



”PROGRAMS AT APJAK STEM EDUCATION AND RESEARCH CENTER OF OSU-AMU”

SULTANA N. NAHAR

Astronomy, Ohio State University, Columbus, Ohio, USA

- Co-founder and Co-Director (OSU): Indo-US APJ Abdul Kalam

STEM ER Center of OSU-AMU

- Founder: International Society of Muslim Women in Science

18th Annual Convention of the FAAA



**Federation of Aligarh
Alumni Associations**

Double Tree, 1075 Holcomb Bridge Rd, Roswell, Georgia 30076

July 26 - 28, 2019

Support:



THE OHIO STATE UNIVERSITY

Connection to AMU: **Adjunct Professor of Physics, AMU**



- Profession: Atomic Astrophysicist at OSU
- Co-author of the textbook "Atomic Astrophysics and Spectroscopy" (A.K. Pradhan and S.N. Nahar, Cambridge University press, 2011)
- **Teach a research based course and computational workshop at AMU**

Connection to AMU: **Recognition Programs at AMU**

- Poor representation in science by developing countries, particularly by Muslims, directed me to promote STEM education and research since 1995
- Knowledge is a necessity in Islam, it empowers mind, brings advances
- Recognition brings positive impact toward advances via
 - Happiness - it is our inherent nature to be pleased when our effort is appreciated
 - Inspiration to achieve the best
 - Confidence in ones ability
 - Brings support for the work by other organizations
 - Raises the bar of excellence
- Started recognition program at AMU in 2011.
 - Have established the program in the Departments of **Physics, Mathematics, Zoology, and Microbiology**
 - Introduced Astronomy course and provided the books
 - Brought AMU Physics members to American Physical Society (APS) membership with many benefits at no cost
 - Wrote news articles about AMU in APS newsletters

Recognition program: PHYSICS Department. AMU 2011



- After working with the Physics Department in 2011, I needed to visit AMU **but did not know Urdu or Aligarh Tahjib** Dr. Nasreen Haque of Intelage Inc of Atlanta connected me to Hasan Kamal who made an extra trip to AMU for me. He solved those and some other issues

OSU RECOGNITION FOR HASAN KAMAL, 2016



- Hasan Kamal has continued to work with us for OSU-AMU projects. At the OSU-AMU International Conference on STEM Education and Research (STEMCON-16) held in 2016 he was recognized along with 5 other AMU officials by the OSU Vice Provost Prof. Brustein.

PHYSICS: RECOGNITION PROGRAM CEREMONY



- 3-4 faculty members and 4 students are recognized for excellence in research and academic performance - sponsored by Sultana Nahar

MATHEMATICS: RECOGNITION PROGRAM CEREMONY



- 1-2 faculty members and 1-2 Ph.D. graduates are recognized initiated by Nahar

ZOOLOGY: RECOGNITION PROGRAM



- 1-2 faculty members for best research and teaching, and 1-2 Ph.D. graduates are recognized for best Ph.D. thesis by recognition program sponsored by Sultana Nahar

MICROBIOLOGY: DEPARTMENT MEMBERS



- 1-2 faculty members and 1-2 Ph.D. graduates are to be recognized - sponsored by Sultana Nahar. Picture: with Chair and other members of the Department

OSU-AMU: STEM Faculty Training Project - Director: Pradhan, Co-director (Research): Nahar, Co-director (STEM Education): Irving - Batch 1 Fellows



- With OSU advisors after completion of MED-STEM
- Research at OSU formed a chapter in Ph.D. thesis

OSU-AMU: OSU Co-sponsored & Co-organized ALI-GARH NANO-IV International 2014 Conference
- OSU Conveners: Pradhan, Nahar

THE OHIO STATE UNIVERSITY

ALIGARH MUSLIM UNIVERSITY ALIGARH

**Inauguration of
ALIGARH NANO-IV INTERNATIONAL 2014**
International Conference on Nanoscience & Nanotechnology

Co-Sponsored by:
OSU (USA) - AMU STEM EDUCATION & RESEARCH CENTER
Under Indo-US Collaborative Obama Singh 21st century knowledge initiative awards
DRDO, DST -Nano Mission, CSIR-CEERI, Pilani, CST-U.P., UGC (SAP - DRS I), TEQIP-II, ICMR, Maewin India

Date: March 8, 2014
Time: 9:00 A.M.

Venue:
KENNEDY HALL AUDITORIUM
Centre of Excellence in Materials Science (Nanomaterials), CST (UP)
Department of Applied Physics
Zakir Husain College of Engineering & Technology

DRDO **DST** **CSIR-CEERI** **UGC** **ICMR** **Macwin**
Growing Together

OSU-AMU: OSU held the first International Conference on STEM ER (STEMCON-16) jointly with Aligarh Nano - V International, 2016 Support: USIEF, MHRD, Nahar prizes



The Aligarh Muslim University, Aligarh, India

announces International Conference On



Nanotechnology (ALIGARH NANO-V) and STEM-Education and Research (STEM CON-16) (March 12-15, 2016)

In partnership with The Ohio State University (OSU) in Ohio, USA and CEERI Pilani, the Aligarh Muslim University (AMU) is organizing an International Conference on Nanotechnology and STEM-ER (Science, Technology, Engineering and Mathematics-Education and Research) during March 12-15, 2016. More than fifty foreign delegates are expected to attend. The first two days (March 12 & 13, 2016) would be devoted to Nanotechnology and its applications, the next two days (March 14 & 15, 2016) to on recent advances and methods to improve the teaching and research standards in STEM subjects in universities in India and other developing countries.

In a pilot project (STEM-ER) funded by the US-India Education Foundation (USIEF) under the title '21st Century Knowledge Initiative', OSU and AMU have started a two-year dual PhD and Masters of Education (Med-STEM) degree programs. Four AMU PhD research students, selected under a very strict criteria have already completed courses of the first academic year at OSU and returned to AMU to continue the second year for the dual PhD+Med (STEM) degrees. The aim of the project is to create world class faculty for teaching and research at Indian Universities.

The Centre of Excellence in Materials Science (Nanomaterials) at AMU supported by Council of Science and Technology (CST) Uttar Pradesh is a leading national centre for Nanotechnology research with several patents (published) and awards to its credit. The Centre successfully organized four conferences in past with active participation of foreign and national experts on Nanotechnology.

Under Patronage

Lt. Gen. Zameer Uddin Shah
Vice Chancellor, AMU

Brigd. S. Ahmed Ali
Pro-Vice Chancellor, AMU

Conference Themes

- NANOTECHNOLOGY**
- ✓ Nanotechnology for defence applications
 - ✓ Synthesis and characterization techniques of nanomaterials
 - ✓ Nanotechnology for harnessing energy
 - ✓ Nanomaterials in food, agriculture and water purification
 - ✓ Nanoparticles for engineering materials
 - ✓ Magnetic nanoparticles and applications
 - ✓ Nanoparticles based drug targeting
 - ✓ Nanomedicine and health-care
 - ✓ Nanoelectronics and nanosensors
 - ✓ Bionanotechnology
 - ✓ Nanocosmetics and house hold products
 - ✓ Graphene and its nanocomposites
 - ✓ Organic and inorganic nanocomposites

- STEM-ER**
- ✓ US-India STEM Faculty Training Project
 - ✓ STEM Teaching at Indian Universities
 - ✓ Indo-US Universities Consortium for STEM-ER
 - ✓ International STEM-ER Initiatives
 - ✓ Digital STEM education

For more details please visit:

Websites:

www.aligarhnano.com

[www.astronomy.ohio-](http://www.astronomy.ohio-state.edu/~pradhan/Stem/main.html)

[state.edu/~pradhan/Stem/main.html](http://www.astronomy.ohio-state.edu/~pradhan/Stem/main.html)

Contact us at: aligarhnano@gmail.com

Support: "US-India Education Foundation, AMU"

Prizes: Best Oral and BestPoster presentations

Conference Chairs

Nanotechnology (ALIGARH NANO-V)

- Prof. Alim H. Naqvi (Convener)
E-mail: alimhnaqvi@yahoo.com, Mobile No.:+91-9219505388
- Prof. Ameer Azam (Convener and Chairperson Applied Physics Deptt.)
E-mail: azam2288@gmail.com, Mobile No.:+91- 9319788742
- Prof. Parvez Qamar Rizvi (Co-convener)
E-mail: pqrizvi@rediffmail.com, Mobile No.:+91-9412328718
- Prof. Jamil Akhtar (Co-convener)
E-mail: jamil@ceeri.ernet.in, Mobile No.:+91-9829075297
- Dr. Shakeel Khan (Co-convener)
E-mail: skhanapd@gmail.com, Mobile No.:+91-9358210751
- Dr. M. Wasi Khan (Organizing Secretary)
E-mail: wasiamu@gmail.com, Mobile No.:+91-9897532717
- Dr. S.S.Z. Ashraf (Joint Organizing Secretary)
E-mail: ssz_ashraf@rediffmail.com, Mobile No.:+91-8171289819
- Dr. Braj Raj Singh (Joint Organizing Secretary)
E-mail: brajviro@gmail.com, MobileNo.:+91-7417311153
- Dr. Azra Parveen (Joint Organizing Secretary)
E-mail: azrap2001@gmail.com
- Dr. S. Asad Ali (Joint Organizing Secretary)
E-mail: asadsyyed@gmail.com, Mobile No.:+91-9412537464
- Dr. Zafrul Hasan (Joint Organizing Secretary)
E-mail: zafaramu@gmail.com, Mobile No.:+91-9456096093

STEM-ER (STEMCON-16)

- Prof. Anil Pradhan, Ohio State University, USA (Convener)
E-mail: pradhan.1@osu.edu, Mobile No.: 1-614-292-5850
- Prof. Nesar Ahmad, AMU, Aligarh (Convener)
E-mail: nesar.ahmad@gmail.com, Mobile No.:+91- 9411878942
- Prof. Sultana N. Nahar, Ohio State University, USA (Co-convener)
E-mail: nahar.1@osu.edu, Mobile No.: 1-614-292-1888
- Prof. Karen Irving, Ohio State University, USA (Co-convener)
E-mail: irving.8@osu.edu, Mobile.: 1-614-292- 1229
- Prof. Rahimullah Khan, AMU, Aligarh (Co-convener)
E-mail: rahimullah@rediffmail.com, Mobile No.:+91-09319683858
- Prof. Altaf Wani, Ohio State University, USA (Co-convener)
E-mail: wani.2@osu.edu, Mobile No: 1-614-292-9015
- Prof. Asad Ullah Khan, AMU, Aligarh (Organizing Secretary)
E-mail: asad.k@rediffmail.com, Mobile No.:+91- 9837021912
- Mr. Hasan Kamal, USA (Joint Organizing Secretary)
E-mail: hasankamalusa@gmail.com,
- Dr. P. Tripathi, AMU, Aligarh (Joint Organizing Secretary)
E-mail: ptrip71@yahoo.com, Mobile No.: +91-8791472602
- Dr. M. Mohsin Khan, AMU, Aligarh (Joint Organizing Secretary)
E-mail: khanmohsinin@gmail.com, Mobile No.:+91-9634367427

Key Dates

Last date of Abstract Submission : January 1, 2016
Acceptance Notification : January 15, 2016
Last date for early bird registration : February 1, 2016
Dates of Conference : March 12 - 15, 2016

Registration Fees

Type of Visitor	Indian Delegates	Indian Delegates	Foreign Delegates	Foreign Delegates
	Early Bird (Upto Feb. 1, 2016)	Late Entry (After Feb. 1, 2016)	Early Bird (Upto Feb. 1, 2016)	Late Entry (After Feb. 1, 2016)
Students	Rs. 2000/-	Rs. 2500/-	US\$ 150/-	US\$ 200/-
Academia / R&D Institution	Rs. 4000/-	Rs. 5000/-	US\$ 200/-	US\$ 250/-
Industry	Rs. 10000/-	Rs. 11000/-	US\$ 250 /-	US\$ 350/-



OSU-AMU: Aligarh Nano - V and STEMCON-16, OSU conveners: Nahar, Pradhan



- A team of OSU members traveled to India for STEMCON-16
- Formed a consortium of Indo-US universities

OSU-AMU: Obama-Singh Project Symposium, 2017 STEM ER Center was formalized with legal and financial issues



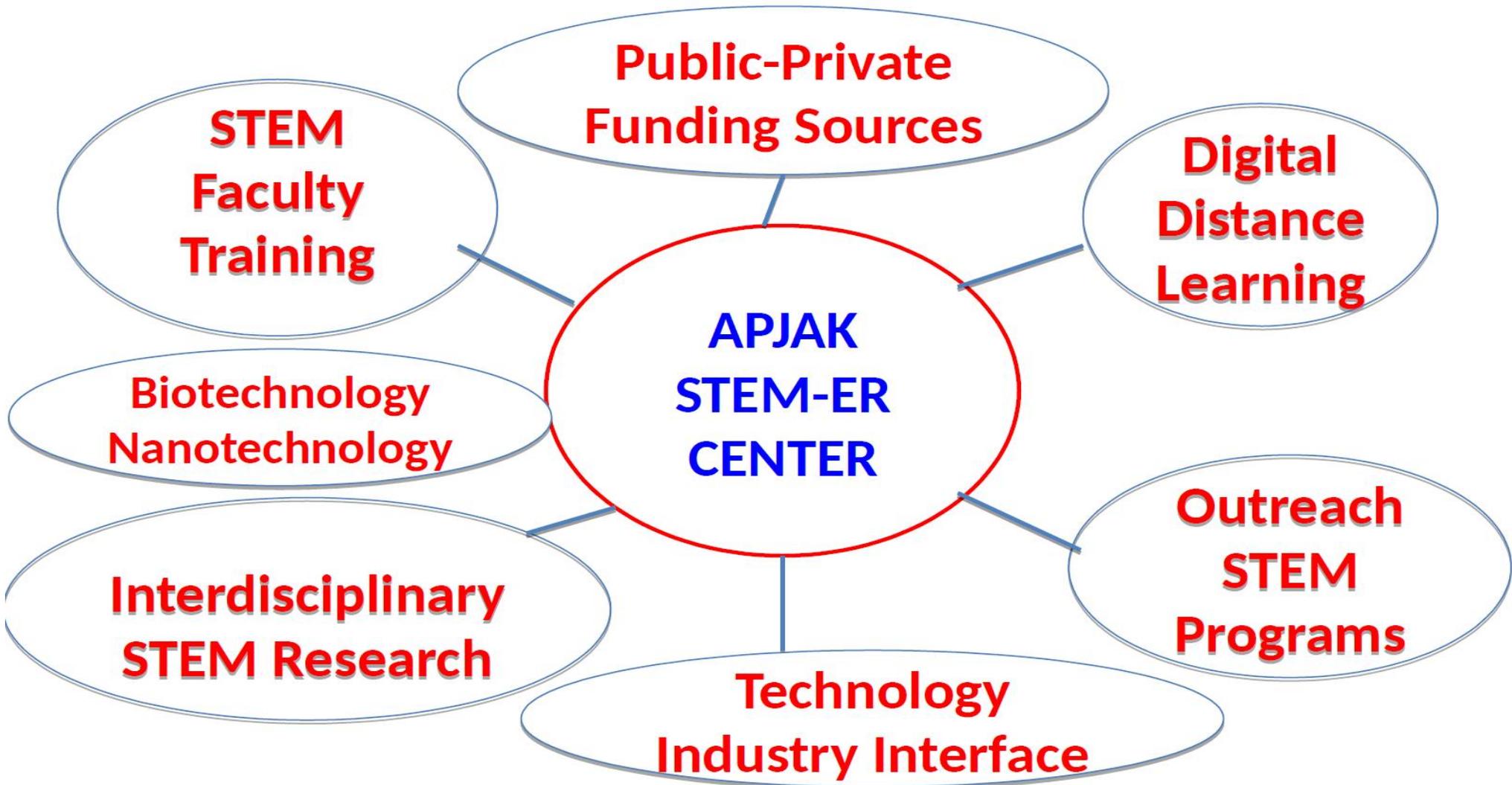
- Appointed: AMU Director: Prof. Tauheed Ahmed (Physics Chair), Co-Director: Prof. Farukh Arjmand (Chemistry), Members: 8 OSU-AMU Fellows, several AMU advisors - Dedicated space was given

OSU-AMU: Indo-US APJ Abul Kalam STEM ER Center
(named by Anil Pradhan), - Smart room, furnished offices,
lab space, Computer lab. Center team at the entrance



APJ Abdul Kalam (APJAK)

Indo-US Center For STEM Education and Research



OSU-AMU: APJAK STEM ER Center Activities, - Women in STEM Roadshow of US Department of State (PI: Nahar)



- Objective: Encourage and help minority and disadvantaged female college students to pursue STEM disciplines and higher studies in the US.
- Held 9 workshops at **Aligarh (pic)**, Delhi, Hyderabad, Kolkata, Kurnool, Patna. Center: the Indian base and monitor of 1 year.

OSU-AMU: APJAK STEM ER Center Activities, - B.Sc. AND M.Sc. RESEARCH EXPERIENCE PROJECTS 2019



- Nahar initiated the program in 2018. The first batch of 26 students (Physical Sciences, Life Sciences, Engineering) with 25 faculty members have just completed their projects. Some presented their research at national

Bangladesh: Vice Chancellors

- Prof. Md. Akhtaruzzaman, Dhaka University,
- Prof. Mizanur Rahman, Jagannath University



”ALIG” (Islamic history)



”ALIG” (Business Ad)