CURRICULUM VITA

MIAH MUHAMMAD ADEL, Ph. D.
(Nane was MUHAMMAD ADEL MIAH before 1999)
Professor of Physics, Water, and Environmental Sciences
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I. Versatile Skills and Interests

Transboundary water conflicts and resolution
Management of surface water resources
Arsenic mitigation of groundwater
Water quality
Water sustainability
River basin analysis
Integrated downstream effects from upstream water diversion
Wind power

II. Water and Environmental Sciences

II. A. Publications

2011 M. M. Adel, "The marathon painstaking journey and challenges of sharing own resources with the upstream neighbor", *Proceedings on the International Conference on Tipaimukh Dam*, (accepted), Jewish Center, New York, July 17, 2010

2009 M. M. Adel, "Growing sugarcanes in home gardens", *Arkansas Environmental, Agricultural, & Consumer Sciences Journal*, vol. 9, pp.18-20

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

2005 M. M. Adel, "Background state leading to arsenic accumulation in the Bengal basin groundwater", *Journal of Water and Health*, vol. 3, no. 4, pp.435-452.

2005 M. M. Adel and M. T. Hossain, "Environmental impact from giant retail store supercenter construction by the Bayou Bartholomew", *Management of Environmental Quality: An International Journal*, vol.16, no. 3, pp. 198-210

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**)

2004 M. M. Adel, "Chemical agents incineration exhaust fallout and effects", *Management of Environmental Quality: an International Journal*, vol. 15, no.6, pp.629-655

2004 M. M. Adel, "Impacts from trans-boundary water rights violations in South Asia", pp. 205-214, in R. Murray, K. Jacobson, and S. Anderson, eds., *Proceedings of the 2004 Water Management Conference: Water Rights and Related Water Supply Issues*, Salt Lake City, Utah

2004 M. M. Adel, "Upstream water diversion constructions on transboundary rivers", pp. 547-556, in R. Murray, K. Jacobson, and S. Anderson, eds., *Proceedings of the 2004 Water Management Conference: Water Rights and Related Water Supply Issues*, Salt Lake City, Utah

2003 M. Adel, "Biosphere III: The site of 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 (**invited)**

2002 M. M. Adel, "Man-made climatic changes in the Ganges basin", *International Journal of Climatology* , vol.22, pp.993-1016

2001 M. M. Adel, "Effects on downstream water resources from upstream water diversion in the Ganges basin", *Journal of Environmental Quality*, vol. 30, pp. 356-368

2000 M. M. Adel, "Microlevel climate change in the Ganges basin", *Journal of the Arkansas Academy of Sciences*, vol. 53, pp. 83-91

2000 A. Ghanem, J. Smith, M. Elzey, T. S. Soerens, M. M. Adel, and G. Thomas , "Locating NAPLS in ground water using partitioning fluorescent dyes", *Journal of the Arkansas Academy of Sciences*, vol. 53, pp. 55 – 62

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

1999 M. M. Adel, "The impact of climatic extremes and water shortage upon human health", *World Resource Review*, vol. 11, no. 4, pp. 576-601

1999 M. M. Adel, "Integrated investigation of the arsenic episode in Bangladesh", *Indian Journal of Environmental Protection*, vol. 19, no. 9, pp. 652-660

1997 M. A. Miah, "Biosphere III and the destructive activities of river barrages", *Bitchitra*, vol. 22, pp. 25-31.

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

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**)

1996 M. A. Miah, "Signs of climatic changes in Ganges basin", *Bitchitra*, vol. l0, pp. 14-21 (**Cover page article**)

1996 M. A. Miah, "Ecocide in the Ganges basin", *The Message*, pp. 13-14, May 1996

1996 M. A. Miah, "The water crisis in Bangladesh: a challenge to integrated water management in urban areas", *Environmental Research Forum*, vol. 3-4, pp. 69-86,

1995 M. A. Miah, "Integrated effects of water diversion", pp. 23-24, in FOBANA Conveners eds., *Proceedings of 8th Annual Convention of the Federation of Bangladeshi Associations of North America (FOBANA)*, Montreal, Canada (**invited)** .

1993 et al., and M. A. Miah, "Sources and sinks of methane", vol. 13, pp. 457-466, in M. A. K. Khalil, ed., *NATO ASI Series in Atmospheric Methane: Sources, Sinks, and Role in Global Change*, Portland, Oregon

II. B. Selected Conference Contributions

2011 M. M. Adel, "Ecological responses to indiscriminate anthropogenic actions on water resources ", Henderson State University, Arkadelphia, Arkansas, 7 March, 2011 **(invited)**

2011 M. M. Adel, "Environmental reactions to human actions", Henderson State University, Arkadelphia, Arkansas, 7 March, 2011 **(invited)**

2011 M. M. Adel, "Anthropogenic actions and environmental reactions ", Student-Faculty Research Forum, University of Arkansas at Pine Bluff, 9-10 March, 2011

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.

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).**

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.

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)**.

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

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.

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.

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.

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.

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

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.

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.

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**)

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.

2000 M. M. Adel, "Obstruction to water's natural purification and arsenic contamination in the Bengal basin", 4th International Conference on Arsenic Exposure and Health Effects, San Diego, CA, 18-22 July, 2000.

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.

1999 M . M. Adel, "Local hydrogeologic history and accumulation of poisonous element in groundwater", 51st NGWA Annual Meeting, Nashville, TN, 3-6 December, 1999.

1999 M. M. Adel, "Arsenic disaster in Bangladesh: causes and remedies", International Conference in Wagner College, NY, December 30 (**invited**)

1999 M. M. Adel, "The arsenic calamity in the Ganges delta", Arkansas Academy of Sciences Annual Meeting, Hot Springs, AR, 2-3 April, 1999.

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**)

1998 M. A. Miah, "Water shortage and water contamination", Annual Convention of NABIC, Columbus, OH, 13 June, 1998 (**invited**).

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**).

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.

1998 M. A. Miah, "Climatic influences from surface features", Arkansas Space Grant Consortium Annual Meeting, UAMS, Little Rock, AR, 19 March, 1998.

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**).

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**).

1997 M. A. Miah, "Environmental consequences of water shortage", Arkansas Space Grant Consortium Annual Meeting, Fayetteville, AR, 13 March, 1997.

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.

1996 M. A. Miah, "Integrated effects of water shortage", Arkansas-Oklahoma-Kansas Chapter of Physics Teachers, Fayetteville, AR, 15 February, 1996.

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.

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**).

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.

1995 M. A. Miah, "Human-induced environmental changes", 21st Plenary Meeting of Geophysics and Environment, University of Colorado at Boulder, 2-17 July, 1995.

1995 M. A. Miah, "Suspended particulate matter in the air and environmental diseases", 21st Plenary Meeting of Geophysics and Environment, University of Colorado at Boulder, 2-17 July, 1995.

1995 M. A. Miah, "Integrated effects of upstream water diversion", 8th Annual Convention of

FOBANA, Montreal, Canada, 3-5 September, 1995 **(invited).**

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.

1994 M. A. Miah, "Urban environmental diseases in the Ganges basin" , Medical University, Dhaka, Bangladesh, August 16, **(invited)**.

1994 M. A. Miah, "Environmental research resources in Biosphere III", COSPAR (Cooperative Space Research) Meeting, Hamburg, Germany, 13-15 July, 1994.

III. Space Physics

III. A. Journal Publications

2011 M. M. Adel, "Absolute flux comparison of magnetospheric particles", *Canadian Astronautics and Space Journal* (in press)

2008 M. M. Adel, "A detector telescope's pitch angle sampling of magnetospheric particles", *Earth, Planets, and Space*, vol. 60, pp.753-761

1994 M. A. Miah, "EXOS-C project at UAPB", *UAPB Research Journal*, vol. 1, pp.17-25

1994 M. A. Miah, "Phoenix-1 observation of storm-time precipitation of ring current particles", *UAPB Research Journal*, vol.1, pp.45-54

1994 M. A. Miah, "Significant variation of proton precipitation in equatorial thermosphere", *Advances in Space research*, vol.14, no. 9, pp.229-235

1993 M. A. Miah, "Solar-induced variation of proton precipitation near the equator", *Journal of Atmospheric and Terrestrial Physics*, vol.55, no. 9, pp.1295-1301

1993 M. A. Miah, "Solar cycle dependence of equatorial protons in the thermosphere", vol. 2, p. 721, in Hruska, Shea, Smart, and Heckman, eds., *Proceedings of the Solar-Terrestrial Predictions - IV Workshop*, Montreal, Canada

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, pp. 9-20.

1991 M. A. Miah, "Global proton peak flux profile in the equatorial zone", *Indian Journal of Radio and Space Science*, vol. 20, pp.12-24

1991 M. A. Miah, "ONR-602 experiment to investigate particle precipitation near the equator", *Journal of Geomagnetism and Geoelectricity*, vol. 43, pp.445-454.

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

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, pp.541-550

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, pp. 622-632

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.

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, pp. 14-21

III. B. Selected Conference Contributions

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.

2006 M. M. Adel, "Instrument efficiency and comparison of magnetospheric particle fluxes", AGU Spring meeting, MD, 23-26 May, 2006.

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.

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.

1994 M. A. Miah, "Telescope response functions", COSPAR Meeting, Hamburg, Germany, July 13-15, 1994.

1994 M. A. Miah, "Spatial and temporal features of particle precipitation in off-equatorial zones", COSPAR Meeting, Hamburg, Germany, July 13-15, 1994.

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.

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.

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.

1990 M. A. Miah, "Solar-induced variation of particle precipitation near the equator", URSI Conference, Prague, Czechoslovakia, 28 August-5 September, 1990.

1990 M. A. Miah, "Temporal features of radiation belt particle precipitation near the equator", Gordon Conference, New Hampshire, 15-16 October, 1990.

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.

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.

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.

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.

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.

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.

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.

IV. Books/Manuscript Authored

2011 *Biosphere III* (manuscript)
1989 *An International Guide to Crescent Sighting*
1989 *Micro-level Climate Change in Northwest Bangladesh*

V. News Media Article

1989-10 More than 60 articles on earth, water, environment, climate, space, and lunar astronomy, and published in English and Bengali in *the Independent, the Daily Star, NFB (an internet daily), the Pine Bluff Commercial, the Arkansas Democrat, the Daily Ittefaque, the Daily Inqilab, the Daily Sangram, the Daily Janakantha, the Daily Sonar Desh, the Weekly Holiday, the Weekly Thikana, the Weekly Bangla Patrika, the Weekly Prabashi, the Weekly Bangla Barta, bdesh@egroups.com, shetubondhon@egroups.com, and nabic-L@egroups.com.*

VI. Funded Research Projects (PI in all of those except where marked by "Co-PI")

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 Microlevel Climate Change in the Ganges Basin", funded by NIH, $8,700.00

1997-98 "Investigation of Microlevel 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

VII. Selected Minigrants

2010 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, Texas

1992 From NATO to attend NATO Advanced Workshop on global methane cycle, Portland, Oregon.

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

VIII. Research Associates Supervised

1998 S. Jahan, S. Jameel, and K. Rashid on climate change and groundwater contamination projects

1989-90 Dr. A. Karim in the space physics on the study of global zones of particle precipitation project

IX. Selected Domestic and International Collaborations

IX. A. Space Physics

1989-92 Principal investigator in the group - 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.

IX. B. Water & Environmental Sciences

2007 - Collaborating with Crowley County Community College's International Center, Kansas, on cleaning drinking water of arsenic contaminant to provide purified water for the arsenic-affected people of the world

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

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 System Research, Austria

X. Selected Awards/Honors/Recognitions

2010 Silver Lapel Pin from American Geophysical Union for achieving consecutive 25 years of membership

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

1989 **New Comer Award from the University of Arkansas at Pine Bluff for outstanding performance in research and other scholarly activities**

1986 A NATO fellowship for the NATO Advanced Study Institute in Genesis and Propagation of Cosmic Rays, Erice, Sicily, Italy

1986 A scholarship from the Vatican City Observatory for the First Summer School in Observational Astronomy and Astrophysics, Papal Summer Residence, (**one of eighteen participants selected globally**)

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.

XI. Academic Achievements

1996 Full Professor of Space, Earth and Environmental Sciences, University of Arkansas at Pine Bluff
1994- Tenured Faculty
1992- Graduate Faculty
1992-95 Associate Professor of Space, Earth and Environmental Sciences, University of Arkansas at Pine Bluff
1988-90 Assistant Professor of Space, Earth and Environmental Sciences, University of Arkansas at Pine Bluff

2000 - Adjunct Professor, Department of Economics, University of Arkansas at Pine Bluff

XII. Courses Offered

1975-2010 Physical Science, Earth Science, Astronomy, Environmental Science, Energy Conversion, College Physics, University Physics, Electronics, Space Physics, Astrophysics, Classical & Analytical Mechanics, Electromagnetic Theory, Optics, Modern Physics, Mathematical Physics, Statistics, Quantum Mechanics, Acoustics, Thermodynamics, Statistical Mechanics, Nuclear Physics, Nuclear Reactor Physics, Solid State Physics, Environmental Science & Engineering, and Lab courses

XIII. Courses Developed

1990-2010 Environmental Science and Engineering, Astronomy, Space Physics, Nuclear Physics, Astrophysics, and Quantum Mechanics

XIV. Reviewer

Environmental science textbooks
Article for proceedings
Environmental Justice
Indian Journal of Radio and Space Physics

XV. Selected Featuring

2010 *The Weekly Thikana*, New York, USA, July 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

XVI. Professional Affiliations

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

XVII. Advisor to International Organizations

1994 - International Water Rights Watch (An International Water Rights Environmental Watch Group)
1992 - South Asia Watch, Inc. (Human Rights Watch Group)

1990 - Institute of Allergy and Chemical Immunology of Bangladesh (Environmental Diseases Center)

XVIII. Outreach/Community Activities

(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 International Paper Mill Stakeholder Group for Reduction of High Volume and Low Concentration Pollutants

XIX Education

1988 Ph. D. Louisiana State University, Baton Rouge, Louisiana, USA
Major Field: Space Physics
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 Field: 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*

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

Graduate Courses at LSU, AUB, and RU: Electricity & Magnetism, Mathematical Physics, Quantum Mechanics, Classical Mechanics, Statistical Mechanics, Elementary Particle Physics, Nuclear Physics, Solid State Physics, Nuclear Radiation Detection Instruments, Electronics, Reactor Physics, Cosmic Ray Astrophysics,

Stellar Astronomy, Galactic Astronomy, Laser Physics, Group Theory, Advanced Lab

Undergraduate Courses at RU. Particle Dynamics, Properties of Matter, Optics, Thermodynamics, Statistical Mechanics, Classical Mechanics, Acoustics, Electricity and Magnetism, Relativity, Atomic Physics, Nuclear Physics, Elementary Particle Physics, Electronics, Mathematical Physics, Quantum Mechanics, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Modern Algebra, Differential Calculus, Integral Calculus, Vector Calculus, Ordinary and Partial Differential Equations, Tensor Calculus, Statistics, and Chemistry Labs and Physics Labs.

XX. Hobbies

Gardening, swimming, writing, and troubleshooting electronic equipment