CURRICULUM VITA

MIAH MUHMMAD ADEL, Ph. D.

Professor of Space Physics, Astronomy, and Environmental Sciences
P.O. Box 4941
University of Arkansas at Pine Bluff
Pine Bluff, AR 71601
e-mail: adelm@uapb.edu
Tel: (870) 575-8788
Fax: (870) 575-8218
URL: miahadel.com

1. Academic Achievements

1995- Current: Full Professor of Physics, Astronomy, and Environmental Sciences at the University of Arkansas at Pine Bluff.

1994- Current: Tenured Faculty

1992- Current: Graduate Faculty

1990-95: Associate Professor of Physics, Astronomy, Mathematics, and Environmental Sciences, at the University of Arkansas at Pine Bluff.

1988-90: Assistant Professor of Physics, Astronomy, and Mathematics at the University of Arkansas at Pine Bluff.

1980-88: Assistant Professor, Department of Physics, Rajshahi University, Bangladesh **(On Leave Abroad to Louisiana State University, Baton Rouge, Louisiana, USA**).

1978-80: Assistant Professor, Department of Physics, Rajshahi University, Bangladesh **(On Leave Abroad to American University in Beirut, Lebanon**)

1975-78: Lecturer, Department of Physics, Rajshahi University, Bangladesh.

1974-75: Research fellow, Bangladesh Atomic Energy Center, Dhaka, Bangladesh.

2008 -12: Adjunct Professor of Statistics in the School of Business and Management at the University of Arkansas at Pine Bluff.

2. Multidisciplinary Research Experience

1994- Current: Lightning physics, Biophysics, Incineration, Air quality, Environmental science, Flood models, Bayou Bartholomew watershed, Astrology, Climate change, Extreme weather events, Water resources management, Water purification filter based on micro/nanotechnology, Land use and land cover changes, Irrigation, Downstream effects from upstream water diversion, GDP, Widespread irrigation and lightning generation by satellite observation, Remote sensing, and Belgium satellite observation of low altitude radiation belt particle precipitation.

1989- 94: Earth's space environment based on observations by Japanese EXOS-C satellite.

1983- 88: Earth's space environment based on observations by US Air Force S81-1mission, Interaction cross-section of hydrogen with atmospheric gases, Computational physics, Space physics instrumentation, Geomagnetic field model, Geomagnetic storms, Solar maximum and minimum conditions, Solar proton event, Solar electron event, Radiation belt models, Space weather, and Astronomical distance scale.

1882- 83: Thermal Physics of heat transfer, Spectroscopy, and Stellar classification.

1972 –80: Nuclear structure and Particle physics of hyper-fragments produced by the bombardment of 3.0 GeV/c K^- - meson momentum

3. Teaching Experience

3. 1. Courses Offered

1975- Current: Environmental Science, Energy Conversion, College Algebra, Pre-Calculus, Calculus, Differential Equations, Statistics, Physical Science, Astronomy, College Physics, University Physics, Space Physics, Acoustics, Astrophysics, Classical & Analytical Mechanics, Electromagnetic Theory, Optics, Modern Physics, Mathematical Physics, Quantum Mechanics, Thermodynamics, Nuclear Physics, Solid State Physics, Advanced Environmental Science, Advanced Physics, Atomic Physics, Nuclear Reactor Physics, and Physics, Astronomy, and Physical Science Lab courses, Physics labs for nursing and pre-med students, and tutoring University Physics to US AID-supported pre-engineering students from abroad.

3. 2. Courses Development

1999-Curent: Environmental Science (PHYS 4365) and Advanced Environmental Science (GPHY 5365), Astronomy (PHYS 1445), Astronomy (PHYS 1345), Astrophysics (PHYS 4338), Nuclear Physics (PHYS 4343), Space Physics (PHYS 4346), Quantum Mechanics (PHYS 4347), Advanced Physics (GPHY 5331) and Astronomy Lab (1145).

4. Atmospheric and Space Physics Expertise

4.1. Research Experience and Skills

Geomagnetic field models, Solar maximum emission model, Solar proton event, Solar electron event, Radiation belts models, Solar-terrestrial relations, Analysis and interpretation of Japanese EXOS-C satellite data, Analysis and interpretation of US Air Force S81-1 mission data, and Instrument response functions.

4.2. Publications

2017 M. M. Adel, The Angelic Pace Night Journey ever made, *Gomal University Journal,* Pakistan (pending) **(Space Physics & Biophysics)**

2017 M. M. Adel, Lightning generation correlation with widespread irrigation and means of protection, *Asian Journal of Environmental Science* (pending) (**Lightning Physics & Irrigation Science)**

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., v*ol. 1, no. 1, 2016, pp. 26-35. www.arjonline.org (**Atmospheric & Space Physics: Atmospheric Model, Radiation Belts, Interaction Cross-sections)**

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)**

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)**

(Former last name was Miah)

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 (**Atmospheric & Space Physics: Radiation Belt, and Geomagnetic storm)**

1994 M. A. Miah, Significant variation of proton precipitation in equatorial thermosphere, *Advances in Space research*, vol.14, no. 9, 1994, pp.229-235 (**Atmospheric & Space Physics, Interaction Cross-sections)**

1993 M. A. Miah, Solar-induced variation of proton precipitation near the equator, Jo*urnal of Atmospheric and Terrestrial Physics*, vol.55, no. 9, 1993, pp.1295-1301 (**Solar Maximum and Minimum Conditions, Solar Proton Event, Solar Electron Event, Radiation Belt Models, 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 (**Atmospheric & Space Physics: Solar Maximum and Minimum Conditions, Solar Proton Event, Solar Electron Event, Radiation Belt Models, Space Weather**)

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. (**Atmospheric & Space Physics)**

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. (**Atmospheric & Space Physics)**

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. (**Atmospheric & Space Physics)**

1990 M. A. Miah, Observation of Z≥1 particles below 300 km near the geomagnetic equator, *Journal of Geomagnetism and Geoelectricity,* vol. 43, 1990, pp. 461-472. (**Atmospheric & Space Physics)**

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 (**Atmospheric & Space Physics)**

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 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, pp. 339-345, in J. Shapiro and J. P. Wefel, eds., *A NATO Advanced Series in Genesis and Propagation of Cosmic Rays*, D. Reidel 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)**

4. 3. Author/Co-Author of Books

2017 *Satellite Data Analysis for Particle Precipitation* (manuscript)

2017 *Outdoor Shelter from Lightning Strikes* (manuscript)

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

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

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.

4. 4. Selected Conference Contributions

2016 M. M. Adel, Spatial and temporal features of particle precipitation in low- and mid-latitude zones, 2nd 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 speaker**)
(Atmospheric & Space Physics, Computational Physics)

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**)

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)

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, 8-28 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)**

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)**

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)**

4. 5. Selected Domestic and International Collaborations

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 (**Atmospheric & Space Physics, Geomagnetism, Computational Physics)**

2015- Current: Co-Investigator in the analysis and interpretation of Belgium's PROBA-V/EPT data **(Atmospheric & Space Physics, Solar Conditions, Geomagnetism, Computational Physics)**

5. Land Use and Land Cover Changes, Water Resources, Lightning, Climate Change, Environmental Science, and Related Expertise

5. 1. Research Experience and Skills

i) Land use and land cover change-induced environmental changes,
ii) Downstream and upstream environmental effects from upstream water piracy,
iii) Water resources management,
iv) Lightning safety,
v) Climate change,
vi) Global warming vis-à-vis cooling,
vii) Non-internationality of economic health index GDP, and
viii) Micro/nanotechnology-based method to purify contaminated water from any source of arsenic, trace metals, and pathogens

5. 2. Publications

2017 M. M. Adel, Whether the regional cooperation of the water sharing problems are in cold Storage, *International Journal of Research and Analytical Reviews* (pending). **(Water Politics)**

2017 M. M. Adel, The Uttarakhand 2013 and Jammu-Kashmir 2014 Disasters - Upstream Effects of Water Piracy, *African Journal of Environmental Science & Technology* (First time revision submitted). (**Extreme Climatic Event)**

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)**

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)**

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 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 & Consumer Sciences)**

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)**

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)**

2007 M. M Adel, Growing plantain plants in home gardens, *Arkansas Environmental, Agricultural, & Consumer Sciences Journal*, vol.7, 2007, pp.14-16 .
(**Agricultural & Consumer 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 Science: Environmental Pollution)**

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 river, 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)**

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)**

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. **(Water Politics)**

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. **(Greenhouse Gas Emission & Global Change)**

5. 3. Author and Translator of Books

2017 *GDP the Lame Duck Economic Health Index* (in progress). **(Environmental Economics)**

2017 *CO_2 Accumulation vs Inland H_2O Depletion in Regional Warming vis-a-vis Cooling*: *An Upstream Water Piracy Effect* (manuscript). **(Global Warming)**

2017 *The Dam-Locked Delta* (manuscript). **(Water Politics)**

2017 *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 Gasping Ganges Vol. 1*, published by German Academic Publishing Company Lap Lambert. **(Land Use and Land Cover Changes)**

2015 *The Dam-Deluged Gasping Ganges Vol. 2*, published by German Academic Publishing Company Lap Lambert.. **(Land Use and Land Cover Changes)**

2015 *The Dam-Deluged Gasping 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*", published by German Novel Publishing Company Just!Fiction. **(Fiction on 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)**

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)**

5. 4. Selected Conference Contributions

2015 M. M. Adel, **Keynote speaker** on South Asian water issue at the ABC Convention during September 4-7, 2015, in New York. (**Water Resources**)

2014 M. M. Adel, Water aggression, FOBANA Convention New York. NY. August 29 - September 1, 2014 (**Keynote Speaker**) (**Water Resource**)

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 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. **(Water Politics)**

2012 M. M. Adel, Water aggression from upstream and threat to the lower riparian regions June 23-24, 2012, ABC Convention, Astoria World Manor, New York **(Keynote Speaker, invited) (Water Politics)**

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. **(Water Politics)**

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, 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)**

5. 5. Selected Domestic and International Collaborations

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

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) **(Food Security**)

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. **(Land Use and Land Cover Changes & Environmental Changes)**

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. **(Land Use and Land Cover Changes, Surface Water Deprivation, & Water Contamination)**

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. **(Land Use and Land Cover Changes & Environmental Changes)**

6. Services (1988- Current)

6. 1. Institutional

6. 1. 1. Departmental Committee Involvement

Curriculum Committee (Chair), Recruitment Committee, Library Committee (Chair), Promotion and Tenure Committee, and Faculty Peer Evaluation Committee

6. 1. 2. Arts & Science School-wide

Research Committee, Promotion and Tenure Committee (Chair)

6. 1. 3. University-wide Committee Involvement

Promotion and Tenure Committee, Research Advisory Committee, Grievance Committee, Faculty Evaluation Committee, Graduate Faculty Selection Committee, Home-Coming Committee, Teacher Education Committee, Faculty-Staff Workshop Committee, Science Fair Judges Selection Committee, and Awards Committee

6. 2. Domestic & International

6. 2. 1. External Reviewer

Faculty Promotion and Tenure of other universities (viz., LSU-Alexandria)

6. 2. 2. External Examiner

Ph. D. Thesis, Rajshahi University, Bangladesh

6. 3. Editorial Board Member

Physics International, American Research Journal of Physics, Gomal University Research Journal (Pakistan)

6. 4. Reviewer

(i) *College Physics* (textbooks) published by W. H. Freeman and Pearson

(ii) *Environmental Science* (textbook) *by McGraw Hill*

(iii) *Gomal University Research Journal (*Pakistan)

(iv) *NATO-sponsored conference proceeding* articles on methane

(v) *Physics International* Journal

(vi) *Environmental Justice* Journal

(vii) *African Journal of Environment and Technology*

(viii) *Academia Journal of Environmental Science*

(ix) *Hydrology Journal*

(x) Ammons Scientific's *Comprehensive Psychology Journal*

(vii) *Environment and Natural Resources Research Journal*

(ix) *Elsevier Journal of Rural Studies*

(x) *Indian Journal of Radio and Space Physics*

(xi) *World Multi-Conference on Systematics, Cybernetics and Informatics*

(xii) *Environment and Natural Resources Research,* Canadian Center of Science and Education, and

(xiii) *Engineering International*

6. 5. Community Level

(i) Commissioner, Bayou Bartholomew Flood Protection Action Committee

(ii) Member of the Bayou Bartholomew Alliance

(iii) Member of the Advisory Board of the Groundwater Conservation Task Force of the

Jefferson County Industrial Foundation

(iv) Member of the Paper Mill Stakeholder Group for Reduction of HighVolume and Low Concentration Pollutants

6. 6. International Level

1994 – Current: International Farakka Committee (an international water rights watch group)

1992 - Current: South Asia Watch, Inc. (a human rights watch group)

1990 - Current: Institute of Allergy and Chemical Immunology of Bangladesh (an environmental disease treatment center)

6. 7. Foreign Government's Project

1996-98: Performed the Bangladesh Government-assigned task on finding downstream climate change following upstream water piracy from the Ganges River

7. Institutional Advancement/Leadership, Management and Strategic Planning

7. 1. Physics Program revitalization in1988

i) Arkansas State was about to terminate the Physics Program from the University of Arkansas at Pine Bluff for no graduation of students in the past years when I was hired in 1988.

ii) My job would be terminated if I was not able to revitalize the Physics Program for which the University of Arkansas at Pine Bluff was not spending any fund.

iii) With my prior knowledge in working with Air Force S81-1 Mission data for the Ph. D. degree, I proposed for collaboration with Japanese researchers who were working with the EXOS-C Project at that time.

iv) The Japanese group asked for a copy of my Ph. D. thesis.

v) I submitted a copy of my thesis to the Japanese group.

vi) After reviewing the thesis, EXOS-C data was released to me with the condition of bearing the group members' names when any publication was made.

vii) As the PI, I prepared an EXOS-C data-based proposal for AFOSR for consideration of funding asking funds for a laboratory setup, my 50% salary, a post-doc's salary, and a few students' stipends.

viii) The project was funded by Air Force Office of Scientific Research (AFOSR) at $369,000.00 for three years (1989-1992), and later extended.

ix) I recruited four Physics majors one of whom is Dr. Ruth Jones, currently a mission specialist at NASA Center in Huntsville, AL

x) To find the Space Physics Program at this campus, the Director of NASA-Arkansas Space Grant Consortium visited by office in October 1989 and promised to grant $21,000.00 in two separate projects with support for Physics majors.

xi) Following the submission of the projects, this additional fund was made available for the Physics Program

xii) Physics Program has been running since then with regular graduation of Physics majors

7. 2. Private Sector Contacts

Through the University Development Office, I contacted the car dealer Trotter Ford, local federal lab National Center for Toxicological Research (NCTR), the production companies Century Tube, International Paper, etc. for one or more of the issues like i) soliciting funds for the Physics Program, ii) knowing their research projects that Physics faculty and students could collaborate, and iii) exploring students' co-op programs, etc. etc.

7. 3. Setup of Research Labs

7. 3. 1. Space Physics Data Analysis Lab

1989 : I set up the Space Physics Data Analysis Lab with i) one MicroVAX 3300, ii) TU 81 PLUS Magnetic Tape Drive, iii) one laser printer, iv) one fast speed line printer, v) one color printer, and vi) one fax machine

7. 3. 2. Electronics Lab

1997-98: I set up the electronics lab for students to learn how to repair i) computers, ii) monitors, iii) TVs, and iv) VCRs

7. 3. 3. Solar-Terrestrial Radiation Monitoring Lab

1997-98: I set up the Solar-Terrestrial Radiation Monitoring Lab that houses i) one total ultraviolet radiometer (TUVR) 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,

ii) one normal incidence pyrheliometer (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),

iii) one standard precision pyranometer (SPP) capable of measuring the global radiation,

iv) one global precision pyranometer (GPP) capable of measuring the global radiation,

v) one black and white pyranometer capable of measuring the global radiation, and

vi) one solar tracker capable of orienting payloads toward the sun.

7. 3. 4. Environmental Science Lab

1997-98: I set up the environmental science lab that has i) one ozone monitor with several filters to study air pollution, and

ii) one water quality meter

7. 4. Setup of Teaching Lab

I set up the Astronomy Teaching Lab

7. 5. On-going Research Projects

7. 5. 1. Domestic – Local and Regional Climate study

A study of 40 years of past Arkansas climate and its future projection (three students are working on three cities' climate data).

7. 5. 2. International

i) I am collaborating with the Catholic University of Belgium on the analysis and interpretation of PROBA-V/EPT satellite data.

ii) I have teamed up with 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 (NASA's one of the favorite ideas) and its relation to widespread groundwater irrigation.

7. 5. 3. Global

I have been working in the capacity of the Vice President of Humane Water members (https://humanewater.org/staff/ and https://humanewater.org/staff/dr-miah-adel/), a Wichita (Kansas)-based charitable, non-profit, and scientific organization to reach out the world with potable drinking water and arsenic-free irrigation water using micro/nanotechnology based filter system. Also, working for the inaugural international conference of Humane Water in Wichita during 28-29 October, 2017.

8. Budgeting and Grant Procurement

8. 1. Funded Research Projects (Co-PI where mentioned)

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.

8. 2. Selected Travel Grants for Participations in Conferences

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 : 3rd America-Bangladesh-Canada Conference, New York.

2010 : 2nd America-Bangladesh-Canada Conference, New York.

2009 : International Farakka Committee 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.

8. 3. Pending Proposals

2017 : M. M. Adel, Climatic Impact of Land Use and Land Cover Changes in South Asia-Bangladesh (submitted to NASA for about $600,000.00 for a 3-year period).

2017 : M. M. Adel, Energetic Particle Telescope's Sampling of Radiation Belt Particles (submitted to NASA-Arkansas Space Grant Consortium for $5,060.00).

8. 4. Selected Unfunded Proposals

2016 : Spatial and Temporal Features of PROBA-V/EPT-observed Particle Precipitation (NSF). Three year solicited amount $733,705.00.

2015 : Land Cover and Land Use Changes in South Asia – Bangladesh (NASA). Three-year solicited amount about $750,000.00.

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

2013 :M. M. Adel (USA), B. Jhunjhunwalla (India), and N. Ahmed (Australia), The Ganges Basin Food Security and Land Use Change, Belmont Forum, Brazil, $755,600.00 (three- to five-year period).

2013 :WSC-Category 2: Water Sustainability and Climate Study in the Ganges Basin, National Science Foundation, $399,956.00 (five-year period).

2013 : Development of Underrepresented Group Manpower for Nuclear Industry, Nuclear Regulatory Commission, $774,940.00 (five-year period).

2012 : Super-tank River Basin Model Instrumentation, Department of Defense, $426,754.34 (three-year period).

2012 : Super-tank River Basin Model for Groundwater Contamination Study, Army Research Office, $646,343.00 (three-year period).

9. Faculty Recruitment (1988- Current)

Post-Doctoral Fellow Selection Committee

Faculty Selection Committee

Two times member in the Chemistry & Physics Chairperson Selection Committee

10. Faculty Evaluation (1988- Current)

Multiple times involved in the Departmental and University-wide Promotion and Tenure Committee

External Member for Faculty Promotion and Tenure of other institutions

Annual Faculty Peer Evaluation Committee member

Graduate Faculty Selection Committee member

Faculty Evaluation Committee member

11. Program Accreditation

Two times worked in the Physics Program Accreditation

12. Selected Awards/Honors/Recognitions

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**

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 : New Comer 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 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**).

1977 : An award from the Bangladesh Institute for the Advancement of Science and Technology Teaching for outstanding performances in the Institute's 1977 Summer School in Rajshahi University, Rajshahi, Bangladesh.

13. Featured in

2015 The Weekly Thikana, New York, USA, October 1 issue
2010 *The Weekly Thikana*, New York, USA, August 17 issue
1999 *The Daily Sangram*, 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 Arkansawyer*, Pine Bluff, AR March 30 issue

14. Professional Affiliations

(i) American Geophysical Union (AGU), Washington, DC, USA
(ii) World Federation of Scientists, Erice, Sicily, Italy
(iii) Emerald Literacy Group, UK

15. Education

1988 Ph. D. Louisiana State University, Baton Rouge, Louisiana, USA
Major Field: Space Physics (Planetary space environment)
Minor Field: Astronomy/Astrophysics
Thesis Title: *Global Zones of Particle Precipitation*

1980 M. S. (ABD), American University of Beirut (AUB), Beirut, Lebanon (**Left without completion because of acceptance to Ph. D. program at LSU, Baton Rouge, Louisiana**).
Major Field: Nuclear Physics

1974 M. Sc. Rajshahi University (RU), Rajshahi, Bangladesh
Major Field: Nuclear and Particle Physics
Minor Fields: Quantum Mechanics and Electronics

Thesis Title: *A Dissertation on Properties of Hyperfragments and Other Fragments Produced in Nuclear Emulsion Exposed to 3.0 GeV/c K^- - Meson Momentum* (Emulsion plates were brought from CERN, Geneva, Switzerland)

1972 B. Sc. (Honors): Rajshahi University, Rajshahi, Bangladesh
Major Field: Physics;
Minor Fields: Mathematics and Chemistry

15. 1. Graduate Courses

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, Cosmology (Audit), Laser Physics (Audit), Group Theory (Audit), and Physics seminars

Cumulative GPA: 3.80

16. Other Qualification

Enjoy writing in both English and Bengali for publications in dailies and weeklies on issues of current public interests for public learning. Most of the articles have been on water issues. I might have written over fifty articles just a few of which I kept track. On many occasions, writing is relaxing for me.

17. Hobbies

Gardening, Writing, Research