Assisted in the formal resolution of grievances between the Department of Agriculture and a faculty member by holding hearings and cross-examining.
- Assisted in the formal resolution of grievances between the Chairperson of Chemistry & Physics and a faculty member by holding hearings and cross-examining.
- Assisted in the formal resolution of grievances between a Chemistry faculty member and a student by talking to the student.
- Assisted in the formal resolution of grievances between university the Controller and a faculty member by holding hearings.
- Assisted in the formal resolution of grievances between university the Director of Purchasing and a faculty member by holding hearings.
- Assisted in the formal resolution of grievances between two university students by talking to them.
- Assisted in the formal resolution of grievances between two Physics majors.

Conflict Resolution Committee

- Offered internal stakeholders a model for promoting individuals' capacities and responsibilities for making decisions about their lives.
- Urged internal stakeholders for building a sense of community.
- Advised stakeholders to offer best customer services.
- Encouraged internal stakeholder for fostering mutual respect and cooperation.
- Recognized internal stakeholders for developing the use of understanding and fairness.
- Discouraged internal stakeholders to use power as a basis for resolving conflicts and disputes.

Faculty Evaluation Committee

(Discussed above)

Graduate Faculty Selection Committee

- Checked for the terminal degree.
- Checked for research and scholarly activities.
- Checked for graduate course offering opportunities in the candidate's discipline.
- Checked for prior experience of the applicant.
- Checked for letters of recommendation.

Home-Coming Committee

- Assisted in selecting the theme.
- Assisted in developing creative ways to publicize and promote Homecoming events.
- Assisted in scheduling events.
- Assisted in selecting the speaker.
- Proposed promotional designs.

- Volunteered in homecoming events.

Teacher Education Committee

- Regularly attended the meetings
- Periodically review educational goals and policies for the schools in the district.
- Helped to establish consistency with the State's Higher Education Department's requirements of law and the statewide goals and standards.
- Reviewed performances of students in different disciplines to infer students' prior exposure in high schools.
- Recommended to the State's Higher Education Department for teacher preparation program in affected disciplines.
- Included in the course syllabi materials that school districts teachers teach in their classes.

Faculty-Staff Workshop Committee

- Assisted in selecting the themes and sub-themes.
- Assisted in scheduling events/talks.
- Assisted in selecting the speakers for different working groups.
- Advertise for participations of local businesses in decorations.
- Proposed promotional designs.
- Volunteered in the workshop events.
- Contributed to door prizes.

Faculty-Staff Senate

- Approved programs, curriculum, prerequisites, new courses, and course placements within the appropriate disciplines.
- Offered degrees and certificates subject to fulfillment of requirements.
- Established grading policies.
- Set up standards or policies regarding student preparation and success.
- Set up faculty roles-related school governance structures.
- Set up of faculty roles and involvement in program accreditation processes including preparation of self-study reports.
- Established policies for faculty professional development activities.
- Established processes for program review,
- Set up processes for institutional planning and budget development, and recommended salary raises/or bonus payments,
- Established faculty promotion and/or tenure policies and rules.
- Approved faculty promotion and/or tenure.

Science Fair Judge Selection Committee

- Assisted in the collection of interested persons for judging.

- Assisted in the selection of qualified and right judges for the Science Fair projects concerned.
- Assisted in the distribution of projects for each judges.
- Assisted in the timing of judging.

Awards Committee

- Maintained awareness of all awards presented in the institution.
- Developed procedures for nominating persons, the submission and review process, including the rubric for scoring applicants, and the recognition process.
- Identified the type of award for honorees e.g., a plaque; name listing; cash award; etc.
- Developed a timeline for nominations/applications acceptance and their reviews.
- Made recommendation to the Committee the way of presenting awards to the awardees.
- Received and reviewed materials submitted for awards.
- Determined eligibility of candidates for awards.
- Made recommendation for the most qualified applicant to receive the award.
- In the institutional home page, published criteria for awards and recognition, and the procedures for applying and/or nominating individuals by the timeline approved by the Committee, announced awards recipients, and promoted the existing awards.
- Recommended any new awards that might be considered by the Committee.
- Conducted an annual assessment of the awards policies and procedures and made recommendations for any adjustments.

11. 2. Domestic & International

11. 2. 1. External Reviewer

Faculty Promotion and Tenure of Other Universities

- Evaluate the application following the guidelines.
- Prepare a letter of evaluation for the candidate and send to the Departmental or the Committee Chairman.

11. 2. 2. Ph. D. Thesis External Examiner

Rajshahi University, Bangladesh
Gomal University, Pakistan

- Checked for the originality of the work.
- Checked for plagiarism.
- Checked for the mathematical correctness if mathematics used.
- Checked for the grammatical mistakes.
- Checked for the standard.
- Followed the institution-stipulated guidelines.

11. 3. Editorial Board Member

- *Physics International*
- *American Research Journal of Physics*
- *Gomal University Research Journal* (Pakistan)

11. 4. Reviewer

- *College Physics* (textbooks) published by W. H. Freeman and Pearson
- *Environmental Science* (textbook) by McGraw Hill
- *Gomal University Research Journal* (Pakistan)
- NATO-sponsored conference proceeding articles on methane
- *Physics International Journal*
- *Environmental Justice Journal*
- *African Journal of Environment and Technology*
- *Academia Journal of Environmental Science*
- *Hydrology Journal*
- Ammons Scientific's *Comprehensive Psychology Journal*
- *Environment and Natural Resources Research Journal*
- *Elsevier Journal of Rural Studies*
- *Indian Journal of Radio and Space Physics*
- *World Multi-Conference on Systematics, Cybernetics and Informatics*
- *Environment and Natural Resources Research*, Canadian Center of Science and Education,
- *Engineering International*
- *NSF proposals*
- *NASA proposals*

11. 5. Community Level

Commissioner, Bayou Bartholomew Flood Protection Action Committee

- Convinced people through science the possibility of flooding the city.
- Employed students and supervise them to do the project.
- Made presentation of the work accomplished to local, state, and regional professional and other gatherings.
- Tried to publish the work.

Member of the Bayou Bartholomew Alliance

- Maintained the cleanliness of the Bayou.
- Selected a spot on its bank for people's picnicking.
- Maintained the Bayou for canoeing.

Member of the Advisory Board of the Groundwater Conservation Task Force of the Jefferson County Industrial Foundation

- Attended the monthly meetings.
- Checked and interacted with the parties to be hired for the feasibility of the alternate sources of water for irrigation and industrial use.
- Asked questions to the speakers for the understanding of other attendants.

Member of the Paper Mill Stakeholder Group for Reduction of High Volume and Low Concentration Pollutants

- Used the exhaust gases and the smokestack height and weather variables to find the exhaust fallout distances from the Paper Mill.
- Assessed the environmental impact of the exhaust.
- Assigned and supervised Environmental Science students on projects related to the above tasks.

11. 6. International Level

International Farakka Committee (an international water-rights watch group)

- Studied the domino effects occurring in the downstream due the water piracy at the upstream.
- Assigned projects to students in Environmental Science on the various aspects of the problem.
- Made presentations of the work in professional gatherings.
- Made publications of the work.
- Authored books on the different effects of the problem.

South Asia Watch, Inc. (a human-rights watch group)

- Raised voices against human-rights violation in South Asia.
- Delivered lectures in gatherings

Institute of Allergy and Chemical Immunology of Bangladesh (an environmental disease treatment center)

- Studied the environmental problems in Bangladesh and presented it to educational institutions and public gatherings.
- Alerted people on the results of environmental uncleanliness.

12. Institutional Advancement/Leadership, Management and Strategic Planning

12. 1. Physics Program Revitalization in 1988

- Revitalized the Physics Program at the University of Arkansas as a newly hired faculty with no monetary help from the institution.
- Explored worldwide ongoing research activities in my field
- Proposed for expertise-based collaboration with Japanese researchers were working with the EXOS-C Project.
- Convinced the Japanese group of my expertise by sending a copy the Ph. D. thesis.
- Japanese group released EXOS-C data to me with the condition of bearing the group members' names when publication and presentations were made.
- Prepared, as the PI, an EXOS-C data-based proposal for Air Force Office of Scientific Research (AFOSR) for consideration of funding asking funds for a laboratory setup, 50% salary, a post-doc's salary, and a few students' stipends.
- Received a funding of \$369,000.00 for three years (1989-1992) from AFOSR.
- Recruited four Physics majors one of whom is Dr. Ruth Jones, currently a mission specialist at NASA Center in Huntsville, AL
- To hear the news of the Space Physics Program at this campus, the Director of NASA-Arkansas Space Grant Consortium visited and promised to grant \$21,000.00 in two separate projects for Physics majors.
- Physics Program has been running since then with more or less regular graduations of Physics majors.

12.2. Coordinated Physics Program

- Oversaw effective curriculum delivery.
- Achieved the discipline goal.
- Ensured learning outcomes to meet standards and benchmarks.
- Maintained an innovative and student need-responsive positive work environment.
- Generated proposals to build labs with federal funding.
- Effectively managed the discipline budgets.
- Supported professional development of faculty and staff.
- Recommended faculty and staff for promotion and/or tenure.
- Recruited faculty members maintaining diversity.
- Maintained professional integrity.
- Practiced shared governance.
- Practiced interdisciplinary and intercampus collaboration in generating research proposals.
- Oversaw colleagues' performance and progress.
- Worked to uphold the institutional mission and vision.

12. 3. Private Sector Contacts

Through the University Development Office, contacted

- Car dealer Trotter Ford,
- Local Federal lab National Center for Toxicological Research (NCTR),
- Production company Century Tube, and
- Production Company International Paper,

for one or more of the issues like

- Solicitation of funds for the Physics Program,
- Possible collaboration of Physics faculty and students with them, and
- Exploration of students' internships and co-op programs.

12. 4. Setup of Research Labs

12. 4. 1. Space Physics Data Analysis Lab (1989)

- MicroVAX 3300,
- TU 81 PLUS Magnetic Tape Drive,
- Laser printer,
- Fast speed line printer,
- Color printer, and
- Fax machine.

12. 4. 2. Electronics Lab (1997-98)

- Computer repair instruments,
- Monitor repair instruments,
- TVs repair instruments,. and
- VCRs repair instruments,

12. 4. 3. Solar-Terrestrial Radiation Monitoring Lab (1997-98)

- One total ultraviolet radiometer (TUV) capable of measuring the sun and sky ultraviolet radiation in the wavelength range 0.295 to 0.385 micrometer which is particularly important for environmental, biological, and pollution studies,
- One normal incidence pyrliometer (NIP) capable of measuring the solar radiation that passes through the atmosphere and reaches the earth's surface is called the Direct Normal Irradiance (DNI),
- One standard precision pyranometer (SPP) capable of measuring the global radiation,
- One global precision pyranometer (GPP) capable of measuring the global radiation,
- One black and white pyranometer capable of measuring the global radiation, and
- One solar tracker capable of orienting payloads toward the sun.

12. 4. 4. Environmental Science Lab (1997-98)

- Ozone monitor with several filters to study air pollution
- Water quality meter

12. 5. Setup of Teaching Lab

Astronomy Lab and Climate Change Lab

12. 6. On-going Research Projects

12. 6. 1. Domestic – Local and Regional Climate Study

A study of 40 years of past Arkansas climate and its future projection

12. 6. 2. International

- Reached out the Bengal basin's arsenic-affected areas with potable drinking water using micro/nanotechnology based filter system.
- Involved in shrimp farming in the Bengal basin for increased production of food, side income opportunities, and employment in rural areas.
- Collaboration with the Catholic University of Belgium on the analysis and interpretation of PROBA-V/EPT satellite data.
- Collaboration with the Rajshahi University (Bangladesh) to study the impact of land use and land cover changes upon the climate of Bangladesh, particularly, the rise of lightning fatalities during the pre-monsoon and early monsoon seasons and its relation to widespread groundwater irrigation.
- Determining the exhaust fallout distances, plume types and their day-night and seasonal variation of directions from the under-construction coal-fired power plant in the Sundarbans on the coast of the Bay of Bengal.
- Studying the spectrum of people's engagements that make them vulnerable to lightning strikes in the Bengal basin from recorded case studies.

12. 6. 3. Training Received

Higher Ground: Building, Sustaining, and Assessing Faculty; Blackboard; LiveText

13. Budgeting and Grant Procurement

13. 1. Funded Research Projects (Co-PI where mentioned, else PI)

2019-20: Sparta Aquifer hydrologic condition based on GRACE observation (funded by NASA-Arkansas Grant Consortium, \$7,5632)

2018-19: Wind Characteristics of Arkansas, prepared in collaboration with Southern Regional Climate Center at LSU, Baton Rouge (funded by NASA-Arkansas Space Grant Consortium for \$5500.00)

2017-18: Energetic Particle Telescope's Sampling of Radiation Belt Particles (funded by NASA-Arkansas Space Grant Consortium for \$5,060.00).

2016 –17: Space Physics Research Infrastructure Development at UAPB funded by Arkansas Space Grant Consortium for \$6,600.00.

2009: Healthy and Environmentally Friendly Potable Water Supply in Bangladesh, awarded by SUEZ ENVIRONMENT-WATER FOR ALL FOUNDATION, FRANCE, WATER FOR

ALL COMPETITION, 2009 to WATC International Arsenic, Water, Ecosystem and Environment Research Center, Wichita, Kansas, USA, EU 1,000.00 (Co-PI).

2000-04: Scholarship grant for students from EPA, \$28,000.00.

1997-00: Fluorescent Tracers as Partitioning Tracers for Field Identification and Quantification of Subsurface Contamination, funded by DSWA, \$290,000.00 (Co-PI).

1997-98: Research & Instructional Equipment Grant, funded by DOD, \$82,400.00.

1997-98: Investigation of Micro-Level Climate Change in the Ganges Basin, funded by NIH, \$8,700.00.

1997-98: Investigation of Micro-Level Climate Change in the Arkansas River Basin, funded by NIH, \$9,370.00.

1997-98: Impact of Surface Feature Changes upon Climate, funded by NASA-Arkansas Space Grant, \$3,500.00.

1994-96: Regional Climate Changes Due to Shortage of Natural Water Supply, funded by NASA-Arkansas Space Grant Consortium, \$6,000.00.

1993-94: A Study of Environmental Changes in the Ganges Basin, a research incentive grant funded UAPB, \$1,000.00.

1992-94: Solar-Induced Variation of Particle Precipitation, funded by NASA-Arkansas Space Grant Consortium, \$10,500.00.

1992-94: Particle Precipitation in the South Atlantic Anomaly Region, funded by NASA-Arkansas Space Grant Consortium, \$10,500.00.

1992-93: Equipment Proposal funded by NASA-Arkansas Space Grant Consortium, \$4,257.00.

1989-93: Global Zones of Particle Precipitation as Observed by EXOS-C, funded by DoD, \$369,000.00.

13. 2. Selected Conference/Workshop/Faculty Development Participation Grants

2019: Participation in the 99th Annual Meeting of the American Meteorological Society, Phoenix, AZ, January 6-10.

2018: Participation in the sixth AMS Climate Studies Diversity Project workshop in Silver Spring, MD, July 29 - August 3.

2018: Participation in the Princeton University Plasma Physics Workshop in Princeton Plasma Physics Laboratory, June 29 - July 1.

2015: As the **Keynote speaker** on South Asian water issue in the 2015 ABC Convention in New York.

2014: As the **Keynote speaker** on water aggression in the 2014 New York FOBANA Convention on the Labor Day weekend.

2012: From the **3rd America-Bangladesh-Canada (ABC) Conference** to attend the ABC Conference in New York.

2010: From the **2nd ABC Conference**, to attend the ABC Conference in New York.

2009: From **International Farakka Committee (IFC)** to attend the international conference on the effects of Tipaimukh Dam, New York.

2008: From the **United Nations University (UNU)**, Bonn, Germany, to attend the UNU-Sponsored International Conference on Environment, Forced Migration, and Social Vulnerability, 9-11 October.

2003: From **NOAA** to attend the Global Water System Project- Open Science Conference, New Hampshire.

2003: From **IFC** and the Indian National Geography Congress (INGC) to attend the Silver Jubilee Conference of the INGC in Gaziabad, India.

1997: From **FOBANA** to attend XI annual Convention in Los Angeles, CA.

1993: From **NSF** to attend the workshop on biostatistics and public health in Houston, TX.

1992: From **NATO** to attend NATO Advanced Workshop on global methane cycle, Portland, OR.

1990: From **NASA** to attend the workshop on global change in Godard Space Flight Center, Greenbelt, MD.

13. 3. Upcoming Proposals

- **Parker Solar Probe Guest Investigator** (Solicitation: NNH20ZDA001N-PSPGI)
- **In-space Validation of Earth Science Technologies** (Solicitation: NNH20ZDA001N-INVEST)
- PD-20-1265, Geometric Analysis, National Science Foundation

13. 4. Selected Unfunded Proposals

2019: Space Science and Technology Research Center at UAPB (NASA, \$3,000,000.00)

2019: A Topographical-Spatial-Temporal Study of PBL by UAV (> \$1million)

2017: A Study of Climatic Variability in Arkansas (submitted to Arkansas-NASA).

2017: Climatic Impact of Land Use and Land Cover Changes in South Asia-Bangladesh (submitted to NASA).

2016: Spatial and Temporal Features of PROBA-V/EPT-Observed Particle Precipitation (submitted to NSF).

2015: Land Cover and Land Use Changes in South Asia – Bangladesh (submitted to NASA).

2015: UAPB-UAM Research Collaboration Project for NASA-Arkansas Space Grant Consortium.

2013: M. M. Adel (USA), B. Jhunhunwalla (India), and N. Ahmed (Australia) prepared “The Ganges Basin Food Security and Land Use Change” and submitted to Belmont Forum, Brazil.

2013: WSC-Category 2: Water Sustainability and Climate Study in the Ganges Basin, submitted to National Science Foundation.

2013: Development of Underrepresented Group Manpower for Nuclear Industry, submitted to Nuclear Regulatory Commission.

2012: Super-Tank River Basin Model Instrumentation, submitted to Department of Defense.

14. Selected Awards/Honors/Recognitions

2018: A certificate from International Agency for Standards and Ratings entitling the Father of Modern Water Politics in Environmental Research

2018: A certificate from International Agency for Standards and Ratings for the 2018 World Champion in Environmental Science (Water Reservoirs)

2018: Fellow, Directorate of Environmental Sciences, International Agency for Standards and Ratings

2014: Chancellor’s Award for Excellence in Research at the University of Arkansas at Pine Bluff

2013: Nominated for Excellence in Research at the University of Arkansas at Pine Bluff

2012: American Men and Women of Science

2010: Silver Lapel Pin Award from American Geophysical Union

2010: Recognition for more than two decades of services at the University of Arkansas at Pine Bluff

2006: Recognition by the American Registry of Outstanding Professionals

2003: Outstanding Established Faculty Award for scholarly activities

2001: Honor Club Member donor appreciation by the University of Arkansas at Pine Bluff

1999: A certificate of recognition from NGWA for presentation at the 51st Annual Convention, Nashville, TN

1999: Challenge Club Member donor appreciation by the University of Arkansas at Pine Bluff

1998: Challenge Club Member donor appreciation by the University of Arkansas at Pine Bluff

1997: Chancellor Club Member donor appreciation by the University of Arkansas at Pine Bluff

1994: An award from Rotary Club, Bangladesh

1990: An Award of the Key to the City of Pine Bluff by the Pine Bluff City Mayor

1989: Newcomer Award from the University of Arkansas at Pine Bluff for outstanding performances in research and other scholarly activities

1986: A NATO Award to attend Cosmic Ray Astrophysics school in Erice, Sicily, Italy.

1986: Scholarship from Vatican City State to study astronomy and astrophysics (**one of 18 students selected globally from Asia, Australia, Africa, Europe, North America, and South America**).

15. Featured

2018 USA NEWS CORP,

<https://sites.google.com/site/usanewscorp/dr-miah-muhammad-adel-from-usa-wins-world-championship---2018-in-environmental-sciences-water-politics> for **World Championship 2018 in**

Environmental Sciences (Water Politics); entitled the Father of Modern Water Politics in Environmental Research

2018 USA NEWS CORP, <https://sites.google.com/site/usanewscorp/dr-miah-muhammad-adel-from-usa-wins-world-championship---2018-in-environmental-sciences-reservoirs> for **World Championship 2018 in Environmental Sciences (Reservoirs)**

2018 *The Weekly Thikana*, New York, Thursday, August 23

2018 *The Nayadiganta*, Dhaka Bangladesh, August 13 issue

2015 *The Weekly Thikana*, New York, USA, October 1 issue

2010 *The Weekly Thikana*, New York, USA, August 17 issue

1999 *The Daily Sangam*, Dhaka, Bangladesh, May 10 issue

1995 *The Weekly Thikana*, New York, USA, September 10 issue

1994 *The Daily Ittefaque*, Dhaka, Bangladesh, September 7 issue

1993 *Homecoming*, Vol. X, No. 1, Spring, USA

1989 *The Arkansas Gazette*, Little Rock, AR, July 31 Issue

1989 *The Arkansas Democrat*, Little Rock, AR, April 30 issue

1989 *The Pine Bluff News*, Pine Bluff, AR, April 13 issue

1989 *The Pine Bluff Commercial*, Pine Bluff, AR, April 3 issue

1989 *The Arkansasawyer*, Pine Bluff, AR March 30 issue

16. Professional Affiliations

- American Geophysical Union (AGU), Washington, DC, USA
- World Federation of Scientists, Erice, Sicily, Italy
- Emerald Literacy Group, UK
- Fellow, the Directorate of Environmental Sciences, International Agency for Standards and Ratings

17. Other Qualifications

- Enjoy writing articles and books in English

- Enjoy writing articles and books in Bengali (more than 50 articles published in the news media).
- Explore unexplored issues
- Explore new environmental problems

18. Vocational and Technical Education

- Attended SEARK at Pine Bluff and received EPA License UNIVERSAL Technician
- Attended classes to be trained as an electrician and a plumber (no license)
- Received repair training for car washing and shampooing machine repair at Fragramatics Mfr Co, 3021 South Midland Drive, Pine Bluff, AR 71603
- Real Estate License by Arkansas Real Estate Commission (not renewed after 2004), and took home inspection courses
- MicroVAX System Manger Training
- Trained to repair TVs, VCRs, Computer Monitors at 320 W. Sencore Drive, Sioux Falls, SD 57107

19. Hobbies:

Gardening, Writing, Research

Referees

1. M. A. Karim, Ph. D., Provost and Executive Vice Chancellor for Academic and Student Affairs University of Massachusetts Dartmouth

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North Dartmouth, MA 02747-

2300 Tel: (508) 999-8024

Fax: (508) 999-8375

e-mail: mkarim@umassd.edu

2. Meer Husain, P. G.

President, Humane

Water P. O. Box 782916

Wichita, KS 67278

husain.meert@gmail.com

[m](mailto:husain.meert@gmail.com)

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316-337-6046

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Chairman Department of Physics

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901.678.4733

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Region NASA/Marshall Space Flight Center

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LOUISIANA STATE UNIVERSITY AND A & M COLLEGE

BATON ROUGE, LOUISIANA 70803

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MUHAMMAD ADEL MIAH
436-41-4328

BIRTHDATE: 02/16/52

NON-RESIDENT

ISSUED 11/28/89 TO:

DR. A. H. CHOWHURY
DEPT. OF MATH. SCI.
U OF ARKANSAS
PINE BUFF, AR 71601

DEGREES AWARDED:

MS/ '74 MSc
UNIVERSITY OF RAJSHAHI

12/22/88 DOCTOR OF PHILOSOPHY
LOUISIANA STATE UNIVERSITY
COLLEGE: GRADUATE SCHOOL
MAJOR: PHYSICS

COURSE TITLE	DEPT	CRSE	GR	CARR	EARN	QPTS
AMERICAN UNIVERSITY OF BEIRUT UNIVERSITY OF RAJSHAHI						
				GR	15/79-25/80	
				UG	15/69-25/74	
LOUISIANA STATE UNIVERSITY 1ST SEM 1980-81 GRAD 6 SPHYS						
CLASSICAL MECHANICS	PHYS	7221	B	3.00	3.00	9.00
QUANTUM MECHANICS	PHYS	7241	A	3.00	3.00	12.00
COSM RAYS & MESN PHY	PHYS	7282	A	3.00	3.00	12.00
SEM SCATTERING TH	PHYS	7857	P		1.00	
				SEMESTER	9.00	10.00
				LSU SYSTEM	9.00	10.00
				CUMULATIVE	9.00	10.00
						33.00
						3.666
						3.666
						3.666
LOUISIANA STATE UNIVERSITY 2ND SEM 1980-81 GRAD 6 SPHYS						
SPEC PROB IN PHYS	PHYS	4991	A	6.00	6.00	24.00
QUANTUM MECHANICS	PHYS	7242	A	3.00	3.00	12.00
SEM SCATTERING TH	PHYS	7857	P		1.00	
				SEMESTER	9.00	10.00
				LSU SYSTEM	18.00	20.00
				CUMULATIVE	18.00	20.00
						36.00
						4.000
						3.833
						3.833
LOUISIANA STATE UNIVERSITY 3RD SEM 1980-81 GRAD 6 SPHYS						
SPEC PROB IN PHYS	PHYS	4991	A	3.00	3.00	12.00
STATISTICAL MECH	PHYS	7225	A	3.00	3.00	12.00
				SEMESTER	6.00	6.00
				LSU SYSTEM	24.00	26.00
				CUMULATIVE	24.00	26.00
						24.00
						4.000
						3.875
						3.875

Barbara J. Tolmudge
DIRECTOR OF RECORDS AND REGISTRATION

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COURSE TITLE	DEPT	CRSE	GR	CARR	EARN	QPTS
LOUISIANA STATE UNIVERSITY						
1ST SEM 1981-82 GRAD 6 SPHYS						
MATH METH TH PHYS	PHYS	7211	A	3.00	3.00	12.00
CLASSICAL ELECTRODYN	PHYS	7231	B	3.00	3.00	9.00
SEM SCATTERING TH	PHYS	7857	P		1.00	
THEISIS RESEARCH	PHYS	8000	S	3.00		NOT
SEMESTER				6.00	7.00	21.00
LSU SYSTEM				30.00	33.00	114.00
CUMULATIVE				30.00	33.00	114.00
						3.800
						3.800

LOUISIANA STATE UNIVERSITY
2ND SEM 1981-82 GRAD 7 PPHYS

MATH METH TH PHYS	PHYS	7212	A	3.00	3.00	12.00
CLASSICAL ELECTRODYN	PHYS	7232	B	3.00	3.00	9.00
SEM SCATTERING TH	PHYS	7857	P		1.00	
THEISIS RESEARCH	PHYS	8000	S	3.00		NOT
SEMESTER				6.00	7.00	21.00
LSU SYSTEM				36.00	40.00	135.00
CUMULATIVE				36.00	40.00	135.00
						3.750
						3.750

LOUISIANA STATE UNIVERSITY
3RD SEM 1981-82 GRAD 7 PPHYS

DISSERTATION RES	PHYS	9000	S	6.00		NOT
SEMESTER				6.00	7.00	21.00
LSU SYSTEM				36.00	40.00	135.00
CUMULATIVE				36.00	40.00	135.00
						3.750
						3.750

LOUISIANA STATE UNIVERSITY
1ST SEM 1982-83 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS	7857	P		1.00	
DISSERTATION RES	PHYS	9000	S	9.00		NOT
SEMESTER					1.00	
LSU SYSTEM				36.00	41.00	135.00
CUMULATIVE				36.00	41.00	135.00
						3.750
						3.750

LOUISIANA STATE UNIVERSITY
2ND SEM 1982-83 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS	7857	P		1.00	
DISSERTATION RES	PHYS	9000	S		9.00	
SEMESTER					10.00	
LSU SYSTEM				36.00	51.00	135.00
CUMULATIVE				36.00	51.00	135.00
						3.750
						3.750

LOUISIANA STATE UNIVERSITY
3RD SEM 1982-83 GRAD 7 PPHYS

DISSERTATION RES	PHYS	9000	S		6.00	
SEMESTER					6.00	
LSU SYSTEM				36.00	57.00	135.00
CUMULATIVE				36.00	57.00	135.00
						3.750
						3.750

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NOV 28 1989

Barbara J. Talmadge
DIRECTOR OF RECORDS AND REGISTRY

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COURSE TITLE DEPT CRSE GR CARR EARN QPTS

LOUISIANA STATE UNIVERSITY 1ST SEM 1983-84 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS 7857	P		1.00	
SL TP: LASER/QUAN OPT	PHYS 7895	P		3.00	
DISSERTATION RES	PHYS 9000	S		8.00	

SEMESTER			36.00	12.00	
LSU SYSTEM			36.00	69.00	135.00
CUMULATIVE			36.00	69.00	135.00

LOUISIANA STATE UNIVERSITY 2ND SEM 1983-84 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS 7857	P		1.00	
DISSERTATION RES	PHYS 9000	S		9.00	

SEMESTER			36.00	10.00	
LSU SYSTEM			36.00	79.00	135.00
CUMULATIVE			36.00	79.00	135.00

LOUISIANA STATE UNIVERSITY 3RD SEM 1983-84 GRAD 7 PPHYS

DISSERTATION RES	PHYS 9000	S		6.00	
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SEMESTER			36.00	85.00	
LSU SYSTEM			36.00	85.00	135.00
CUMULATIVE			36.00	85.00	135.00

LOUISIANA STATE UNIVERSITY 1ST SEM 1984-85 GRAD 7 PPHYS

HIGH ENERGY PART P	PHYS 7281	A	3.00	3.00	12.00
TOPICS IN ASTROPHYS	PHYS 7783	A	3.00	3.00	12.00
SEM SCATTERING TH	PHYS 7857	P		1.00	
DISSERTATION RES	PHYS 9000	S		5.00	

SEMESTER			6.00	12.00	
LSU SYSTEM			42.00	97.00	159.00
CUMULATIVE			42.00	97.00	159.00

LOUISIANA STATE UNIVERSITY 2ND SEM 1984-85 GRAD 7 PPHYS

TOPICS IN ASTROPHYS	PHYS 7783	A	3.00	3.00	12.00
SEM SCATTERING TH	PHYS 7857	P		1.00	
SL TP: GROUP THEORY	PHYS 7895	P		3.00	
DISSERTATION RES	PHYS 9000	S		5.00	

SEMESTER			3.00	12.00	
LSU SYSTEM			45.00	109.00	171.00
CUMULATIVE			45.00	109.00	171.00

LOUISIANA STATE UNIVERSITY 3RD SEM 1984-85 GRAD 7 PPHYS

DISSERTATION RES	PHYS 9000	S		6.00	
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SEMESTER			45.00	115.00	
LSU SYSTEM			45.00	115.00	171.00
CUMULATIVE			45.00	115.00	171.00

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LOUISIANA STATE UNIVERSITY AND A & M COLLEGE

BATON ROUGE, LOUISIANA 70803

THE NAME OF THE UNIVERSITY IS PRINTED IN PURPLE ACROSS THE ENTIRE 8 1/2 X 11 TRANSCRIPT

MUHAMMAD ADEL MIAH

436-41-4328

COURSE TITLE	DEPT	CRSE	GR	CARR	EARN	QPTS
LOUISIANA STATE UNIVERSITY 1ST SEM 1985-86 GRAD 7 PPHYS						
SEM SCATTERING TH	PHYS	7857	P		1.00	
DISSERTATION RES	PHYS	9000	S		8.00	
SEMESTER					9.00	
LSU SYSTEM					124.00	3.800
CUMULATIVE					45.00	171.00 3.800

LOUISIANA STATE UNIVERSITY
2ND SEM 1985-86 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS	7857	P		1.00	
DISSERTATION RES	PHYS	9000	S		2.00	
DISSERTATION RES	PHYS	9000	S		9.00	
SEMESTER					12.00	
LSU SYSTEM					136.00	3.800
CUMULATIVE					45.00	171.00 3.800

LOUISIANA STATE UNIVERSITY
3RD SEM 1985-86 GRAD 7 PPHYS

DISSERTATION RES	PHYS	9000	S		6.00	
SEMESTER					6.00	
LSU SYSTEM					142.00	3.800
CUMULATIVE					45.00	171.00 3.800

LOUISIANA STATE UNIVERSITY
1ST SEM 1986-87 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS	7857	P		1.00	
DISSERTATION RES	PHYS	9000	S		2.00	
DISSERTATION RES	PHYS	9000	S		9.00	
SEMESTER					12.00	
LSU SYSTEM					154.00	3.800
CUMULATIVE					45.00	171.00 3.800

LOUISIANA STATE UNIVERSITY
2ND SEM 1986-87 GRAD 7 PPHYS

SEM SCATTERING TH	PHYS	7857	P		1.00	
DISSERTATION RES	PHYS	9000	S		6.00	
DISSERTATION RES	PHYS	9000	S		8.00	
SEMESTER					15.00	
LSU SYSTEM					169.00	3.800
CUMULATIVE					45.00	171.00 3.800

LOUISIANA STATE UNIVERSITY
3RD SEM 1986-87 GRAD 7 PPHYS

DISSERTATION RES	PHYS	9000	S		6.00	
SEMESTER					6.00	
LSU SYSTEM					175.00	3.800
CUMULATIVE					45.00	171.00 3.800

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APR 18 1989
John J. Talmadge
DIRECTOR OF RECORDS AND REGISTRATION

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MUHAMMAD ADEL MIAH 436-41-4328

COURSE TITLE DEPT CRSE GR CARR EARN QPTS

LOUISIANA STATE UNIVERSITY 1ST SEM 1987-88 GRAD 7 PPHYS

Table with 7 columns: COURSE TITLE, DEPT, CRSE, GR, CARR, EARN, QPTS. Rows include SEM SCATTERING TH, DISSERTATION RES, PHYS 7857 P, PHYS 9000 S.

Summary table with 7 columns: SEMESTER, LSU SYSTEM, CUMULATIVE, and values for EARN and QPTS.

LOUISIANA STATE UNIVERSITY 2ND SEM 1987-88 GRAD 7 PPHYS

Table with 7 columns: COURSE TITLE, DEPT, CRSE, GR, CARR, EARN, QPTS. Rows include SEM SCATTERING TH, DISSERTATION RES, PHYS 7857 P, PHYS 9000 S.

Summary table with 7 columns: SEMESTER, LSU SYSTEM, CUMULATIVE, and values for EARN and QPTS.

LOUISIANA STATE UNIVERSITY 3RD SEM 1987-88 GRAD 7 PPHYS

Table with 7 columns: COURSE TITLE, DEPT, CRSE, GR, CARR, EARN, QPTS. Rows include DISSERTATION RES, PHYS 9000 S.

Summary table with 7 columns: SEMESTER, LSU SYSTEM, CUMULATIVE, and values for EARN and QPTS.

LOUISIANA STATE UNIVERSITY 1ST SEM 1988-89 GRAD 7 PPHYS

Table with 7 columns: COURSE TITLE, DEPT, CRSE, GR, CARR, EARN, QPTS. Rows include SEMESTER, LSU SYSTEM, CUMULATIVE.

EXAM ONLY

- 04/25/81 PASS QUAL EXAM FOR DOC
06/16/81 PASS PREGEN EXAM REQ FOR DOC
04/19/82 PASS GEN EXAM FOR DOC
09/14/88 PASS FINAL EXAM FOR DOC
12/22/88 DISSERTATION GLOBAL ZONES OF PARTICLE PRECIPITATION

END OF ACADEMIC RECORD

NOT--NOT USED IN COMPUTING TOTALS

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