



THE OHIO STATE UNIVERSITY



## **Prof. Sultana Nurun Nahar** (US Citizen)

Fellow of APS, BPS, BAS, TWAS-UNESCO;

APS Woman Physicist of the Month

Dept of Astronomy, The Ohio State University. Columbus, OH 43210, USA

Tel: (614)292-1888 (O), (380)867-4277 (M), 614-456-7199 (H), Fax: (614)292-2928

Email: nahar.1@osu.edu, Web: <http://www-astronomy.ohio-state.edu/nahar.1>

ORCID:<https://orcid.org/0000-0002-8750-3836>

google scholar: <https://scholar.google.com/citations?hl=en&user=zSkBe7AAAAAJ>

Founder: Database NORAD-Atomic-Data (<https://norad.astronomy.osu.edu/>)

Textbook: "Atomic Astrophysics and Spectroscopy" (A.K. Pradhan and S.N. Nahar, Cambridge University press, 2011, New York)

Founder: International Society of Muslim Women in Science

### **This CV has several sections:**

- i) Standard Credentials: Positions, Education, Research, Grants, Teaching, Services, p.1**
- ii) International engagement in STEM research and education, p.18**
- iii) AWARDS/ SCHOLARSHIPS/ HONORS /RECOGNITION, p.26**
- iv) Featured in articles/ presentations for scientific contributions, p.38**
- v) Featured in articles/ presentations for STEM education and Research contributions, p.42**
- vi) BIBLIOGRAPHY: vi) Publications in scientific research, p.44**
- vii) Publications in STEM education and research, p.63**
- viii) Invited presentations in science, p.67**
- ix) Invited/Conference presentations in STEM education and research, p.80**
- x) Contributory presentations in scientific conferences, 88**

### **i) Standard Credentials: Positions, Education, Research, Grants, Teaching, Services** **POSITIONS (Current):**

- *Research Professor*, Dept of Astronomy, The Ohio State University, Columbus, Ohio,
- *Co-Director (Research & Chief Liaison)*, Indo-US APJ Abdul Kalam Center for STEM Education and Research of AMU-OSU, 2013 - present
- Adjunct Professor, Department of Physics and Astronomy, Wayne State University, USA, 2024 -
- Adjunct Professor, Department of Physics, Cairo University, Egypt, 2018- present
- Adjunct Professor of UGS-India Scheme, Department of Physics, Aligarh Muslim University, India, 2017 - 2022, continues to Visiting Professor
- Associate Member, Laboratory of Innovation in Science, Technology, Education, Modeling and Management (LISTM), University of Chouaib Doukkali, Morocco, El Jadida, 2018 - present
- Director, Women in STEM Raadshow of US Department of State, 2017-2018, continuing service

### **EDUCATION:**

- Ph.D. (Atomic Theory), 1987, Wayne State University ( WSU), Detroit, Michigan  
Dissertation: "Electron and positron scattering from atoms"
- M.A. (Quantum Optics), 1982, Wayne State University ( WSU), Detroit, Michigan

Thesis: “Nematic Liquid Crystal and Optical Nonlinearity”

- M.Sc. (Theoretical Physics), 1979, University of Dhaka (DU), Bangladesh, Rank: 1st Class 1st

Thesis: “Compton Scattering on Nucleons at Low Energies”

- B.Sc.Hons. (Physics), 1977, University of Dhaka (DU), Bangladesh, Rank: 1st Class 1st  
**Honors at DU:** i) Salekunnesa Award for the Best B.Sc.Hons. Female Student of Dhaka University, ii) 1st Class 1st award, B.Sc.(Hons.), iii) 1st Class 1st award, M.Sc., iv) Merit Scholarship B.Sc.(Hons.), v) Merit Scholarship M.Sc., vi) DU Vice Chancellor recognition for contributions in STEM Education and Research in Bangladesh, vii) Recognition by DU Physics (Research based Lecture course with computational workshops)

**Honors at WSU:** i) Thomas Rumble Graduate Fellowship, ii) Knoller Physics Fellowship, iii) Gustafson Memorial Graduate Teaching Award, iii) Women of Wayne Alumni Headliner Award, iv) WSU Distinguished Alumni Award

## **RESEARCH GRANTS**

- Recipient of 19 grants

- Funding agencies: **DOE, NSF, HST-NASA, NASA, U.S. Department of State, MHRD of Indian Government**

19. **Co-I NSF:** “Solving the solar problem with accurate opacities”, PI: A.K. Pradhan, Grant GR136906, 07/01/2024 - 06/30/2027, \$585,713, 4 mons/yr, 3 years

18. **Women in Physics (WiP) grant of APS:** Faculty Advisor for physics activities of female undergraduate students at Aligarh Muslim University, 08/01/2024-07/31/2025, \$1000

17. **Coordinator: MHRD of Government of India:** “Leadership for Academicians Programme” (LEAP), 2019, \$250 K 09/01/2019 - 02/17/2021

16. **PI: U.S. Department of State:** “Indo-US collaboration: STEM educational and research opportunities for women from minorities and disadvantaged groups” under “Women in STEM Roadshow”, Held nine workshops in Tier-1 and Tier-2 cities in New Delhi, Hyderabad and Kolkata consulate districts and 1 year follow-up, PI: S.N. Nahar, S-IN650-17-GR-0034, 9/30/2017 - 9/30/2018, \$74,871.80

15. **PI: NSF:** “Solving the Nebular Abundances Anomaly: New Features in Photoionization and Recombination”, PI: S.N. Nahar, NSF AST-1312441, 08/15/2013 - 07/31/2020, \$390,247

14. **Co-I: STSCI-NASA:** “Improving UV Continuous Opacities and Model Spectra for Cool Stars”, PI: J. Valenti, Co-Is: N Piskunov, B Edvardsson, A Pradhan, S. Nahar, N Lewis, S Horst, J Moses, Cycle 23 AR, 12/01/15 - 11/30/18, \$36K (total for OSU)

13. **Co-PI: DOE:** “Testing theoretical stellar interior and HED plasma opacities at the Sandia Z”, PI: A.K. Pradhan, Co-PIs: S.N. Nahar, M. Pinsonneault, DOE Office of Fusion Sciences, DE-SC0012331, 09/01/14-08/31/20, \$503K

12. **Co-PI: USIEF:** “The STEM -Faculty Project: Training the Next Generation of STEM faculty at Higher Education Institutes in India”, PI: A.K. Pradhan, W. Haider (Co-I: S.N. Nahar with 7 others), Obama-Singh 21st Century Knowledge Initiative Award, US India Education Foundation, 07/01/13-07/17/2017, \$250,000

11. **PI, NSF:** “Radiative Atomic Processes in Iron-Peak Elements For Non-LTE Astrophysical Models”, PI: S.N. Nahar, AST-1109088, 9/1/11-08/31/2014, \$342,495

10. **Co-I, DOE:** “Laboratory Tests of Stellar Interior Opacity Models”, PI, J.E. Bailey, Sandia National Lab; Co-I/Consultants: A. Pradhan, M. Pinsonneault, C. Iglesias, R. Heeter, J. Abdallah, M. Sherrill, D. Arnett, C. Meakin, W. Eissner, S.N. Nahar, DE-FG52-09NA29580,

09/15/09-09/14/2012, \$396K (total for OSU)

9. **PI, OSU DIVERSITY:** “Collaborative Project on Energy, Health, and Globalization with Egypt”, S.N. Nahar, Diversity and Inclusion, OSU, April 2012, \$1000 (internal from OSU)
8. **PI: NASA:** “Atomic Data for Multi-Wavelength Spectroscopy of Iron in Astrophysical Plasma”, PI: S.N. Nahar, Co-I: C.J. Zeippen, APRA, 07/01/06 - 06/30/08, \$165,000, (recipient OSU)
7. **Co-I, NASA:** “Theoretical X-Ray Atomic Astrophysics and Spectroscopy - The RmaX Network”, A.K. Pradhan, Co-I: S.N. Nahar, ATP, 04/15/02 - 04/14/04, \$150K
6. **Co-I, NASA:** “Atomic Data for Multi-Wavelength Spectral Formation”, PI: A.K. Pradhan, Co-I’s: S.N. Nahar, T.A.A. Sigut, Space Astrophysics and Research Analysis (SARA), 01/01/02 - 12/31/04, \$183,000
5. NSF grant (743042): ”High-Precision Computational Spectroscopy of Fe-Peak 5Elements”, PI: A.K. Pradhan, collaborator S.N. Nahar, 7/1/02 - 6/30/04 (\$85,000/yr, PI: A.K. Pradhan)
4. **Co-I, NASA:** “Atomic Processes In X-ray Astrophysics”, PI: A.K. Pradhan, Co-I: S.N. Nahar, T.W. Kallman, Astrophysical Theory Program (ATP), 05/01/99 - 04/30/02, \$193,000
3. **Co-I, NASA:** “Radiative and Collisional Atomic Data for UV and Optical Astronomy”, PI: A.K. Pradhan, Co-I: S. N. Nahar, NASA (Ultraviolet, Optical, Visible, & Gravitational Astrophysics), 10/01/98 - 09/30/01, \$161K
2. **Co-I, NASA:** “Atomic Database For Astrophysics From The Iron Project”, PI: A.K. Pradhan, Co-I’s: S.N.Nahar, C. Mendoza, T.W. Kallman, C.J.Zeippen, ADP, 01/01/98 - 12/31/00, \$138K
1. **Co-I, NASA:** “A comprehensive opacities/atomic database for the analysis of astrophysical spectra and modeling”, PI: A.K. Pradhan, Co-PI’s: S.N.Nahar, D.Mihalas, I.Hubeny, T.Lanz, S.Voels, M. Van Steenberg and S.Heap, ADP, 06/1/94 - 05/31/97, \$177K
- OSC Computation: 7000 RU, SUG meeting of OSC, December 5, 2015,
- Continuous computational grants from 1990 - present (2024)
- Continuous computational workshop grant for global mentorship, 2013 - present (2025)
- **Travel Grants: 16** (APS 4 times, Climate Change-UN, Conferences in Stellar Atmosphere-Germany, Atomic data-Germany, -Mexico, -Kentucky, ITAMP Harvard-CfA 2 times, IAU GA, Symp - 2 times, Electron-Ion Collisions -Atlanta, ICPEAC, OSU-ODI, OSU Global Gateway-2 times)

### PAST POSITIONS (Long term): 18

18. *Research Scientist*, Astronomy, Ohio State U, Columbus, Ohio, 2003 - 2015
17. *Senior Research Associate*, Astronomy, Ohio State U, Columbus, Ohio, 1993 - 2003
16. *University Postdoctoral Fellow of Mathematical and Physical Sciences*, Ohio State U, Columbus, Ohio, 1990 - 1993
15. OSU Co-Coordinator, Leadership for Academicians Programme (LEAP) of India, 2019 - 2020
14. Director: Women in STEM Roadshow under US Department of state, OSU, 2017 - 2018
13. *Associate Director (Research & Chief Liaison)*, Obama-Singh 21st Century Knowledge Initiative Award Project: “THE STEM-FACULTY PROJECT: Training the Next Generation of STEM Faculty at Higher Education Institutions in India”, OSU, 2013-2017
12. *Visiting Professor*, Cairo University, under the MOA between OSU & Cairo University, Giza, Egypt, 2013 - 2018
11. *Visiting Professor*, Physics Department, Aligarh Muslim University under Obama-Singh STEM Education and Research Project, Aligarh, India, 2013 - 2017

10. Visiting Professor, Physics Dept, University of Kashmir, India, 2014 - 2022
9. Visiting Faculty, Physics Department, Delhi University, Delhi, India, Since 2013 - Feb-March 2016
8. *Visiting Faculty*, Physics Department, Rajshahi University, Bangladesh, 2008 - 2017
7. *Visiting Faculty*, Physics Department, Chittagong University, Bangladesh, 2008 - 2017
6. *Visiting Faculty*, Physics Department, Dhaka University, Bangladesh, 1995 - 2017
5. *Postdoctoral Research Associate* (includes teaching Modern Physics in Spring 1990), Physics and Astronomy, Georgia State U., Atlanta, Jan 1988 - May 1990
4. *Postdoctoral Research Associate*, Wayne State U., Detroit, Michigan, May 1987 - Dec 1987
3. *Thomas Rumble Graduate Fellow*, Physics & Astronomy, Wayne State U, 1984- 1987
2. *Graduate Research Assistant* (AFOSR) Physics & Astronomy, Wayne State U, Summer, 1984-1984
1. *Graduate Teaching Assistant*, Physics and Astronomy, Wayne State U, 1979- 1984

### **PAST POSITIONS (Short term): 19**

19. Organizer of Atomic Data need for Astronomy workshop, Heidelberg, Germany, Oct 2 -7, 2022
18. Adjunct Professor (UGC-India) visit, Aligarh Muslim University, India, Sep 8 -27, 2022
17. Visiting Scientist, Weizmann Institute of Science, Rehovot, Israel, June 17 - 28, 2018
16. International Lecturer, International School of Young Astronomers (ISYA) of IAU, African region. Egypt, March - April, 2018
15. *Visiting Scientist*, NASA Goddard Space Flight Center, December 2017
14. Visiting Professor, Sylhet University of Science and Technology, Bangladesh, 2017
13. Visiting Professor, National Research Institute of Astronomy and Geophysics, Helwan Observatory and Kottamia Telescope, (seminar, collaboration), Egypt, April 2015, October 2016
12. Visiting Professor, King Saud University (seminars, workshop), Riyadh, Saudi Arabia, 2014
11. Visiting Professor, Dammam University (seminars), Dammam, Saudi Arabia, 2014
10. Visiting Professor, Taibah University (seminars), Madina, Saudi Arabia, 2014
9. Visiting Professor, Indian Institute of Astrophysics (research, seminar), Bangalore, India, 2014
8. Visiting Professor, Jain University (seminar, higher education meeting), Bangalore, India, 2014
7. *Visiting Scientist*, NASA Goddard Space Flight Center, October 2012
6. Visiting Professor, United Arab Emirates University (seminars), Al Ain, UAE, 2011
5. *Visiting Scientist*, NASA Goddard Space Flight Center, October 2010
4. *Visiting ITAMP-Scientist*, CFA, Harvard University, August, 2006
3. *Visiting ITAMP-Scientist*, CFA, Harvard University, August, 2005
2. Consultant, Observatoire de Paris, Meudon, France, June 28-July 5, 2005
1. Visiting Scientist, Physics Department, Stuttgart University (research), Germany, 2002

### **RESEARCH AREAS:**

- Atomic Astrophysics: Iron Opacity, Exoplanetary spectroscopy, Kilonovae spectroscopy
- Photoionization - established characteristic features
- Electron-Ion Recombination (developed unified method with Pradhan)
- Photo-Excitation of ions
- Electron Impact Excitation of ions
- Dielectronic Satellite Lines - Extended unified theory for DES lines
- Theoretical Spectroscopy (developed quantum defect based spectroscopy algorithm for the R-matrix method)

- Member: International collaborations, “the Opacity Project” & “the Iron Project” - develop theory to study characteristics & compute high accuracy large scale data for radiative and collisional atomic processes in astrophysical plasma - **”Iron Lady”** for work on iron ions
- Co-leader: Multi-disciplinary (Astronomy, Physics, Chemistry, Pathology, Radiation Oncology) Biomedical Nanoscience program “Resonant Nano-Plasma Theranostics” (RNPT) for cancer treatment using x-rays - RNPT is one of the 4 high-impact contributions of astronomy along with GPS, wireless internet, laser eye surgery (**Astronomy Magazine**, May 2012)

## **PUBLICATIONS:**

### **1. BOOKS, Magazines, Newsletters**

- **Graduate Textbook: “Atomic Astrophysics and Spectroscopy”** By: A.K. Pradhan, S.N. Nahar (Cambridge Univ Press, 2011) (Bridging Physics & Astronomy)

#### **Working on the 2nd addition of the book**

- Editor, Special issue book: **”Photoionization of atoms”** of journal *Atoms* during 2020-2024 (publisher MDPI, Basel, Switzerland, 2024)
- Chief Editor, Designer, and Contributor, annual e-magazine **”An-Nisa”** for women in STEM, published under Indo-US STEM Education and Research Center of OSU-Aligarh Muslim University, India (since 2022: 3 volumes, <https://www.astronomy.ohio-state.edu/nahar.1/indousstemerc.html#publications>)
- Chief Editor of annual **Newsletter of ISMWS** (International Society of Muslim Women in Science) for about 450 members from 32 countries, since 2011 (published at Ohio State University, USA, <https://www.astronomy.ohio-state.edu/nahar.1/ismws.html#news>)

### **2. JOURNAL PUBLICATIONS ON SCIENTIFIC RESEARCH: ~ 201**

- Refereed Journals: ~ 145,
- Book Chapters - 6
- Invited refereed reviews: - 20,
- Proceedings: - 20,
- Invited articles - 5
- Technical Reports - 5
- In Progress: several in preparation
- Dedication articles for scientists: 5
- **Featured in articles for scientific work: 35**

Full Bibliography: <http://www.astronomy.ohio-state.edu/nahar.1/scires-publications.html>

### **3. PUBLICATIONS IN STEM RESEARCH & EDUCATION, OUTREACH: 44**

- Book chapter “World class STEM faculty: An international dual degree program”: 1
- Long report (“Women in STEM Roadshow” for US Department of State, ISMWS for An-Nisa 2022): 2
- News articles in newsletters of APS, FIP, CSWP, OSU, A-Nisa: 31
- Publications at Knowledge Bank for OSU Office of Outreach and Engagement: 10
- **Featured in articles for STEM Education and Research: 11**

Full Bibliography: <http://www.astronomy.ohio-state.edu/nahar.1/stemer-publications.html>

### **RESEARCH and STEM ER INTERVIEWS by TV & NEWSPAPER: 47**

(On research: 27, on STEM Education and Research: 20)

Voice of America (VOA) Bangla, BBC Bangla, Pratham Alo, Noya Diganta (Bangladesh), Indian



newspapers (Daily Jagran, Avadnama, India Times), 22. India Times Magazine, 21. OSU newspaper onCampus, 20. Wayne Alumni magazine, 19. APS on branding APS, 18. APS on awards, 17. Egyptian National TV NILE, 16. Astronomy Magazine, 15. CBS-SmartPlanet Fox news, 14. OSU Research News, 13. The Daily, 12. Columbus Dispatch, 11. Anandbazzar Patrika (India), 10., N-TV (Bangladesh), 9. S-TV (Bengali NY), 8. Thikana (Bengali, NY), 7. UAE University (Muslim Scientist), 6 on Cancer Discovery, Prathom Alo (Bangladesh), etc

## **1. SCIENTIFIC PRESENTATIONS: 347+**

### **i) Invited, National/International: 162**

- Scientific: Keynote Speeches/Speaker, Honorary & Public Lectures: 57
- Invited Conference/university wide presentations: 48
- Seminars: 57

### **ii) Contributory presentations: 185+**

Details at: <http://www.astronomy.ohio-state.edu/nahar.1/scires-presentations.html>

## **2. STEM Education & Research Presentations (Invited, National/International): 91**

- STEM Research & Education Keynote, Honorary & Public Lectures: 61
- Invited STEM ER Conference presentations: 30

Details at: <http://www.astronomy.ohio-state.edu/nahar.1/stemer-presentations.html>

• **Presentation Locations (Scientific & STEM ER):** APS in various places in the US and Canada, ASOS-Berkeley, Workshop-Harvard, NASA, APP-Nevada, Notre Dame, North Dakota, IAU in Australia, Bangladesh, Canada, Egypt, England, France, Germany, India, Israel, Italy, Mexico, Pakistan, Palestine, Saudi Arabia, UAE etc

## **On-line DATABASE: NORAD-ATOMIC DATA ( about 250 atomic systems):**

**Contents:** - Energies, - Oscillator Strengths, - Photoionization Cross Sections, - Electron-Ion Recombination rates, - Lifetimes, - Spectra, - Excitation Collision Strengths and rates, etc (by Nahar et al) of atoms & ions

New: Experimental Data: Energies, lines, photoionization cross sections

**Additional data to be included (from publications): 20 ions**

URL: <https://norad.astronomy.osu.edu/>

### **• NORAD usage metrics:**

Total accesses = 309,515, Total monthly unique requester= 63,313 (1 year and 8 months: Dec 2023 - Jul 2025)

## **RESEARCH GUIDANCE & CO-SUPERVISION: STUDENTS/ POSTDOCS/ RESEARCHERS**

- Deliver globally online researching training course "*Atomic Astrophysics and Spectroscopy with Computational workshops on R-matrix and SUPERSTRUCTURE codes*" (in partnership with Ohio Supercomputer Center):
- Taught and trained research: Over a thousand of researchers from 31 countries since 2013
- Individual supervision:
  - Postdoctoral Fellows at OSU: Dr. Chiranjib Sur, Dr. Rahla Naghma
  - Individual Research Training (non-degree, outside OSU): Research group of Prof. A.N. Tripathi (University of Roorkee-IIT, India), Prof. Akeel Hashem (Bashra U, Iraq), Prof. Gultekin Celik (Selsuk U, Turkey), Mr. Mahmudul Hasan (Rajshahi U, Bangladesh), Prof. Sule Ates (Selsuk U,

Turkey), Prof. Tahmina Ferdous (Jahangirnagar U, Bangladesh), Mr. Vahid Reza Adineh (Azad Islamic U, Iran), Prof. M. Ghosain (Islamic University of Gaza, Palestine), Dr. Arun Goyal (Delhi U, India), Dr. Zher Samak (Al-Aqsa University, Palestine)

- Co-supervision of Ph.D. students (OSU & OSU affiliated): Dr. Hala, Dr. Bilal Shafique, Dr. Mayank Dimri (Delhi University), Dr. Manuel Bautista, Dr. Lianshui Zhao, Dr. Sara Lim, Dr. M. Westphal, Dr. G.X. Chen, Dr. M. Montenegro, Dr. Ramadan Semida (Beni-Suef U, Egypt)

- **Overseeing Research Advisor of Ph.D. students under OSU Obama-Singh STEM Faculty Training Project, 2013 - 2017: 8**

Dr. Asim Rizvi (Radiology), Malik Azeem (Molecular Genetics), Dr. Nida Rehmani (Radiology), Dr. Hala (Astrophysics), Dr. Pervez Alam (Nanotechnology), Dr. Swaleha Naseem (Physics), Dr. Taqseer Khan (Mathematics). Dr. Sabiha Parveen (Chemistry)

- M.Sc: Yesin Gokce, Mehedi Faysal (Dhaka University), J. Peng, Luo Yi, Habib Abdurahman Arebu (Addis Ababa U, Ethiopia)

- Undergraduates: Ethan Palay, Michael Dance, Michael Rothman, Kevin Hoy, Jonathan Begeny, Mitchell Button, Jackson Cook, Vidit Bhandari (Denison University)

- Individual High School Research Training: Azalea Shillington (Sycamore High School, Cincinnati, USA), Shivam Parikh (Olentangy Orange High School, USA), Under Falak Research Foundation in Saudi Arabia:

Dana Mohammed H. Bashoaib (Manarat Jeddah International School, Jeddah), Deema AlOwais (Misk Schools, Riyadh)

- Faculty Advisor of OSU Student Associations (continuing to present):

i) International Society of Muslim Women in Science at Ohio State (founder), 2017-present

ii) Bangladesh Student Association, 2012-present

iii) Pakistani American Students Association, 2020-present

**Founder and overseeing supervisor of Research Programs:**

i) REU (Research Experience for Undergraduates) at Indo-US STEM Education and Research Center of OSU and Aligarh Muslim University. 1st in an Indian University, 2018 -

ii) Promotional Research Program, supports and supervises any research project in STEM, Indo-US STEM Education and Research Center, 2024

iii) Established research program in Bangladesh, Egypt, India, Jordan, Pakistan, Palestine, USA

**Recognition for research training:**

- APS newsletter published as **Front page article**, "International Teaching Can Transform Physics", describing the global online teaching and research training course and the impact, 2022

- **"Outstanding Research Mentor Award"**, Ohio State University, 2012

- **"Shield of Cairo University Vice President of Research"**, Vice President of Research and Graduate Studies, Egypt, 2012

- **"Shield of Cairo University Dean of Academic Affairs"** (3 times), Dean of Faculty of Science, Cairo University, Egypt, 2013, 2015, 2016

- **"Shield of Dhaka University"**, VC on behalf of Physics Department, University of Dhaka, Bangladesh, 2017

- **"Certificate of Appreciation" (in Arabic)** for a semester long mentoring advising of two of 14 best school students in a countrywide competition, Falak Space Research Foundation, Saudi Arabia, Feb 2025 (English) "The Falak Astronomy Society for Space Sciences and Research extends its gratitude and appreciation to

Professor Sultana Nahar

for her dedicated efforts and distinguished work as a volunteer advisor in the Falak Research Program. Her contributions have had a profound impact on achieving the organization's goals. We pray that her efforts are crowned with success and wish her continued excellence and guidance. We pray that her efforts are crowned with success and wish her continued excellence and guidance."

**THESIS EXAMINER: PH.D., MASTER'S, UNDERGRAD:**

Ph.D. = 37 (Egypt, India, Pakistan, USA)

M.Sc.= 6 (Egypt)

B.Sc. = 4 (as an advisor, OSU)

**DEVELOPMENT OF STEM EDUCATION AND RESEARCH CURRICULUM: 5:**

5. Developed a research based atomic astrophysics course with lectures and computational workshops on atomic structure and R-matrix codes which partner with Ohio Supercomputer Center (provides certificates) - being delivered internationally in-person since 2013 and virtually to various universities over 30 countries:
4. Developed new Curriculum at OSU for MEd in STEM degree for Indian graduate students under Obama-Singh Knowledge Initiative award (with A.K. Pradhan, K. Irving), 2013 (published as Chap 9: "World class STEM faculty: An international dual degree program", K.E. Irving, A.K. Pradhan, S.N. Nahar, in "Recruiting, preparing, and retaining STEM teachers for a global generation", p.217-238 (Editors: J. Leonard, A. Burrows, & R. Kitchen, Brill Sense, Boston, 2019) - The first batch of Indian students graduated in 2016
3. Introduced, developed and sponsored a new STEM Research Program, Research Experience for Undergraduates (REU), for B.Sc. students, who do not have the scope for any experience under UGC curriculum in India, at the Indo-US STEM Education and Research Center of OSU-AMU at Aligarh Muslim University in 2018 and formalized in 2021 - the first batch graduated in September 2019, 3rd batch in session in 2024
2. Developed a STEM course for undergraduate female students for choosing STEM fields and pursue higher education in the USA (under US Department of State grant for Women in STEM Roadshow), 9 workshops in India, 2018-2019
1. Developed teaching and research programs under a recognition program in many universities and institutions in developing countries

**Teaching & Training: TEACHING & GLOBAL RESEARCH TRAINING COURSE "ATOMIC ASTROPHYSICS AND SPECTROSCOPY WITH COMPUTATIONAL WORKSHOPS ON SUPERSTRUCTURE AND THE R-MATRIX CODES" (with certificates): 31**

Participating countries: Australia (1), Bangladesh (2), Egypt (3), Ethiopia (4), India (5), Iran (6), Iraq (7), Jordan (8), Mexico (9), Morocco (10), Pakistan (11), Palestine (12), Saudi Arabia (13), Senegal (14), Syria (15), Turkey (17), United Arab Emirates (18), USA (19), Germany (20), Spain (21), Belgium (22), Czech Republic (23), Sweden (24), Portugal (25), Ghana (26), Madagascar (27), Nigeria (28), Rwanda (29), Sudan (30), Tanzania (31)

35. **OSU Astronomy 2024:** "The Sun" lecture at two undergraduate courses: i) Astronomy 2140 - Planets and the Solar System, ii) Astronomy 2141 - Life in the Universe, November 19-20, Fall 2024 (Lecturer of the courses: Prof. Anil Pradhan)

34. **Global 2024:** "Atomic and Molecular Astrophysics and Spectroscopy with computational



workshops on R-matrix and SUPERSTRUCTURE codes I", Global participation from various universities in 11 countries (Australia, Bangladesh, India, Jordan, Mexico, Pakistan, Palestine, Saudi Arabia, Senegal, Syria, USA) on zoom organized under the Indo-US STEM Education and Research Center of OSU-Aligarh Muslim University, (60 participants), May 4 - 30, 2024

33. **Bangladesh, IAU 2024:** Lecturer, 16th IAU-Abdul Jabbar Astronomy Workshop 2024, organized by National Outreach Coordinator and Sponsored by IAU, "Stars", "The Sun", Dhaka, May 22-24, 2024, "Black Holes", Rajshahi, July 3-5, 2024

32. **OSU Astronomy 2024:** "The Sun" lecture at two undergraduate courses: i) Astronomy 2140 - Planets and the Solar System, ii) Astronomy 2141 - Life in the Universe, April 17-18, Spring 2024 (Lecturer of the courses: Prof. Anil Pradhan)

31. **Bangladesh, IAU 2023:** "Stars and the Sun" lecturer of Bibha All-Girls Astronomy Workshop 2023, organized by National Outreach Coordinator and Sponsored by IAU, Mar 3-4, 2023

30. **Global 2022:** "Hands on session: Calculating your own atomic data with SUPERSTRUCTURE" by Sultana N. Nahar, International participants of "Investigating the roots: How our perception of the Milky Way system is shaped by our knowledge of atomic data products - Atomic Data Workshop", University of Heidelberg, Germany (29 registrations from Germany, Spain, Portugal, Belgium, Czech Republic, Sweden, India, USA) Oct 3-8, 2022

29. **India 2022:** "Atomic Astrophysics and Spectroscopy with computational workshops on SUPERSTRUCTURE", S. N. Nahar, Physics Department, Aligarh Muslim University, India, Sep 13 - 25, 2022 (162 registered)

28. **Global 2022:** "Atomic Astrophysics and Spectroscopy with computational workshops on the SUPERSTRUCTURE and R-matrix codes II", Global participation from various universities in 11 countries (Bangladesh, Egypt, India, Iraq, Mexico, Morocco, Pakistan, Palestine, Saudi Arabia, United Arab Emirates, USA) on zoom organized under the Indo-US STEM Education and Research Center of OSU-Aligarh Muslim University, (62 participants), Jun 18 - Jul 11, 2022

27. **Bangladesh, IAU 2022:** On "Stars", lecturer of Bibha All-Girls Astronomy 2022, held by National Outreach Coordinator of IAU and Sponsored by IAU, Feb 20-22, 2022

26. **OSU USA 2021 - 2022:** "Atomic Radiative Processes", Research lecture course, Astronomy Dept, OSU, 2021-2022

25. **Global 2021:** "Atomic Astrophysics and Spectroscopy with computational workshops on the SUPERSTRUCTURE and R-matrix codes", Global participation from various universities in 11 countries (Bangladesh, Egypt, Ethiopia, India, Mexico, Morocco, Pakistan, Palestine, Saudi Arabia, United Arab Emirates, USA) on zoom organized under the Indo-US STEM Education and Research Center of OSU-Aligarh Muslim University, October 16-31, 2021

24. **Global 2021:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", participants from OSU, Quaid-i-Azam University in Pakistan, Hashemite University in Jordan, and Jordan University in Amman, June 9 - 25, 2021

23. **Bangladesh, IAU 2021:** On "Stars", lecturer of Bibha All-Girls Astronomy Workshop, held by Bangladesh Astronomical Society and Sponsored by IAU, Feb 11-13, 2021

22. **Morocco 2020:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", University of Chouaib Doukkali, El Jadida, Morocco, Dec 9 - 27, 2020

21. **International 2020:** "Radiative processes in astrophysical plasma", lectures and computational workshops, participants from OSU and Quaid-i-Azam University, Pakistan, June -

August, 2020

20. **Egypt 2018:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", Cairo University, Egypt, Apr 1 - 20, 2018
19. **Global 2018:** International Lecturer on "SOLAR PLASMA, ATOMIC STRUCTURE, SPECTROSCOPY", 41st International School of Young Astronomers of IAU (participants from 9 countries, Egypt, Ethiopia, Ghana, Madagascar, Nigeria, Rwanda, Sudan, Tanzania), Egypt, Mar 28 - Apr 11, 2018
18. **India 2018:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", Aligarh Muslim University, U.P., India, Feb 25 - March 14, 2018
17. **Bangladesh 2017:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", Dhaka University, Bangladesh, Oct 20 - Nov 4, 2017
16. **Bangladesh 2017:** "ATOMIC STRUCTURE AND TRANSITIONS: THEORY & COMPUTATION USING SUPERSTRUCTURE PROGRAM", Jahangirnagar University, Bangladesh, Nov 8, 2017
15. **Bangladesh 2017:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", Rajshahi University, Bangladesh, Oct 30 - Nov 1, 2017
14. **India 2017:** "Atomic Astrophysics and Spectroscopy and computational workshops on the SUPERSTRUCTURE and R-matrix codes", Aligarh Muslim University, India, April 2017
13. **Egypt 2016:** "Astrophysical Atomic Processes, Opacity, & Cancer Treatment with X-rays" & Computational workshops with R-matrix Codes & SUPERSTRUCTURE", Cairo University, Oct 22 - Nov 11, 2016
12. **India 2016:** "ATOMIC STRUCTURE AND TRANSITIONS: THEORY & COMPUTATION USING SUPERSTRUCTURE PROGRAM", University of Kashmir, India, April, 2016
11. **India 2016:** "Atomic Spectroscopy of Collisional and Radiative Processes in Astrophysical Plasma with computational workshops on R-matrix codes and SUPERSTRUCTURE", Aligarh Muslim University, India, 2016
10. **Egypt 2015:** "Atomic Spectroscopy and Collisional Excitation in Plasma with Computational Workshops on the SUPERSTRUCTURE and R-matrix codes", Cairo University (participants from 7 institutions), Egypt, 2015
9. **Saudi Arabia 2014:** "Atomic structure calculations", King Saud University, Riyadh, April 2014
8. **India 2014:** "Atomic and Molecular Radiation Physics with computational workshops on SUPERSTRUCTURE and R-matrix codes: From Astronomy to Biomedicine" (with Pradhan), Aligarh Muslim University, India, Feb-Mar 2014
7. **India 2014:** "Atomic and Molecular Radiation Physics: From Astronomy to Biomedicine with Computational Workshop on SUPERSTRUCTURE and R-matrix codes", (with Pradhan), Delhi University (participants from 3 institutions), Feb-Mar 2014
6. **Egypt 2013:** "Atomic Spectroscopy and Opacity with Computational Workshops on SUPERSTRUCTURE and R-matrix codes", Cairo University (participants from 7 institutions), Egypt, 2013
5. **OSU Astronomy USA 2006:** Graduate course "Atomic Astrophysics and Spectroscopy" (with Pradhan), Astronomy Dept, OSU, Fall 2006

4. **OSU USA 2004:** Graduate course “Atomic Astrophysics and Spectroscopy” (with Pradhan), Astronomy Dept, OSU, Fall 2004
3. **OSU USA 2000 - 2003:** Substitute lecturer, Atomic Radiative Processes, Astronomy Dept, OSU, 2000 - 2003
2. **GSU, USA 1989:** Undergraduate Modern Physics course, Georgia State University, 1989
1. **Wayne State University, USA, 1979-1984:** Graduate Teaching Assistant, Wayne State University, Detroit, 1979 - 1984

#### **Recognition for teaching & training**

- **6. Recognition Certificate**, VC of AMU & OIA Vice Provost of OSU, 2021
- **5. Recognition Certificate**, Dean of Faculty of Science and Director of Innovation Center, University of Chouaib Doukkani, Morocco, 2020
- **4. Recognition Shield**, Department of Physics, Dhaka University, Bangladesh, 2017
- **3. Recognition Certificate**, Department of Physics, Rajshahi University, Bangladesh, 2017
- **2. ”Indian Emblem Trophy”**, Vice Chancellor of Aligarh Muslim University, India, 2014
- **1. “Daniel R. Gustafson Memorial Award for a Graduate Teaching Assistant”**, Wayne State University, USA, 1984

#### **REFEREE/REVIEWER OF JOURNALS AND BOOKS: 46**

1. *Advances in Quantum Chemistry*, 2. *Arabian J. Chemistry*, 3. *Astronomy & Astrophysics (A&A)*, 4. *Astrophysical Journal (ApJ)*, 5. *Astrophysical Journal Letters (ApJL)*, 6. *Astrophysical Journal Supplements (ApJS)*, 7. *Astrophysics and Space Science (ASTR)*, 8. *Atomic Data Nuclear Data Tables (ADNDT)*, 9. *Atoms*, 10. *Canadian Journal of Physics (CJP)*, 11. *Environmental Science and Pollution Research*, 12. *European Physics Journal D (EPJD)*, 13. *IEEE-Transactions on Plasma Science*, 14. *Indian Journal of Physics (IJP)*, 15. *Intl J. Mass Spectrometry*, 16. *The International Conf. and Exhibition for Sci. (ICES)*, Saudi Arabia. 17. *Int Journal of Radiation Oncology, Biology, Physics*, 18. *Japanese Journal of Applied Physics*, 19. *Journal of Applied Physics*, 20. *Journal of Astrophysics and Astronomy D*, 21. *Journal of Biomedical Nanotechnology*, 22. *Journal of Earth and Space Sciences*, 23. *Journal of Electron Spectroscopy and Related Phenomena*, 24. *Journal of Optical Society of America (JOSA)*, 25. *Journal of Optics and Laser Technology*, 26. *Journal of Physics B (JPB)*, 27. *Journal of Physics B Letter*, 28. *Journal of Physics D*, 29. *Journal of Quantitative Spectroscopy & Radiative Transfer (JQSRT)*, 30. *Molecular Physics* 31. *Monthly Notices of Royal Astronomical Society (MNRAS)*, 32. *New Astronomy*, 33. *New Journal of Physics (NJP)*, 34. *Ohio Journal of Science*, 35. *Optics Letter*, 36. *Physical and Chemical News*, 37. *Physica Scripta*, 38. *Physical Review A (PRA)*, 39. *Physical Review Letters (PRL)*, 40. *Physics of Plasmas (POP)*, 41. *PRA Rapid Communications*, 42. *Pramana - Journal of Physics*, 43. *Radiation Physics and Chemistry*, 44. *Solar Physics*, 45. *The Open Astronomy Journal (TOAJ)* 46. *Centennial Book Series of Dhaka University, Bangladesh*

#### **EDITOR: 7**

7. Chief Editor with Prof. G. Hinojosa (Editor): ”Photoionization of atoms”, special issue of journal ATOMS with publisher MDPI (2020-2023)
6. Chief Editor, e-magazine ”An-Nisa” for women in STEM, published by Indo-US STEM Education and Research Center of OSU and AMU at AMU, India, 2022-present (OSU Knowledge Bank publisher, in process)
5. Editor: Newsletters for ”International Society of Muslim Women in Science”, 2014 - present

2024 (originated, 2010)

4. "Atomic Data for X-ray Astronomy" (Editors: A.K. Pradhan, S.N. Nahar, P.L. Smith), Proceedings of IAU XXV JD 17 in "Highlights of Astronomy", Vol. 13, IAU 2003, Astronomical Society of the Pacific Conference Series (ASP Publisher, 2006, Edited by O. Engvold), p621
3. Guest Editor, journal Atoms
2. Editor, Egyptian Journal of Physics (<https://ejphysics.journals.ekb.eg/>)
1. Editor, Journal of Taibah University for Science, Saudi Arabia (JTUSCI, Elsevier, 2014-2020)

### **REVIEWER/EVALUATOR OF PROPOSALS: 11**

11. UK Research and Innovation (UKRI) opportunity
10. NASA MUREP Innovation and Tech Transfer Idea Competition (MITTIC)
9. National Research Council (NRC) of National Academy of Sciences (NAS 2017- present),
8. NSF
7. Army Research Lab (ARL) (2017- 2025)
6. NASA APRA (Astrophysics Research and Analysis)
5. Physics and Astronomy prizes, Al Azhar University, Egypt, 2016
4. APS Fellowships (2012-2014), Award
3. NASA Fellowships
2. Ohio Supercomputer Center
1. Razzaq-Shamsun Physics Research prizes, Bangladesh, 2003 - present

### **SCIENTIFIC ORGANIZER OF CONFERENCES, EVENTS (National/International): 44**

44. Chief organizer of the international symposium celebrating the International Women's Day 2025 in hybrid platform under the joint sponsorship of Indo-US APJ Abdul Kalam STEM Education and Research Center of OSU and Aligarh Muslim University in India, and International Society of Muslim Women in Science based at OSU on March 22, 2025.
43. Member organizer of the Certificate Ceremony of the REU (Research Experience for Undergraduates) program with Aligarh Alumni Association at the Indo-US STEM Center of OSU and AMU at Aligarh, India, October 15, 2024
42. Chair of the Committee for the "International Women's Day Symposium 2024" organized by the Indo-US APJAK STEM Education and Research Center of AMU and OSU, and International Society of Muslim Women in Science (ISMWS), Hybrid platform with participants from 9 countries, Aligarh Muslim University, India, March 30, 2024
41. Faculty Advisor of "Women in Physics" grant of APS for physics events of female undergraduate Physics students at Aligarh Muslim University, 08/01/2024-07/31/2025
40. Organized and hosted Program Scientist of NASA Missions, Dr. Hashima Hasan, of NASA Headquarters along with student organization International Society of Muslim Women in Science at Ohio State for a public lecture session for students and NASA mission objective presentations at Astronomy Department, January 17-19, 2024
39. Member of the Organizing Committee for the symposium of the "International Women's Day" by the Indo-US APJAK STEM Education and Research Center of AMU and OSU, and International Society of Muslim Women in Science (ISMWS), Hybrid platform, Aligarh Muslim University, India, March 29, 2023
38. Member of SOC (Scientific Organizing Committee) for atomic Data for "Investigating the roots: How our perception of the Milky Way System is shaped by our knowledge of atomic data

products”, Heidelberg, Germany, Oct 3 - 7, 2022

37. As a Co-founder and Co-Director, Indo-US A.P.J. Abdul Kalam Centre for STEM Education and Research of OSU-AMU, India (with A.K. Pradhan at OSU, founded in 2013) - initiated and worked with Vice Chancellor Prof. T. Mansoor, to hold the formal celebration of the Center with engraving a stone at the newly dedicated building for the Center, Sep 26, 2022

36. As a founder of the International Society of Muslim Women in Science (ISMWS with members from 32 countries, founded in 2010) inaugurated opening a new chapter at Kashmir, ISMWS-Kashmir, at National Institute of Technology - Srinagar, India, Sep 22, 2022

35. Organized Session X ”US-Bangladesh Education Collaboration Program” of the annual conference of Bangladesh Physical Society, Dhaka, Bangladesh, May 19-21, 2022

34. Chair of the organizing committee, celebration of the international (US, India, Egypt) Women’s Day (supported by the International Society of Muslim Women in Science and Indo-US STEM Education Center of OSU-AMU, virtual platform, March 26, 2022

33. Organization and hosting the program ”Admission Adda with the Ohio State University” of EducationUSA for Bangladeshi students and researchers (zoom platform and facebook streaming), US Embassy in Dhaka, Bangladesh, August 25, 2021

32. Chair of the organizing committee, celebration of the international (US, India, Egypt) Women’s Day (supported by the International Society of Muslim Women in Science (ISMWS founded in 2010 by Nahar) and Indo-US STEM Education Center of OSU-AMU, March 20, 2021

31. The US Organizer (for Frontiers of Physics) along with Bangladesh Physical Society for the first US+Bangladesh physics conference ”International e-Conference on Physics”, operated in Bangladesh, during Feb 5-7, 2021

30. Co-organizer, Symposium on ”Prospects of STEM Education in 21st Century and Contributions of Women Scientists in STEM” at the Indo-US STEM Education and Research Center of OSU-AMU, celebrating the centenary of Aligarh Muslim University, India, October 13-14, 2020

29. Co-organizer for the symposium on ”International collaboration and prospects in STEM Education and Research”, Indo-US STEM Education and Research Center of OSU-AMU, India, March 3-4, 2020

28. Co-Coordinator, workshop of the ”Leadership for Academicians Programme (LEAP)” of government of India organized by OSU in Ohio, Sep 9 - 14, 2019

27. Organizer, Celebration of International Women’s Day, Aligarh Muslim University, India (support: US Dept of State & ISMWS), 2018

18-26, Director - organized 9 workshops in 6 cities (Aligarh, Delhi, Hyderabad, Kolkata, Kurnool, Patna) on Women in STEM Roadshow under US Department of State, 2018

17. Member of the international Scientific Committee, the 6th International Conference of Science and Developments (ICSD VI), Gaza, Palestine, March 14-15, 2017

16. Organizer, Celebration of International Women’s Day, Aligarh Muslim University, India (support: Dept of Physics & ISMWS), 2017

15. Member of International Committee, Modern Trends in Physics Research 2016 (MTPR-016), Hurghada, Egypt, December 17-20, 2016

14. Organizer, Celebration of International Women’s Day, Aligarh Muslim University, India (support: Dept of Physics & ISMWS), 2016

13. Co-convener, joint international conference on nanotechnology, ALIGARH NANO-V and STEM Education and Research (STEMCON16, organizer) of the Ohio State University and



Aligarh Muslim University, Aligarh, India, March 12-15, 2016

32. Member of International Advisory Committee, Modern Trends in Physics Research 2014 (MTPR-014), Dec 19-23, 2014, Cairo, Egypt
11. Organizer, Celebration of International Women's Day, Aligarh Muslim University, India (support: Dept of Physics & ISMWS), 2014
10. Convener, ALIGARH NANO-4 International 2014, an International Conference on Nanoscience and Nanotechnology, Aligarh Muslim University, India, March 8-10, 2014
9. Worked with organizing committee for US speakers, 3rd intl conference on "Current Development of Atomic, Molecular, Optical and Nano Physics with Applications", India, 2011
8. Coordinated US Speakers, "International Workshop on Ultra-Fast Laser Technology and Applications" (UFLTA), Egypt, 2010
7. Coordinator of "Nanospectroscopy Consortium" of The Ohio State University, CfA-Harvard University, Thomas Jefferson University, Ohio State U, December 8, 2006
6. Scientific Organizer: Joint international IP/ITAMP workshop "High Accuracy Atomic Physics in Astronomy", Harvard-Smithsonian CfA, Cambridge, Massachusetts, August 7-9, 2006
5. Data Panelist, JD 17 "Atomic Data for X-ray Astronomy", International Astronomical Union General Assembly, Sydney, Australia, July 13-26, 2003
4. Scientific Organizer: The international symposium "Advances in Atomic Physics and Applications to Astrophysics", in honor of birthdays of Professor Micheal J. Seaton and Dr. Werner Eissner; University College London, London, U.K., December 13, 2002
3. Scientific Organizer: International workshop "Astrophysical Applications of the Iron Project/Opacity Project data for NLTE Models"; University of Stuttgart, Germany, July 19, 2002
2. Scientific Organizer: The international workshop "Astrophysical and Laboratory Applications of the Iron Project and the Opacity Project"; Goddard - NASA, Maryland, USA, Feb 22, 2002
1. Coordinator of the International scientific collaboration: "The Iron Project", July 2001 - June 2002. Organized semi-annual international general IP meetings at
  - (i) Goddard-NASA, USA, Feb 23-24, 2002,
  - (ii) University of Stuttgart, Germany, July 20-21, 2002
- **CHAIR OF SCIENTIFIC SESSIONS (7):** DAMOP-APS, ACAG-5, MTPR, CDAMOP, Aligarh NANO, STEMCON16, US+Bangladesh Physics Conference.

## **NATIONAL AND INTERNATIONAL ELECTED POSITIONS: 12**

12. Reviewer, Research Associateship Programs of National Academic of Sciences, 2014-present
11. President, International Society of Muslim Women in Science (ISMWS), 2010 - present
10. Associate Member, Innovation in Science, Technology, Education, Modeling and Management (ISTEMM), Chouaib Doukkali University, El Jadida, Kingdom of Morocco, 2018 - present
9. Vice Chair, High Accuracy Stellar Spectroscopy, Division B / Commission B5, IAU, 2016-2021
8. Member of the National Committee, IAU100 Celebrations in Bangladesh, 2018 - 2019
7. Selection committee: John Wheatley Award of APS, 2015
6. Leader of OSU Delegation, the 5th International Exhibition and Conference on Higher Education (IECHE), Saudi Arabia, April 15-18, 2014
5. Selection committee: APS Fellows through FIP, 2012-2014
4. Elected Member, Executive Committee, Forum on International Physics, APS, 2012-2014
3. Coordinator, the International Iron Project, 2001-2002
2. Class Representative in B.Sc.Hons, Dhaka University, Bangladesh, 1976-1977

1. Class Representative, throughout Elementary and High Schools

## **FOUNDING MEMBER OF GLOBAL NETWORKS & TRUSTS FOR STEM RESEARCH AND EDUCATION: 9**

- 9. Founder & Sponsor of STEM Research & Education Recognition Programs: Universities and institutions in 6 countries- Bangladesh (17 programs), Egypt (6 programs), India (5 programs), Pakistan (3 programs), Palestine (2 programs), USA (2 programs), and formulate the terms and regulation for the recognition - all have positive impact
- 8. Co-founder: Frontiers of Physics (FOP) for advancement of science education in Bangladesh (with Dr. Charles Clark at NIST) that partners with Bangladesh Physical Society (BPS) and various universities (Established: 2019)
  - Organized US-Bangladesh conference in 2021,
  - organized US-Bangladesh collaboration in Physics session with BPS in 2022,
  - established four student presentation prizes at BPS conferences, initiated in 2022
- 7. Founded Prof. Harun-ar-Rashid recognition program in Physics at University of Dhaka, Bangladesh, for the best research advisor, best Ph.D. thesis, and lectureship on cutting-edge research in honor of Prof. Harun-ar-Rashid (from fund raising to formulation of the MOA), 2023
- 6. Co-founder and Co-Director with Prof. A.K. Pradhan, Indo-US A.P.J. Abdul Kalam Centre for STEM Education and Research of OSU, USA and Aligarh Muslim University, India, Established: 2013 -present
  - introduced global teaching and research training at the Center since 2021
  - introduced REU (Research Experience for Undergraduates) since 2018
  - introduced annual symposium celebrating International Women's Day and recognition to women for research achievements since 2013
  - introduced International Society of Muslim Women in Science chapter to promote STEM for women in 2021
  - Chief Editor: Annual magazine "An-Nisa" for life stories and research for women in STEM at the present time, started in 2022
- 5. Founder: International Society of Muslim Women in Science (ISMWS), about 450 members from 32 countries to promote STEM education and research in STEM, 2010
  - 1. USA, 2. Afghanistan, 3. Algeria, 4. Australia, 5. Bangladesh, 6. Canada, 6. Egypt, 8. England, 9. Ghana, 10. India, 11. Indonesia, 12. Iran, 13. Iraq, 14. Jordan, 15. Kenya, 16. Kuwait, 17. Lebanon, 18. Malaysia, 19. Morocco, 20. Nigeria, 21. Oman, 22. Pakistan, 23. Palestine, 24. Russia, 25. Saudi Arabia, 26. Somalia, 27. Sri Lanka, 28. Sudan, 29. Syria, 30. Turkey, 31. United Arab Emirates, 32. Yemen
- 4. Founder of
  - ISMWS chapters: Student Chapter at Ohio State, Established: 2017
  - ISMWS student chapter at East Carolina University, USA (gave some guidance only)
  - ISMWS student chapter, ISMWS at AMU, at Aligarh Muslim University, India
  - ISMWS student and faculty chapter, ISMWS-Kashmir, in Kashmir, India
  - ISMWS student and faculty chapter at NED University of Science & Technology, Pakistan
  - ISMWS student chapter at Karachi University, Pakistan
  - ISMWS chapter in Egypt, ISMWS-Egypt (2023)
  - ISMWS chapter at Islamic University in Gaza, Palestine: ISMWS-IUG (2023)
- 3. Co-Founder: International Society of Arab Women in Science (with Prof. Lotfia El Nadi of

Cairo University), 250 members from 7 countries, Established: 2010

1. USA, 2. Algeria, 3. Egypt, 4. Jordan, 5. Lebanon, 6. Qatar, 7. United Arab Emirates

- 2. Founder: A Network of Scientists in Developing Countries: 30

- Exchange of information on science issues, conferences, bring APS memberships at no cost etc.

Algeria (1), Bahrain (2), Bangladesh (3), Egypt (4), Ethiopia (5), Ghana (6), India (7), Iran (8), Iraq (9), Jordan (10), Madagascar (11), Malaysia (12), Morocco (13), Nepal (14), Nigeria (16), Oman (17), Pakistan (18), Palestine (19), Rwanda (20), Russia (21), Saudi Arabia (22), Senegal (23), Sudan (24), Syria (25), Tunisia (26), Turkey (27), Ukraine (28), United Arab Emirates (29), Yemen (30)

- 1. Founder and sponsor: Abdur Razzaq & Shamsun Nahar Trust for Education, Bangladesh: introduced & support recognition program in 8 institutions:

2 elementary schools (Gandaria Mahila Samittee and char Domdoma), Maniza Rahman Girls High School, Ishaqia Boys High School, Central Women's College, Coed Kabi Nazrul Government Collage, Panchdona and Anjuman Madrasa schools

### **PROFESSIONAL MEMBERSHIP: 15**

15. The American Physical Society (APS, lifetime)

14. International Astronomical Union (IAU, lifetime)

13. Division of Atomic, Molecular and Optical Physics (DAMOP, life) of APS

12. Forum on International Physics (FIP, life) of APS

11. EGLS (former Ohio Section) of APS

10. Forum on Industrial & Applied Physics (FIAP) of APS

9 Member of Committee on the Status of Women in Physics of APS

8. Honorary member of the Topical Society of Laser Sciences (TSLs)

7. The Egyptian Physical Society (for 25 years)

6. Bangladesh Physical Society (BPS, lifetime LM Q0062)

5. Life member of Dhaka Physics Group, Bangladesh

4. Member of Planetarium Founders' Society, Ohio State University

3. Member of Association of Staff and Faculty Women at OSU, 2021-2022

2. International Network of Women Engineers and Scientists (INWES) 2009-2012

1. Patron, Council for Research & Empowerment of Women (CREW), Aligarh, India, Life since 2016

### **SERVICES:**

- Serve as the Co-Director of the Indo-US STEM Education and Research Center of OSU and AMU, 2013 - present

- Co-coordinator of the MOA/MOU between OSU and Aligarh Muslim University, 2013 - present

- Serving in the Committee of Astronomy of The World Academy of Science of UNESCO 2025 - 2028

- Evaluation for Tenured promotions: Princess Norah University, Saudi Arabia (2024), Basra University, Iraq (2016), Portland University, USA (2015)

- Coordinator for collaboration between OSU and Sharda University in India - Organized meetings for research and teaching collaborations and hosted the OSU visit by the Sharda University Vice Chancellor, Prof. S. Khara, during Nov 27-28, 2023

- Coordinator of the MOA between OSU and Cairo University, 2012 - 2022

- Organization and hosting the program "Admission Adda with the Ohio State University" for

prospective Bangladeshi students and researchers, EducationUSA at US Embassy, Bangladesh, August 25, 2021

- Serving as a panelist

- Panelist, SSGSA (Sir Syed Global Scholarship Awards) USA: Selection of prospective Aligarh Muslim University students in STEM for SSGSA awards for study in the USA and other well known international universities; 2021 - 2025

- Panelist, Wayne State University Review Committee for the Department of Physics and Astronomy, WSU, Jan 28, 2021

- Panelist, OSU Faculty Panel Discussion, Reception for incoming Assistant and Associate Faculty of diversity, Office of Diversity and Inclusion (ODI), January 28, 2021

- Panelist, OSU: LEAP workshop panel discussion on international collaboration, 2019

- Panelist, India: Indo-US collaboration, International conference on STEM Education and Research, April, 2016

- Committee member of Honor Nominations:

- Evaluator: Razzaq-Shamsun Physics Research prizes, Bangladesh (2003 - present)

- Evaluator for prizes: Aligarh Muslim University, India (2011 - present)

- APS Committee for i) Fellowships (2012-2014), ii) John Wheatly Award of APS (2018),

- Serve as a Judge, OSU Hayes Forum for research awards for Ph.D. students in Physical and Mathematical Sciences at OSU, 2020 - present 2025

- Judge, Contributed research posters, international conference on Aligarh Nano V and STEM Education and Research, Aligarh Muslim University, 2016

- Judge, OSU Contributed Research Posters, Denman Undergraduate Research Forum, The Ohio State University, March (2014, 2015)

- Evaluator: Physics & Astronomy prizes, Al Azhar University, Egypt (2015),

- Judge, Egypt: Posters, international conference on "Modern Trends in Physics Research", 2010, 2014

- Judge, Wayne State University: Research Posters, 3rd Physics Graduate Research Day, Michigan, 2012

- Judge: State Science Day, Ohio, - Certificates from Ohio Academy of Science (OAS) (2010, 2011)

- Judge: District Science Day, Ohio Academy of Science (OAS) (2010, 2011)

- Judge: Ohio Governor's Award "Excellence in Information Science & Technology Research in H.S.", 2010

- **PROFESSIONAL MENTOR:**

- E-Mentoring Network for Diversity in Engineering and Science ([www.MentorNet.net](http://www.MentorNet.net)), 2007-2013

- Certificates of Appreciation, E-Mentoring, 2010, 2011

- Professional Mentor of Freshman Students in Science (Minority), the Office of Minority Affairs and Retention Services, Ohio State U. (1999 - 2005)

- Certificates of Appreciation, 2002, 2005

## ii) International engagement in STEM research and education

Sultana N. Nahar

### GLOBAL OUTREACH FOR STEM EDUCATION & RESEARCH

- **1. Global teaching and research training:** 29 times

- Described in teaching section above

- **2. Partnership with EducationUSA:** 13

- xiii) Organized Session X "US-Bangladesh Education Collaboration Program" in collaboration with EducationUSA and at the annual conference of Bangladesh Physical Society, Dhaka, Bangladesh, May 19-21, 2022

- xii) A session on "American Physical Society", about APS and its programs, free membership, job scopes, recognition programs etc, for physicists in Bangladesh and developing countries, EducationUSA at US Embassy in Bangladesh, October 21, 2021

- xi) Organization and hosting the program "Admission Adda with the Ohio State University" for prospective Bangladeshi students and researchers, EducationUSA at US Embassy, Bangladesh, August 25, 2021

- x) Organized a session with EducationUSA for US collaborative opportunities for Bangladeshi researchers and students at the first US+Bangladesh "e-conference of Physics" jointly with Bangladesh Physical Society, University of Dhaka, and Frontiers of Physics (US) in February 2021

- i-ix) Organized session on educational scopes and funding with EducationUSA in each 9 workshop on promoting "higher degrees in STEM disciplines" to female college students of minority and disadvantaged groups in India under "Women in STEM Roadshow" program of US Department of State, Feb 5 - 26, 2018

- **3. Global Networks of scientists and programs:** 30 countries

- Described in Founding members section above

- **4. International Collaboration**

- Initiator & liaison coordinator of the Memorandum of Agreement (MOA) between the Ohio State University and Cairo University, Egypt in Arts and Sciences, Engineering, 2012 - 2017 (News: Egyptian newspaper, Middle East Bulletin at OSU, Youtube:

- <http://www.youtube.com/watch?v=IUrMWSbfzTE>)

- Renewed the MOA for 2017 - 2022

- Activities involve i) teaching, ii) computational workshops, iii) collaboration in conferences, iv) reaching out to all Egyptian universities for giving astronomy books for introducing the undergraduate course, lectures, various information on admission, research, etc

- Co-founder and Co-Director, and active in all programs, Indo-US A.P.J. Abdul Kalam Centre for STEM Education and Research of OSU-AMU partnership (described earlier), India, 2013 -

- Initiator and liaison officer, STEM Faculty Training program for postgraduate students of Indian universities under Obama-Singh 21st Century Knowledge Initiative Award of OSU in partnership with AMU, 2013 - 2017

- Leader of OSU Delegation: International Exhibits & Conference on Higher Education, Riyadh, Saudi Arabia, 2014

- Research guidance through emails: provided self-written program on electron/position scattering with atoms and collaboration with University of Roorkee, India in 1990. The program is still in



use (2021) by many

- The research guidance has extended to Iran, Iraq, Bangladesh, Turkey, Jordan, Pakistan
- Visits to developing countries include seminars/ public talks / conference participation, helping admission to US universities, Astronomy books distribution etc. These have had enormous effect on the choice of the Ohio State University for degree/research applications
- Department of State (DOS) Proposal: PI and Director: "Indo-US collaboration: STEM educational and research opportunities for women from minorities and disadvantaged groups" (Women in STEM Roadshow), Held nine workshops in Tier-1 and Tier-2 cities in New Delhi, Hyderabad and Kolkata consulate districts and 1 year follow-up
- USIEF proposal: Co-PI: "The STEM -Faculty Project: Training the Next Generation of STEM faculty at Higher Education Institutes in India", PI: A.K. Pradhan, W. Haider, Co-PI: S.N. Nahar with few others, Obama-Singh 21st Century Knowledge Initiative Award, US India Education Foundation,

## **5. USA: • WAYNE STATE UNIVERSITY: PHYSICS RESEARCH & EDUCATION PROGRAM**

- Founder, sponsor & member of Evaluation Committee: Annual recognition program for i) the best research publications, ii) the best teaching, iii) the best Ph.D thesis, Department of Physics and Astronomy, Wayne State University, (founded in 2015)
- **USA: THE OHIO STATE UNIVERSITY: STEM EDUCATION & RESEARCH:**  
-Described above: Development M.Ed.STEM program for Indian students, Founder and developing programs for the Indo-US STEM Education and Research Center, etc

## **6. BANGLADESH: PROMOTER OF PHYSICS RESEARCH & STEM EDUCATION**

- Founder, sponsor & member of Board of Trustees of the annual "**Razzaq-Shamsun Physics Research Prize**" (founded in 1995) and "Razzaq-Shamsun Lifetime Achievement Award for Contributions in Physics" (founded in 2008) for any researcher in Bangladesh, Administered by Dhaka University
- Founder and co-sponsor of "Prof. Harun-ar-Rashid" awards in Physics at University of Dhaka, Bangladesh (founded 2023)
- Co-Founder and Co-Sponsor with Charles Clark at NIST of four (two males and two females) best research presentations in **Bangladesh Journal of Physics** (founded in 2022)
- Founder, Sponsor & member of three annual best research publications in **Bangladesh Journal of Physics (BJP)** (founded in 2017)
- Sponsor, founder and member of the Evaluation Committee of the annual recognition program for Distinguished physics teacher (teaching + research) and Best teacher awards in Physics and in Arabic, **University of Dhaka** (founded in 2008)
- Sponsor, founder & member of the Evaluation Committee of the annual recognition program for Distinguished Teacher (teaching + research), Best Teacher and four best student awards in Physics, **Chittagong University**, Chittagong (founded in 2008)
- Sponsor, founder & member of the Evaluation Committee of the annual recognition program for Distinguished Teacher (teaching + research), Best teacher and four best student awards in physics, **Jagannath University**, Dhaka, Bangladesh (founded in 2011)
- Sponsor, founder & member of the Evaluation Committee of the annual recognition program for Distinguished teacher (teaching + research), Best teacher, and four best student awards in Physics, **Jahangirnagar University**, Savar (founded in 2008)

- Sponsor, founder & member of the Evaluation Committee of the annual recognition program for Distinguished Teacher (teaching + research), Best teacher awards and one best student scholarship in Physics, **Rajshahi University**, Rajshahi (founded in 2011)
- Sponsor, founder & member of the Evaluation Committee of the annual recognition program for Distinguished Teacher (teaching + research), Best teacher and four best student awards in physics, **Shah Jalal University of Science and Technology**, Sylhet, Bangladesh (founded in 2017)
- Sponsor, founder & Chair of the annual recognition program for 3 best teachers awards (Math & Science, Business, General), **K. Nazrul Gov. College**, Dhaka, (initiated 2008, finalized 2011)
- Sponsor, founder & Chair of the annual recognition program for 3 best teachers awards (Math & Science, Business, General), **Central Women's College**, Dhaka (founded in 2008)
- Sponsor, founder & Chair of the annual recognition program for 7 best teachers (Math & Science, Commerce, general), and all lifetime teaching awards, **Maniza Rahman Girls High School**, Dhaka (founded in 2003)
- Sponsor, founder & Chair of the annual recognition program for 3 best teachers (Math & Science, Commerce, general), and 6 best students awards, **Gumta Ishakia High School**, Comilla (founded in 2017)
- Sponsor, founder & Chair of the annual recognition program for 2 best teachers (Math & Science, General) and 3 annual best graduating students, **Char Domdoma Primary School**, Gazipur (founded, 2011)
- Sponsor, founder & Chair of the annual recognition program for 2 best teachers (Math & Science, General) and 3 best graduating students, **Gandaria Mahila Samitee Primary School**, Dhaka (founded, 2011)
- Founder & Chair of the "**Abdur Razzaq and Shamsun Nahar Trust for Education**", for improvement of education in schools in Bangladesh (founded in 2003)
- Sponsor, founder & Chair of the annual recognition program for 2 best teachers (Math & Science, General) and 3 best graduating students awards, **Panchdona Madrasa and Orphanage**, Narsindhi (founded, 2008)
- Sponsor, founder & Chair of the annual recognition program for 2 best teachers (Math & Science, General) awards, "**Anjuman J.R. Islamia Junior High School**, Dhaka (founded, 2017)
- **Distributed of Physics and Astronomy books** for undergrad course at Universities of Dhaka, Jahangirnagar, Chittagong, Rajshahi, Jagannath, & Kabi Nazrul Government College, Central Women's College; Bangladesh Astronomical Society, Maniza Rahman Girls High School, Panchdoan Madrasa and Orphanage, Gumta Ishakia High School
- This introduced undergraduate Astronomy course at i) Jahangirnagar University, ii) Chittagong University, iii) Jagannath University, iv) course by Bangladesh Astronomical Society
- Collaborate with Bangladesh Astronomical Society for article, lectures, IAU proposal, donated books for workshop, etc.
- Brought IAU membership for Bangladesh Astronomical Society while Bangladesh government is not an official member of IAU
- Organized the first US+Bangladesh "e-conference of Physics" jointly with Bangladesh Physical Society and University of Dhaka in February 2021. Brought US Ambassador to participate and organized the first session, in collaboration with EducationUSA, on the US collaborative opportunities for Bangladeshi researchers and students.
- Brought Dhaka University and Cairo University together for medical physics research

collaboration, 2016

- Deliver lectures/Seminar/public presentation on current research interests institutions countrywide to promote physics research since 1995
- Deliver research based atomic astrophysics lecture course with computational workshops at Universities, such as, Dhaka, Rajshahi, Jahangirnagar, Begum Rokeya, Barisal, PUST
- Research advisor for a Master's thesis in Physics, University of Dhaka (2023)
- Brought many physicists to membership of American Physical Society (APS) at no cost

## **7. EGYPT: PROMOTION & COLLABORATION FOR RESEARCH & EDUCATION**

- Instituted the MOA between OSU and Cairo University, 2012 - 2022 (mentioned earlier)
- Founder & sponsor of a annual recognition program for 10 annual prizes in **Cairo University**:  
-**Physics**: 1 Distinction in research, 1 Best teaching awards, 2 best (male & female) Ph.D., 2 Masters (male & female) graduating students  
-**Astronomy**: 1 Distinguished faculty prize in research & 1 in teaching  
-**Mathematics** distinguished faculty prize in research & 1 in teaching
- Founder & sponsor of a annual recognition program for 16 annual prizes in **Physics** and **Astronomy** Departments, **Al Azhar University** (Cairo and Assiut campuses): 8 Distinguished teaching (teaching + research) and Best teaching, 4 best (male & female) Ph.D., 4 Masters (male & female) graduating students prizes
- Founder & sponsor of a recognition program for 2 annual prizes for the best research publications in **Astronomy, Geophysics** at the **National Research Institute of Astronomy and Geophysics (NRIAG)**
- Founder & sponsor of a recognition program for annual prizes for the best research publications in Egyptian Journal of Physics (initiated in 2016)
- Founder & sponsor of a recognition program for 2 annual prizes for the best research publications in **Physics, Beni-Suef University**, Beni-Suef, Egypt
- Delivering research based lecture course on Atomic Spectroscopy, process, and computational workshops, **Cairo University** attended by post-graduate students, researchers, faculty members from 7 institutes since 2013
- Hold the Adjunct Professorship in Cairo University, given only to well-known Egyptian origin scientists working a developed country
- Seminars and research issues at Zewail City of Science & Technology, National Research Centre, National Institute of Astronomy & Geophysics, American University in Cairo, Helwan University, Ain Shams University, Al Azhar University, etc
- Research guidance at **Cairo University, Beni-Suef University**, Evaluation of Ph.D., Masters thesis
- Collaborated with National Research Centre in Cairo
- Collaborated with programs at Banha University, Menoufia University
- Initiated collaborative research agreement between Cairo University and Aligarh Muslim University in India. Dhaka University in Bangladesh
- **Distributed physics and astronomy books** in many institutions, such as, Cairo, Al Azhar, Suez Canal, Beni-Suef, Ain Shams, Helwan Universities, NRIAG, Zewail City of Science and Technology, Suez Canal University, etc.
- USA liaison for speakers for conferences, such as, Modern Trend in Physics Research (MTPR), workshop of Ultra-Fast Laser Technology and Applications (UFLTA)

- Brought physicists to no-cost membership of American Physical Society (APS), nominated for Fellowship

## **8. INDIA: PROGRAMS IN PHYSICS & STEM RESEARCH & EDUCATION**

- Brought AMU to OSU for the high profile Obama-Singh Knowledge initiative award and served as Co-Director (mentioned earlier)
- **Aligarh Muslim University (AMU), Physics Department:** Adjunct Professor under UGC scheme for teaching and research guidance, 2017-2022
- **Aligarh Muslim University:** Founder & sponsor of a recognition program for annual faculty & students prizes for research, teaching and academic excellence in **Aligarh Muslim University:** 1) 7 in **Physics**, 2) 2 in **Mathematics**, 3) 2 in **Zoology**, 4) 2 in **Microbiology** Departments
- **OSU and Aligarh Muslim University:** Associate Director and the supervising research advisor of the AMU students of the STEM faculty training program of the 21st Century Obama-Singh Knowledge Initiative award of OSU in partnership with AMU, 2013-2017 (one of 3 initiators of the program), and
  - One of the 3 OSU members to introduce the new curriculum for M.Sc. MeD-STEM degree in STEM faculty training program at OSU for the Indian postgraduate students, 2014
- Co-founded with Prof. Anil Pradhan, and in collaboration with AMU, the **Indo-US APJ Abdul Kalam STEM Education and Research Center of the Ohio State University and AMU**, serving as the OSU Co-Director, and:
  - Founded the REU (Research Experience for Undergraduates) program with partial fund at the Center in 2018
  - Founded an official chapter of the International Society of Muslim Women in Science (ISMWS) at the Center in 2021
  - Introduced annual symposium of women on the International Women's Day with presentations and recognition, since 2014-
  - Introduced global research training course "Atomic Astrophysics and Spectroscopy with computational workshops on the R-matrix codes and SUPERSTRUCTURE" since 2021
  - Chief editor of magazine "An-Nisa" for women in STEM introduced in 2022
- **Aligarh Muslim University:** Delivering research based lecture course on Atomic Astrophysics and Spectroscopy, and computational workshops, in person since 2014 -
- **Jamia Millia Islamia (JMI):** Founder & sponsor of a recognition program for annual faculty & students prizes for research, teaching and academic excellence for 3 in **Physics**, 3 in **Mathematics**, 3 in **Chemistry** Departments, founded in 2017
  - Delivered lecture, contributed astronomy books, partnered with OSU proposals
- **Kashmir University:** Founder & sponsor of a recognition program for faculty & student prizes for research, teaching, academic excellence for 8 in **Physics**, 3 in **Mathematics**, 12 in **Departments of Biological Sciences**
- Kashmir University: Delivered lecture course and computational workshop, 2016, delivered many lectures, contributed astronomy books, partnered in OSU proposal
- **Islamic University of Science and Technology (IUST), Awantipore, Kashmir:** Founder & sponsor of a recognition program for annual faculty & students prizes for research, teaching and academic excellence for 3 in **Physics**, 1 in **Mathematics**, 3 in **Chemistry** Departments
- **Women's Degree College on Maulana Azad Road, Kashmir:** Presented seminars and public lectures, distributed astronomy books

- **NIT-Srinagar, Kashmir:** Research collaboration, conferences, lectures, contribution of Astronomy books, India, since 2016
- Founded International Society of Muslim Women (ISMWS) Kashmir at NIT with founding president Prof. Seemin Rubab of NIT for any women in Kashmir
- NIT-Srinagar is a member of the consortium of US and Indian universities for STEM education and research initiatives under Indo-US program
- **University of Delhi:** Delivered research based lecture course on Atomic Astrophysics and Spectroscopy, and computational workshops, University of Delhi, 2014
- Continued research collaboration and teaching with University of Delhi and Delhi Technical University
- Co-supervisor of Ph.D. thesis, Dr. Mayank Dimri, Delhi University
- **Examiner of Ph.D. thesis:** Aligarh Muslim University, University of Delhi, IIT-Indian School of Mines, Delhi Technical University
- Seminars and public lectures at various institutes - Indian Institute of Astrophysics - Bangalore, IFTR-Mumbai, Sharda University - Upper Noida, Jain University - Bangalore, SMVD University - Jammu, etc.
- **IIT-Indian School of Mines, Dhanbad:** Research collaboration with Prof. B Anthony and relevant activities, 2017 -
- Postdoctoral Fellow Dr. Rahla Naghma, Examiner of a number of Ph.D. thesis
- **Sharda University, Greater Noida:** Collaborated with STEM educational programs since 2014, brought to OSU for joint programs
- Recipient of Siddiqui lecture prize of the Innovation Center, 2022
- Brought Indian physicists to no-cost membership of American Physical Society (APS), nominated APS Fellowships

## 9. JORDAN: RESEARCH & EDUCATION

- Lectures and training of research at University of Jordan, Hashemite University
- Founder of recognition program at Department of Physics, University of Jordan

## 10. MEXICO: RESEARCH & EDUCATION

- Lectures and train for research at Autonomous National University of Mexico
- Long term collaboration in Physics with UNAM at Morelos campus

## 11. MOROCCO: RESEARCH & EDUCATION

- Associate Member, Laboratory of Innovation in Science, Technology, Education, Modeling and Management (LISTM), University of Chouaib Doukkali, Morocco, 2018 - present
- Delivered the research training course "Atomic Astrophysics and Spectroscopy with computational workshops on R-matrix and SUPERSTRUCTURE codes" at the Innovation Center, 2020 - continued to have participants from various universities for the global course
  - Continue efforts on the research and education programs

## 12. PAKISTAN: STEM RESEARCH & EDUCATION

- Founder & sponsor of a recognition program for faculty and student prizes for teaching, research, academic excellence in Physics at **Quaid-i-Azam University** (Founded in 2021)
- Founder & sponsor of a recognition program for faculty and student prizes for teaching, research, academic excellence in Physics at **University of Jammu and Kashmir** (Founded in 2021)
- Founder & sponsor of a recognition program for faculty and student prizes for teaching,



research, academic excellence in Physics at **NED University of Science and Technology** (Founded in 2021)

- Founded ISMWS chapter at NEDUT

- Founder & sponsor of a recognition program for faculty and student prizes for teaching, research, academic excellence in Physics at **Karachi University** (Founded in 2024)
- Founded ISMWS chapters at University of Karachi
- Taught global astrophysics course to participants of a number of universities
- Brought physicists to APS membership
- Provided astronomy books for undergraduate course
- Serve as Ph.D. thesis examiner of a number of universities
- Featured in Scientia Magazine, Pakistan: "A Glimpse into the Cosmos with Dr. Nahar", September 2020
- "Astronomy and Beyond", S.N. Nahar, Guest speaker of the webinar series of Muslim Women in Science and Technology of Khwarizmi Science Society of Pakistan, broadcast from Lahore to all of Pakistan, August 23, 2020
- Guest speaker, Physics Camp for Girls, Association of postgraduate students of Pakistan, Dec18-19,2021

#### **14. PALESTINE: STEM RESEARCH & EDUCATION**

- Founder & sponsor of a recognition program for faculty and student prizes for teaching, research, academic excellence in **Islamic University in Gaza (IUG)**: 4 in **Physics**, 2 in **Biology**, 2 in **Chemistry**, 2 in **Mathematics**, 4 in **Departments of Engineering** (founded in 2015)
- Founder & sponsor of a recognition program for faculty and student prizes for teaching, research, academic excellence in **Al-Aqsa University in Gaza**: 2 in **Physics**, 2 in **Mathematics** (founded in 2018)
- Teaching and research collaboration with IUG
- Opened chapter of ISMWS at IUG
- Member of the International Organizing Committee and Keynote Speaker, International Conference on Science Developments VI, organized by and held at IUG, March 12-15, 2017
- Published an article on Physics research in Gaza in APS newsletter 2017
- Brought physicists to no-cost membership of American Physical Society (APS)
- Working for promotion for high school STEM education with the Ministry of Education

#### **14. SAUDI ARABIA: COLLABORATION IN STEM EDUCATION & RESEARCH**

- Visiting faculty to Taibah University, Dammam University, King Saud University, and Princess Norah University for presentations on physics seminars, Med-STEM program, Muslim Women in Science, OSU admission, APS, 2014
- Worked as liaison between OSU and Ministry of Higher Education, 2014
- Lectures and workshop at King Saud University, 2014
- Research connection with Taibah University, Contributed undergraduate astronomy books, 2014, presented public seminar, 2021, served as an Editor of J. of Taibah University for some years
- Wrote news article on STEM program in Saudi Arabia in APS newsletter 2014
- Brought Physics Chair of female section of Dammam University to Physics Department of Miami University, OH, 2016
- Brought Saudi physicists to no-cost membership to American Physical Society (APS)
- Princess Norah University: Recognized Sultana N Nahar as "Woman of Wisdom", interview for

the annual magazine - celebration of Women's Month of March, 2024

- Reviewer of faculty promotions

- Educational connection with King Fahd University of Petroleum and Minerals
- Research Mentor, Falak Foundation for Space Science and Research, 2024-2025
- Collaborator of undergraduate STEM program, Najran University

#### **15. TURKEY: COLLABORATION FOR RESEARCH**

- Research collaboration with Selcuk University, 2014 -
- Research guidance and collaboration: Canakkale Onsekiz Mart University, Karamanoglu Mehmetbey University, 2014. Advisor for M.S. thesis of Yasin Gokce, Karamanoglu Mehmetbey University, 2015
- Collaborated with Marmara University on an IAU proposal and research connection, 2009 -
- Brought Physicists to no-cost membership of American Physical Society (APS)

#### **16. COLLABORATION WITH UNITED ARAB EMIRATES**

- Connected to research related activities with UAE University, An Ains since 2009
- Nahar featured as the role model for a Muslim woman scientist by science students 2009
- Visiting faculty, United Arab Emirates University, presentation of seminars university wide audience, 2011
- Appreciation certificate by the Dean of UAE University Libraries for Contribution of Books, 2011
- Appreciation Certificate for the lecture session on International Society of Muslim Women in Science, 2011
- Brought physicists from UAEs to no-cost membership of American Physical Society (APS)

#### **OTHER MEMBERSHIPS AND SERVICES:**

- Columbus Folk Dancers (CFD <http://recfolkdancecolumbus.org/CFD/Home.html>) American, European, South American, Asians (1991 - present) - Emcee of CFD
- Odity Performers - Bengali songs

### iii) Awards and recognition

Sultana N. Nahar

#### AWARDS/SCHOLARSHIPS/HONORS/RECOGNITION:

- Elected Fellow of The World Academy of Sciences (TWAS) -UNESCO, Category - Physics, 2023
- **American Physical Society (APS): 7**
- The William Fowler Award for Distinguished Research in Atomic Astrophysics of APS, ECLS-APS Section, 2025
- APS published as the Front Page article in APS newsletter "International Teaching Can Transform Physics", on the global online teaching and research training to over 100 participants from 11 countries (Bangladesh, Egypt, Ethiopia, India, Mexico, Morocco, Pakistan, Palestine, Saudi Arabia, United Arab Emirates, USA) at the same time in 2021, APS Newsletter Vol 31, No. 6, June 2022 (This is her 19th news article published in APS newsletters)
- John Wheatly Award of American Physical Society-Forum of International Physics. Citation: "For efforts to promote physics research and teaching through collaboration, mentoring, and philanthropy in several third-world countries, and in particular for her promotion, as both an advocate and role model, of Muslim women scientists.", 2013
- "CSWP Woman Physicist of the Month", American Physical Society, March 2013
- Elected member of the Executive Committee, Forum of International Physics of APS, 2012-2014
- APS Fellow, 2006 - Citation: "For seminal contributions to studies of photoionization and recombination of multicharged atomic systems fundamental to atomic physics and plasma physics and pioneering calculations of remarkable complexity on astrophysically significant processes."
- APS travel grant for conference presentation by a graduate student, DAMOP of APS, University of Oregon-Eugene, Oregon, 1986
- **The Ohio State University (OSU):**
- 24. OSU podcast "Voices of Excellence" features Sultana as "Sultana Nahar: Eye on the Sky" with introduction below, July 2025
- "Sultana Nahar, research professor in the Department of Astronomy and 2025 recipient of the William Fowler Award for Research from the Eastern Great Lakes Section of the American Physical Society, discusses her innovative research in atomic astrophysics, including her notable contributions to the NORAD atomic database and the book Atomic Astrophysics and Spectroscopy. She explores the interdisciplinary bridge between physics and astronomy, explaining how her work helps understand astrophysical plasmas and their applications. Profs Staley and Nahar review her work detecting extraterrestrial life through phosphorus spectroscopy, her unique method of using x-rays in medical applications derived from black hole studies, and the study of the sun's opacity for better astronomical standards."
- 23. 2025 OSU Student Life Leadership Award: "Outstanding Student Organization Advisor Award", (2 awards out of 1400 organizations). CITATION: "Dr. Sultana Nahar, a Research Professor in the Department of Astronomy, is a dedicated physicist who goes above and beyond the call of duty in her service to students, including by advising the International Society of Muslim Women in Science here at Ohio State. As an advisor, Dr. Nahar is always available and proactive, ensuring that events are well-organized, and students have the guidance they need to grow as leaders. From advising on program logistics to personally funding gaps in resources, Dr. Nahar's commitment is unwavering. She helps to connect students to meaningful opportunities for

networking and mentorship. Dr. Nahar actively promotes STEM engagement, advocating for students at OSU and beyond. Her leadership has been instrumental in sustaining and growing the organization, ensuring its long-term success.”

- 22. Middle East Studies Center news story, Sep 23: "Professor Sultana Nahar's Research and Educational Collaborations Make OSU STEM Resources Visible in the Middle East", College of Arts and Sciences, Middle East Studies Center, 2024
- 21. Official Appreciation for Middle East work by the Director, Middle East Studies Center, OSU, July 2024
- 20. Featured as recognition in "Hidden Figures: Women in Science" in celebration of the International Day of Women and Girls in Science on Feb 11, 2023 by the Office of Equity, Diversity, and Global Engagement of College of Education and Human Ecology, The Ohio State University, 2023, - Web feature "Women in Science: Sultana Nahar"
- 19. OSU President K. Johnson's congratulatory message for the TWAS Fellowship in her weekly highlights news report "Notes from a Fellow Buckeye" section "Celebrating success" (p.3) to the whole OSU community, December 14, 2022
- 18. Featured in "New Chapter of International Society of Muslim Women in Science Inaugurated", Middle East Studies Center webpage News, OSU, Nov 7, 2022
- 17. Leadership award for outstanding advisor in "Student Organization Individual Contribution Award for Advisors", Office of Student Life, OSU, 2022
- 16. On August 25, 2021, Nahar organized and hosted the the program "Admission Adda with the Ohio State University" of EducationUSA for Bangladeshi students and researchers (zoom platform and facebook streaming), US Embassy in Dhaka, Bangladesh. It was an OIA news "Ohio State and EducationUSA host information session for Bangladeshi students" on Sep 9, 2021
- 15. OSU 2-Ruby Silver Pin Service Recognition honoring 30 Years at OSU, December 18, 2020
- 14. Featured along with Pradhan in ASC news story: "Two astronomy faculty launch programs around the world to uplift STEM professionals", OSU, Dec 11, 2019
- 13. Featured in news story of the OSU Office of International Affairs "Astronomy professor awarded adjunct professorship at Cairo University", August 6, 2018
- 12. Featured Nahar and Pradhan as co-founded the STEM Center - OSU OIA News, April 28, 2017: "Indo-US Center of Excellence in STEM-ER is established",  
- OSU Arts and Sciences news, 2017: "Indo-US STEM Initiative Celebrates Success, Announces New Center" (p.2)  
OSU Arts and Sciences news, 2017: "Indo-US STEM Initiative Celebrates Success, Announces New Center" (p.2)
- 11. ENGAGED SCHOLAR recognition of OSU, featured in newspaper THE LANTERN, titled "Ohio State professor connects cultures to promote science", page 1, Year 137, Issue 4, January 24, 2017  
- "Engaged Scholars" is a series highlighting Ohio State faculty who have made an impact in OSU communities through their community-engaged research and teaching
- 10. OSU 1-Ruby Silver Pin Service Recognition honoring 25 Years at OSU, 2015
- 9. "Outstanding Research Mentor Award", Denman Undergraduate Research Forum, 2012
- 8. "Outstanding Staff Award" nomination certificate, College of Arts and Sciences for contributions in establishing the Indo-US STEM Center of OSU and Aligarh Muslim University, OSU 2012
- 7. Featured on OSU "Excellence to Eminence" for "Resonant Nano-Plasma Theranostics"

research, the most significant report of the month with title ‘What Success Looks Like’ at OSU, September 11, 2011

- 6. Featured along with Pradhan OSU press release ”ASTRONOMERS REACH FOR THE STARS TO DISCOVER NEW CANCER THERAPY”, June 22, 2011 (reported over 100 news media)
- 5. Featured as ”Meet the Iron Lady” for research publications on iron ions, the first annual magazine of OSU Astronomy Department for circulation outside, 2004, p.page 21
- 4. Certificate of Appreciation for services, Professional Mentor for minority students, Office of Minority Affairs & Retention Services, OSU, 2005
- 3. Certificate of Appreciation for services, Professional Mentor for minority students, Office of Minority Affairs and Retention Services, OSU, 2002
- 2. Certificate of Appreciation for contributions as University Postdoctoral Fellow, 1990-1991
- 1. University Postdoctoral Research Fellowship Award for Women and Minorities, College of Mathematical and Physical Sciences, The Ohio State University, 1990-1993

**- OSC: Highlights at the Ohio Supercomputer Center:**

- 12. Research is highlighted under ”The Ohio State University” (1 of 2) of ”CLIENT RESEARCH SPOTLIGHTS” in the annual ”OSC 2024-2025 Research Report”, p. 12
  - 11. OSC press release featuring story titled ”Ohio State astronomy researcher unveils the sun’s secrets with OSC support” on the web, October 17, 2024.
  - 10. OSC invitation for a plenary presentation on ”THE IRON PROJECT FOR THE STUDY OF THE SUN: COMPUTATIONS USING HPC OF OSC”, Research Symposium 2024, Ohio Supercomputer Center, Ohio, April 9, 2024
  - 9. Featured in the OSC Annual Report 2020 ”Breaking Barriers Nahar aids female Muslim scientists with supercomputing”, p.16, published in April 2021
  - 8. Featured in OH-TECH press release ”Educating the masses: OSC helping Nahar share computational knowledge in Columbus, around the world”, August 24, 2017
  - 7. Featured in OH-TECH Annual Report article ”HELPING NAHAR SHARE COMPUTATIONAL KNOWLEDGE IN COLUMBUS, AROUND THE WORLD”, p.8-9, September 2017
  - 6. Featured in OH-TECH blog on lecture course in Cairo University ”Recent workshop illustrates OSC’s support”, S.N. Nahar, December 2016
  - 5. Featured along with Pradhan in OSC-OH-TECH profiles of research collaboration at OH-TECH website [https://www.oh-tech.org/profiles/sultana\\_nahar\\_and\\_anil\\_pradhan](https://www.oh-tech.org/profiles/sultana_nahar_and_anil_pradhan), 2014
  - 4. OH-TECH featured blog for the observation of the 2014 Astronomy Day ”Studying Our Star, the Sun”, S.N. Nahar, A.K. Pradhan, OSC website, Columbus, OH, May 10, 2014
  - 3. Featured in ”Noteworthy Research Activities” of OSC Annual Research Report ”Applying High-end X-rays to Cancer Treatment”, p.16, 2010
  - 2. Featured as Iron Lady on OSC Research Highlights of 2009 in article ”High Precision Atomic Astrophysics X-ray research for black holes and in nanotechnology”,
  - 1. Featured along with Pradhan in Ohio Supercomputer Center press release ”X-ray researchers turn focus from black holes to cancer”, Jan 28, 2010 (refers ”Iron Lady”)
- The highlight was featured in i) the 2010 calendar (February 2010 page) as the *ground-breaking studies by the Ohio leading researchers using OSC resources*, and ii) as Highlights of OSC achievements at the 25th Anniversary celebration in OSC, 2013

**- Wayne State University: 11**

- "Distinguished Alumni Award" of 2014, President of Wayne State University, Detroit, Michigan
  - Featured with title "Finding a cancer treatment in space", in dedicated magazine titled "Moments of Discovery" of Wayne State Alumni Magazine, Vol 27, No. 4, Winter 2013
  - "Woman of Wayne Headliner Award" -For "WSU Alumni who have been recognized in the media for their outstanding achievements. To honor extraordinary Wayne State University Alumni who have impacted the community in a positive manner", 2013
  - Guest Speaker of the annual Physics Graduate Research Day, 2012
  - "Women Stars in Physics", Lead Speaker, Special focus session of Women Physicists, 2012
  - Thomas C. Rumble University Graduate Fellowship Award, WSU, Detroit, 1985-1986
  - Thomas C. Rumble University Graduate Fellowship Award, WSU, Detroit, 1984-1985
  - Knoller Fellowship Award in Physics, Dept of Physics & Astronomy, WSU, 1985-1986
  - Knoller Fellowship Award in Physics, Dept of Physics & Astronomy, WSU, 1984-1985
  - Knoller Fellowship Award, Wayne State University, 1979
  - Daniel R. Gustafson Memorial Award to a graduate student for excellence in teaching, 1984
- University of Dhaka, & Bangladesh: 10**
- Fellow, Bangladesh Academy of Sciences (BAS), Expatriate category, "... acting as an ambassador of Bangladesh Academy of Sciences devoted to promoting science and technology, in the country you are working and residing...", 2021
  - Fellow, Bangladesh Physical Society (BPS), "for distinguished research and outstanding contributions in Physics", 2021
  - Shield of Dhaka University for "Teaching a certificate course on Computational Atomic Astrophysics", Department of Physics, presented by the Vice Chancellor, Dhaka University, 2017
  - Medal of Dhaka University and recognized with certificate "For her continuing inspirational and sincere work for promotion of physics research and education in whole Bangladesh", Vice-Chancellor, 2014
  - First Position Award, M.Sc. in Theoretical Physics, (1979), University of Dhaka, Bangladesh
  - Merit Scholarships, M.Sc. 1977-1979, University of Dhaka, Bangladesh
  - First Position Award, B.Sc.Hons. in Physics, 1977, University of Dhaka, Bangladesh
  - Salekunnessa Award for the Best Woman Student in the B.Sc.Hons. examinations, University of Dhaka, 1977
  - Kalidas Merit Scholarships, B.Sc.Hons. 1973-1977, University of Dhaka
  - University Admissions: in Dhaka University in 4 individual Departments (Physics, Mathematics, Statistics, & Chemistry), in Bangladesh University of Engineering and Technology (BUET), in Mymensing Medical College - all through countrywide competitions for each subject
- Up to High School:**
- Merit Scholarship - Central Women's College, H.S.C.- First Division
  - Annual Awards - Academic, Music, Art - throughout school life Class I - Class X, Maniza Rahman Girls High School; S.S.C - First Division with Letters, Dhaka, Bangladesh
- Physics/Astronomy National/International: 50**
- Recognized with ISMWS award for "Best quality of research and leadership activities", 6th International Conference on Molecular Modeling and Spectroscopy" (ICMMS6) of National Research Centre (NRC) of Egypt, Dahab, December 2-6, 2024
  - Award plaque for the A.H. Siddiqi (founder of Industrial Mathematics in India) lecture at the the A. H. Siddiqi Centre for Advanced Research in Applied Mathematics & Physics" (CARAMP) at Sharda University campus, Gr. Noida, India, September 23, 2022



- Honoring with a plaque of Kashmir art on authentic Kashmir paper mashi for contributions in STEM and public lecture by Dean of Academic Affairs and Dean of Science, Islamic University of Science and Technology (IUST), Awantipora, Kashmir, India, September 19, 2022
- Certificate of "Deliberation of the research based course on Atomic Astrophysics and Spectroscopy with computational workshops on the SUPERSTRUCTURE and R-matrix codes II" to global participation" (11 countries), jointly by OSU (OIA Vice Provost) and AMU (Director), 2022
- Centenary 1921-2021 plaque of NED University of Engineering and Technology from Vice Chancellor Prof. Sarosh Lodhi, Pakistan, 2021 (presents the NEDUET centenary stamp and coin introduced by government of Pakistan 2021)
- Certificate of "Deliberation of the research based course on Atomic Astrophysics and Spectroscopy with computational workshops on the SUPERSTRUCTURE and R-matrix codes" to global participation", jointly by OSU (OIA Vice Provost) and AMU (VC), 2021
- Certificate of Recognition "In recognition For Outstanding Efforts and the Successful Completion of the Online Research Based Course on ATOMIC ASTROPHYSICS AND SPECTROSCOPY with computational workshops", University of Chouaib Doukkali University, El Jadida, Morocco, December 2020
- Shield of Quaid-Azam University, for Cooperation, Prof. Raheel. Physics Department, Islamabad, Pakistan 2020
- Cinar Leaf Shield of Azad Kashmir University, Prof. Rafique. Physics Department, Muzaffarabad-Kashmir, Pakistan 2020
- Shield of Beni-Suef University by the President, Beni-Suef, Egypt, 2018
- Medal of Faculty of Science, Department of Physics, Helwan University, Egypt, 2018
- Symbolic Chinar Leaf Shield of University of Kashmir, India, 2018
- Selected Guest Speaker through highly competitive panels evaluation for NASA Scientific Colloquium, presentation title "Knowing the universe through atoms", Goddard Space Flight Center - NASA, Greenbelt, USA, December 13, 2017
- Shield of Dhaka University Science Society, Public Nov 4, 2017
- "Shield of MTPR-016" for a keynote speaker and "Medal of Faculty of Science", the 6th international conference on Modern Trends in Physics Research (MTPR), Hurgada, Egypt, December 17-20, 2016
- Shield of Faculty of Science by the Dean honoring International Experts, MTPR-016 ceremony, Cairo University, Egypt, 2016
- Shield of "Guest of Honor" for scientific contributions (first woman recipient), the Arab Conference on Astronomy and Geophysics the 5th Assembly (ACAG-5), National Research Institute of Astronomy and Geophysics (NRIAG), Helwan, Egypt, October 17-20, 2016
- "Shield of Faculty of Science" and certificate of recognition, Dean of Faculty of Science, Cairo University, Citation "for her contributing and supporting the activities of the Faculty of Science, Cairo University", Lecture course with computation workshops, 2016
- Shield of Faculty of Science by the Dean, Helwan University and pennant of the University, Helwan, Egypt, November 7, 2016
- "AMU Victoria Gate memento" in appreciation for all contributions (in an attached letter) of the joint international conference on Nanotechnology and STEM Education and Research for presentations, co-convener, organization etc, Chair of Nanotechnology Center, Aligarh Muslim University, March 12-15, 2016

- Chief Guest, National Science Day celebration, Physics Department, Aligarh Muslim University, India, March 11, 2016
- Golden Dome Shield of the President (highest honor from Cairo University) and Certificate of Recognition for "Her contributing and supporting the activities of Cairo University", President Prof Gaber Nassar and Vice President of Research Prof Gamal Esmat, Cairo University, Giza, Egypt, April 15, 2015
- Shield of Celebration of 2015 International Year of Light and Certificate of Recognition for "Outstanding effort for contributing and supporting the activities of the society", at the annual convention of Topical Society of Laser Sciences (TSLs) celebrating the Year of Light, Keynote speech "The Sun. Allah's Source of Radiation", April 8, Egypt, 2015
- Shield of Faculty of Science by Dean Prof Elsayed Fahiem and Certificate of Recognition for "Her contributing and supporting activities of Faculty of Science, Cairo University", Giza, Egypt, April 18, 2015
- The only invited honorary participant in the group of Deans of Faculty of Science and honored faculty of year 2015 Professor Lotfia El Nadi to lead the parade of graduates and distribute certificates in the Main dome auditorium, Cairo University, Egypt, March 30, 2015
- Medal of National Research Institute of Astrophysics and Geophysics (NRIAG), President Prof. Abo El-Ela Amin Mohamed, Helwan, Egypt, April 8, 2015
- Shield of Taibah University by President Dr. Adnan Almazroa with citation "Congratulations on delivering an outstanding talk during your visit to Taibah University. Truly speaking your topic was timely and your perceptions were sound pragmatic and thought provoking and the audience were fascinated. Therefore in recognition to your excellent services rendered to the cause of education, please accept this plaque as a token of our appreciation and gratitude", Saudi Arabia, April 1 2014. The three days program was written in a poem by a university official
- Medal of Dammam University" and certificate of recognition, Dean of College of Engineering, Dammam University, Saudi Arabia, April 2014
- Shield of Jagannath University, "Recognition for contributions to science", Vice Chancellor, Jagannath University, Dhaka, Bangladesh, 2014
- Recognition by symbolic Kashmir Samovar for "Contributions in Science", Vice Chancellor Professor Talat Ahmad, University of Kashmir, India, 2014 (media coverage)
- Memento of Aligarh Nano-IV International for an invited speaker, Founder of Nanotechnology Center Professor A. Naqvi, India, 2014
- i) "Shield of MTPR-014" & certificate, 5th Intl conf. on Modern Trend in Physics Research", and ii) Medal of Cairo University, Dean of Faculty of Science, Cairo University, Egypt, 2014
- Inaugurated the new 14 in telescope at Aligarh Muslim University, India, September 17, 2013 (coverage in India Education, AMU News, Two Circles Net news etc)
- "Shield of Faculty of Science" and appreciation letter for founding "STEM program in Physics, and Excellence, devotion and care in the lecture course provided during Spring 2013", Cairo University, Egypt, March 2, 2013
- "Highest Honor Gold Medal of TSLs" (same as given to Nobel Laureate Ahmed Zewail), 25th Anniversary of the Topical Society of Laser Sciences, Egypt, (broadcast with interview by Egyptian national TV NILES, Arts and Sciences News of OSU, APS-FIP Newsletter, Canadian Bengali Times, etc);
- Citation: "Due to your activities in the field of advanced science and technology, which employs Atomic Spectroscopy, in the Astrophysical Fields", 2012

- Golden Dome Shield of Cairo University Research” by Vice President of Research and Graduate Studies Professor Gamal Esmat, for the MOA with OSU and other research cooperation with Cairo University, April 8, 2012, Egypt (Egyptian newspaper and Cairo University YouTube: -<http://www.youtube.com/watch?v=lUrMWSbfzTE>, OSU ”Middle East Studies Bulletin”, Spring 2012 and Fall 2012 issues)
- Honorary ”Shield of UFLTA12” and Certificate of Appreciation, 4th International Workshop on Ultra Fast Laser Technology and Applications, NILES and Luxor, Egypt, April 8-12, 2012
- Memento of Appreciation award for an Invited Speaker, 3rd International Conference on ”Current Development in Atomic, Molecular, Optical, & Nano Physics with Applications”, New Delhi, India, December 14-16, 2011
- Certificate of Appreciation, Topical Society of Laser Sciences, Egypt in recognition ”Of extensive collaboration within all our International Meetings concerning Ultra Fast Laser Technology and Applications UFLTA, as well as all the International Conferences on Modern Trends in Physics Research. She was introducing important modern aspects encountered in the field of Atomic Physics, Plasma Physics, and remarkable calculations of opacities initiated in High Power Laser Interactions Simulating Important Astrophysical Phenomena”, October 2011
- Certificate of Appreciation. Egyptian Physical Society, Citation: In recognition ”of extensive contributions to studies of photoionization and recombination of multi-charged atomic systems fundamental to atomic physics and plasma physics and pioneering calculations of remarkable complexity on astrophysically significant processes.”, October 2011
- Certificate for the 2nd ”Radha Gobinda Chandra Public Lecture in Astronomy” lecturer; Citation: ”Honorable Dr. Sultana N. Nahar in Appreciation for contributions for popularizing Astronomy and charitable activities in Bangladesh”, Bangladesh Astronomical Society, July 28, 2011 (announced & reported in newspaper)
- Recognition plaque for research success and achievements, Vice Chancellor Professor Mesbahuddin Ahmed, Jagannath University, Dhaka, Bangladesh, July 24, 2011
- Medal of Honor, 4th Intl conference on *Modern Trends in Physics Research*, Egypt, 2010
- Certificate of High Appreciation for contribution in MTPR-010, Egypt, 2010
- Honorary ”Shield of TSLS” for physics research contributions, Topical Society of Laser Sciences (TSLS), 20th Anniversary celebration, Egypt, 2008
- Certificate of High Appreciation for the efforts given to the international conference MTPR-08, April 6-10, 2008, Cairo University, Egypt
- Honorary plaque for keynote speech of session ”Global warming and Food Crisis” and other contributions, Department of Management Studies, University of Chittagong, Bangladesh, 2008
- Honorary plaque by Department of Physics for Astrophysics seminar and various contributions, Jahangirnagar University, Bangladesh, August 2008
- Enlisted in ”Pioneer Women of Bangladesh” (as the first Astrophysicist), Foundation of Voice of the Voiceless Women, Bangladesh, featured in 12 First Women calendar 2008
- ”Our Pride Award” by Bangladesh Association of Central Ohio (BACO), December 29, 2007, ”In Recognition of Outstanding Achievements in the Field of Astronomy and Physics”
- Shield of N-TV, for a Successful Scientist, N-TV of Bangladesh, 2005
- Featured in a number of Wikipedia
- **Cancer Therapy Research: 5**
- Memento and certificate for the invited lecture ”X-RAY ABSORPTION BY HEAVY ELEMENT COMPOUNDS AND APPLICATIONS IN RADIATION THERAPY”, Intl Conf on

Emerging Trends in Biomedical Sciences (ETBS), Aligarh Muslim U, India, March 6-8, 2016

- Chapter 5: "Dreaming of the Star Treatment" in the book "Science Unshackled" (Renee James, Fall 2014, Johns Hopkins U press)) describes astronomical study and leads to cancer treatment that we propose and includes section 35 "The Iron Lady and the Gold Standard"

- "What has astronomy done for you lately?", Cancer research RNPT findings as one of the four important impacts of Astronomy to human life (i) GPS, ii) wireless Internet, iii) RNPT, and iv) laser surgery of eyes), Astronomy Magazine, May 2012, p.31-35

- Press release worldwide (over 100) of method "Resonant Nano-Plasma Theranostics (RNPT)" for cancer treatment, including "Physics Inventions", "Cancer Discovery", "Innovations of Nano Patent", "Discovery News", "MSNBC.com", "Science Daily", "TechColumbus", "Rockefeller News", "Chicago Chronicle", etc.

11 Interviews by CBS, The Daily, AnandBazaar Patrika, Dispatch, Philadelphia Inquirer, etc

#### **- International STEM Education and Research: 23**

- Memento of "Guest of Honor", Joint International Women's Day symposium of Indo-US STEM Education and Research Center of OSU-AMU and International Society of Muslim Women in Science, Aligarh Muslim University, India, March 30, 2024

- Recognized in the founding stone as a co-founder of the Indo-US STEM Education and Research Center of the Ohio State and Aligarh Muslim Universities, inaugurated by the Vice Chancellor T. Mansoor of AMU, India, 2022

- Recognition crest for US-Bangladesh collaboration for education and research, Bangladesh Physical Society (BPS), Annual BPS conference, May 2022

- Recognition shield for fundamental contributions at Indo-US APJAK STEM Education and Research Center, Symposium on "International collaboration and prospect in STEM Education and Research", Aligarh Muslim University, India, March 5, 2020

- Recognition shield for the coordinator and lecturer, LEAP ("Leadership for Academicians Programme" of government of India) workshop at OSU, September 9 -14, 2019

- Memento from Marine Sciences of Annamalai University, Dean of the Faculty Prof. Muthu Srinivasan, LEAP (Leadership of Academicians Programme), Sep 8-14, 2019

- Trophy and certificate "For leadership, lecturing and inspiring participants of the Women in STEM Roadshow workshops of the US Department of State held in Aligarh, Delhi, Hyderabad, Kolkata, Kurnool, Patna in India during February 2018. We wish Sultana continued contribution for the project", Prof. Gifty Ako-Adounvo, Acting Vice President of Global Strategies and International Affairs of OSU, 2018, Ceremony of completion of 9 workshops of Women in STEM Roadshow

- "Certificate of Appreciation" for delivering the "Atomic Astrophysics with Computational workshops", Department of Physics, Rajshahi University, Rajshahi, Bangladesh, 2017

- Kashmiri samovar gift, for research and education work in STEM, Vice Chancellor Prof Andrabi, University of Kashmir, India, 2017

- Appreciation token for the OSU STEM Education and Research Faculty Training Project, Indian Deputy Chief in Washington DC, August 19, 2016

- Memento of University Monogram and letter of appreciation by Vice Chancellor Prof. Khursheed Andrabi, In appreciation of the STEM Education and Research at University of Kashmir, India, March 2016

- Trophy of Appreciation, Office of Research and Graduate Studies Affairs, IUG Annual Research Celebration Day, Islamic University of Gaza, Palestine, April 18, 2016

- "Gift of Appreciation" (a fine Kashmiri shawl) for contributions on STEM Education and Research at Aligarh Muslim University, Professor Alim Naqvi, Founder of Nanotechnology center of AMU, Keynote session where Nahar was introduced by Prof. Lotfia El Nadi with appreciation of her work at Cairo University, International conference MTPR-014, Egypt, December 15-19, 2014
- Indian Emblem trophy "for Scientific contributions & role in STEM education & research in India under Obama-Singh project", Vice Chancellor General Shah, Aligarh Muslim U, 2014
- Sealed plaque, jointly by AMU-DUTY Society and Indian Society of Industrial and Applied Mathematics (ISIAM), in recognition of contribution to scientific education in India via Obama-Singh 21st Century Knowledge Initiative Award, 2013 (Guest of honor public lecture)
- "Bab-e-Syed" plaque, Vice Chancellor General Shah of Aligarh Muslim University, in recognition for contribution for Obama-Singh 21st Century Knowledge Initiative Award of USIEF for the partnership between OSU and AMU, India, 2013 (Guest of Honor of the program), Sep 2013
- "Shield of Faculty of Science", Al-Azhar University, in appreciation for "promotion of physics research and education", Dean, Faculty of Science, Cairo, Egypt, 2014
- "Distinguished Guest Plaque", Higher Education Symposium, Odisha Development Day, Odisha Society of Americas, July 3, Columbus, OH, 2014
- FIP Spring 2013 newsletter, Article highlighting work on development of Physics in Bangladesh "Recent Visit to Bangladesh Universities and Physics Prizes"
- Letter of Appreciation for contribution of books, President Hatem Odah, National Research Institute for Astronomy and Geophysics (NRIAG), Helwan, Egypt, 2016
- Certificate letter of Appreciation for contribution of books, Astronomy Chair, Al-Azhar University, Cairo, 2013, Egypt
- Certificate letter of Appreciation for contribution of books, Physics Chair, Al-Azhar University, Cairo, 2013, Egypt
- Certificate letter of Appreciation for contribution of books, Chair, Astronomy and Meteorology, Cairo University, Giza, 2013, Egypt
- Certificate letter of Appreciation for contribution of books, Physics Chair, Ain Shams University, Cairo, 2013, Egypt
- Certificate letter of Appreciation for contribution of books, Dean of Faculty of Science, Suez Canal University, Ishmylia, 2013, Egypt
- Certificate letter of Appreciation for contribution of books, Dr. Adel Abdel-Momen, Dean, Faculty of Science, Beni-Suef University, Beni-Suef, Egypt, October, 2012
- Certificate letter of Appreciation for contribution of books, Dr. Hassan M. A. Naboohdah, Dean, University Libraries, UAE University, Al Ain, United Arab Emirates, March 27, 2012
- Official Letter of Appreciation for books contribution from Prof. Shaheen, Head of Department of Library & Information Service, Cairo University Library, Egypt, 2010
- Honorary plaque of Appreciation for Contributions in education, Maniza Rahman Girls High School, Dhaka, Bangladesh, March, 2010
- Honorary Crest of Appreciation for contributions in excellence in education, Maniza Rahman Girls High School, Dhaka, Bangladesh, 2003, 2004, 2005, 2006, 2007, 2008, 2009
- Certificate of Appreciation, E-Mentoring Network for Diversity in Engineering & Science, 2009
- Certificate of Appreciation, E-Mentoring Network for Diversity in Engineering & Science, 2010
- **Role Model of a Woman/Muslim Scientist: 39**
- 40. "Pioneer Woman", Indo-US STEM Education and Research Center of OSU and Aligarh Muslim University in India, International Women's Day Symposium, March 30, 2024 • 39. Nahar's

- statements on science in an interview directed her life path was highlighted by presenter Bushra Gul of University of Karachi at the International Women's Day Symposium, March 30, 2024
- 38. Featured as "Women of Wisdom" in celebrating the International Women's Day and month of March, IEEE-PNU Student Branch, Princess Norah University, Riyadh, Saudi Arabia, March 2024 (X-page and annual magazine)
  - 37. Featured in series "Bangladesh teachers in US universities" (translation from Bengali) who are carrying out research, Bengali weekly newspaper "Bangla", New York, January 27, 2024
  - 36. "Honoring Prof. Sultana N Nahar" plaque, recognition at celebration of the 1st anniversary of Bengali newspaper "Ohio Sangbad", Oct 21, 2023
  - 35. National Science Day 2023 project presentation of "FUTURE PHYSICISTS!" with one past and one present scientists, Ibn Hazem and Sultana Nahar, by the 6th grade students, IQRA Primary School, 127 Park Hill, Clapham, London SW4 9PA
  - 34. Guest of Honor Memento, Symposium on celebration of the International Women's Day organized by the Indo-US APJAK STEM Education and Research Center and Society of Muslim Women in Science, Aligarh Muslim University, India, March 29, 2023
  - 33. Presentation of "Sultana Nahar" under the project of featuring a woman scientist and research contributions to science in honor of "Women's History Month 2023" in March, by Teliyah Jenkins (10th grade), Iberville Math, Science, & Arts Academy, Louisiana, April 2023
  - 32. Chief Guest, "Exchange information for improvement of monthly newspaper Ohio Sanbad (Bengali)", Bengali newspaper "Ohio Sangbad" in Ohio, Carriage Place, Columbus, October 30, 2022
  - 31. Chief Guest, Inauguration of the first Bengali newspaper "Ohio Sanbad" for communities of Bangladeshi and Indian Bengali Americans in Ohio, BACO Center, August 8, 2022
  - 30. Featured with two other women in STEM in "Islamic Horizons" magazine of Islamic Society of North America (ISNA), July/August 2022 issue: "Muslim Women in STEM: A Minority Within a Minority" (p.28-29) and on its webpage
  - 29. "For her contribution for understanding the Sun, and strengthening ISMWS with new chapters at OSU and internationally", Celebration of International Women's Day, Indo-US APJAK STEM Education and Research Center of OSU and AMU, and International Society of Muslim Women in Science, March 26, 2022
  - 28. A role model with 4 others in Astronomy, Syeda Lammim Ahad (Ph.D. candidate in Astronomy, Leiden University, Holland), celebration of "Women in Space in World Space Week 2021" presentation, October 9, 2021
  - 27. OSU OIA-India Gateway "celebrated the visibility and achievements of Ohio State women faculty and alumnae via social media posts" and featured 5 Ohio State faculty (including atomic physicist Sultana Nahar in the College of Arts and Sciences) "who are at the forefront of their fields and are engaged with partners in India", International Women's Day 2021 (OIA-OSU post, April 2, 2021)
  - 26. Certificate of Recognition for her contributions as a role model for Knowledge, inspiration, and intellectual growth, International Women's Day, Indo-US APJ Abdul Kalam STEM Education and Research Center of OSU-AMU (Aligarh Muslim University, India), March 20, 2021
  - 25. Featured among the prominent female scientists in the UGC (University Grant Commission) lecture "Women in STEM Subjects" under the National Women Studies course participated by University members from all over India covering all areas and broad casted held at UGC Center at Aligarh during Sep 3 - 18, 2020



- 24. "Featured Physicist Activity Sultana Nahar", Prof. Dimitri Dounas-Frazer, Course "Matter and Energy in Physical System", Western Washington University, USA, Spring 2020
- 23. Featured at Lotus STEMM stories: "Rendezvous with Sultana N Nahar", October 15, 2019
- 22. Featured woman of Voice of America Bangla news "Naree Kantho: Conversation with scientist Dr. Sultana Nurun Nahar" (video news and featured article at VOA website), April 25, 2019
- 21. Featured Physicist Activity: "Dr. Sultana Nurun Nahar", Prof. Dimitri Dounas-Frazer, Course "Matter and Energy in Physical System", Western Washington University, USA, Spring 2019
- 20. Guest of Honor: Certificate citation "A lady of vision and action" and trophy, International Women's Day, Celebration by Women in STEM Roadshow program, Aligarh Muslim University, India 2018
- 19. Recognition plaque, "All Students of West Bengal" at Aligarh Muslim University, Celebration of International Mother Language Day, Feb 25, 2018, India
- 18. Feature article in Bangladesh newspaper "Pradham Alo" (wide circulation): "A Source of Inspiration Sultana Nahar", by Dr. Rauful Alam (U of Penn), January 17, 2018
- 17. "Prof. Sultana Nahar: The Lady with Vision and Action", Sabiha Parveen (Chemistry, AMU), National Seminar on "Global Contribution of Muslim Women in Natural and Social Sciences, College of Education, Aligarh Muslim University, India, November 6, 2017
- 16. Felicitated as Guest of Honor and a Distinguished Guest, Annual Cultural Functions, Begum Sultan Jahan Hall, Aligarh Muslim University, 2017
- 15. Recognition trophy for the Patron and Stitched gift from graduating girls, Certificate ceremony of CREW (Council for Research and Empowerment of Women), Aligarh 2017
- 14. Guest of Honor trophy and Certificate citation: "For her contributions as an international model of a Muslim female scientist for knowledge, inspiration, and intellectual growth", International Women's Day celebration, Aligarh Muslim University, India, 2017
- 13. Inducted to Patron of Council for Research & Empowerment of Women (CREW) with citation: "In recognition of her contribution to the growth of science & scientific thinking among the women at Global Level", Aligarh, India, March 16, 2016
- 12. Memento and Certificate of Recognition, "For her contributions in Atomic Astrophysics and promoting STEM education and research internationally", Celebration of International Women's Day, Department of Physics, Aligarh Muslim University, India, March 10, 2016  
- Intruding Comment of Convener Prof. Asma of Mathematics "... She has the courage, persistence and power to excel in all fields mostly dominated by men."
- 11. Certificate of Appreciation and gift, "We are honored by and proud of your achievements and representation of Bangladesh in the scientific world. You are our inspiring Hero and as OSU Prof S.A. Akbar says a Legend", Bangladeshi community of Columbus, Celebration of the Victory Day of Bangladesh, December 5, 2015
- 10..Poem in Arabic to welcome her visit at Taibah University, Saudi Arabia, March 2014
- 9. Poems dedicated to her by the inspired students in her atomic astrophysics and spectroscopy course at Aligarh Muslim University, 2014
- 8. Recognition trophy "for promotion as an advocate and role model of Muslim Women Scientist", and Certificate of Recognition "for her contributions as a role model for knowledge inspiration and intellectual growth", Celebration of International Women's Day, Aligarh Muslim University, India, March 11, 2014

- 7. On receiving John Wheatley award of APS: PBC 24 news: "Role model of Muslim women: Dr. Sultana Nurun Nahar", - News BD: "Role model of Muslim women Dr. Sultana Nurun Nahar received American Physical Society Award", - Asian News Broad 24: ""Role model of Muslim women Dr. Sultana Nurun Nahar received American Physical Society Award", November 2012 •
- 6. "Dr. Sultana Nurun Nahar: More Alig than Aligs", An Alig's Armchair, An Aligarh Movement Footnote, Maripat2Aligarh.Blogshot.com, Dec 14, 2011
- 5. Certificate for promoting STEM to the female students, Women Residential College for public presentation, United Arab Emirates U, 2011
- 4. "Dr. Sultana Nahar, The Iron Lady of Mathematical Computations", a modern Muslim pioneer woman scientist, presentation by the female Science students to a university wide event (picture on display in the library), United Arab Emirates University, UAE, December 2009
- 3. Guest of Honor, "International Women's Day" observation, keynote speech "Perspectives of a woman scientist on problems and inspiring women to science", organized by the Progressive Forum in New York, New York, March 18, 2006
- 2. Subject of projects on Muslim woman scientist or Bangladeshi origin scientist by Middle and High school students, California, Texas, New Jersey, OSU in the USA, UAEU, Pakistan
- 1. "Pride of Bangladesh Dr. Sultana Nahar:..." Press release on astrophysics research impact and life, THIKANA (popular Bangla newspaper in the US & Canada), Vol 15, No.6, March 26, 2004
- Modified versions of the THIKANA 2004 article were published by a number of newspapers in Bangladesh; Ittefaq, Prathom Alo etc, 2004
- THIKANA Editor's comment "Dr. Sultana is our pride", listed in the news Highlights of 2004
- Featured in THIKANA a number of times - made OSU known to most Bangladeshi Americans
- In wikipedias: i) "Muslim Astronomers and Astrophysicists of 21st century" (among the 8 listed), CHOWK ilogs, November 1, 2009 (<http://www.chowk.com/ilogs/74478/51363>); ii) Siasat website iii) "Is there Muslim Astronomers or Astrophysicists", Islamic Glory website, in "List of Women Astronomers" wikipedia ([http://en.wikipedia.org/wiki/List\\_of\\_women\\_astronomers](http://en.wikipedia.org/wiki/List_of_women_astronomers)), iv) "Sultana N. Nahar", v) "List of Wayne State University people (under Science section)", vi) "University of Dhaka alumni", vii) "list of Women Astronomers", viii) "Bangladeshi astronomers", ix) "Bengali astronomers", x) "Bengali physicists", xi) "Bangladeshi physicist", xii) "Bangladeshi scientists", xiii) "Bangladeshi Scientists Snipview"

## FEATURED IN ARTICLES/ PRESENTATIONS

**Sultana N. Nahar**

### **iv) Featured in articles/ presentations for scientific contributions: 37**

(web: <https://www.astronomy.ohio-state.edu/nahar.1/scires-publications.html#scifeature>)

1. Research is highlighted under "The Ohio State University" of "CLIENT RESEARCH SPOTLIGHTS" in the "OSC 2024-2025 Research Report", p. 12
2. Astrobites News of AAS, March 21, 2025: "UR: SPECTRA Analysis of Early Universe Galaxies Using JWST Data", Vidit Bhandari presentation at the conference. Research under guidance of A. K. Pradhan and S.N. Nahar
3. OSC press release featuring the story titled "Ohio State astronomy researcher unveils the sun's secrets with OSC support" on the web, October 17, 2024, to be included in the OSC Annual Report for distribution.
4. Featured as "Women of Wisdom", celebrating the International Women's Day and the month of March, IEEE-PNU Student Branch, Princess Norah University, Riyadh, Saudi Arabia, March 2024 - (interview to be published in the Annual magazine)
5. Featured as recognition in "Hidden Figures: Women in Science" booklet in celebration of the International Day of Women and Girls in Science on Feb 11, 2023 by the Office of Equity, Diversity, and Global Engagement of College of Education and Human Ecology, The Ohio State University, 2023, - Web feature "Women in Science: Sultana Nahar"
6. EurekAlert! news release, May 23, 2022: "Modeling Phosphorus Spectra for Extraterrestrial Biosignatures" (4th item) is one of the 5 items in "Newsworthy Talks" section of "Scientists to present the latest in atomic, molecular and optical physics: The 53rd Annual Meeting of the American Physical Society's Division of Atomic, Molecular and Optical Physics" begins May 30 report, and its link to "Collision Strengths and Line Ratios for PII as a Biosignature in Exoplanets (Hoy, Nahar, Pradhan)
7. Featured in section "ACHIEVEMENTS: AWARDS AND RECOGNITION OF FELLOWS" (p.15), Annexure of 7a&b Activities Report of BAS annual report, 2021-2022
8. Featured with two other women in "Muslim Women in STEM: A Minority Within a Minority", Magazine ISLAMIC HORIZONS of Islamic Society of North American (ISNA), issue July/August 2022
9. News of the event "Prof Sultana N Nahar from Ohio State University delivers lecture at NIT Srinagar" was published in 9 news media in Kashmir, India, 2022
10. Featured in the OSC Annual Report 2020 "Breaking Barriers Nahar aids female Muslim scientists with supercomputing", p.16, published in April 2021

11. Featured as a role model with 4 others in Astronomy, Syeda Lammim Ahad (Ph.D. candidate in Astronomy, Leiden University, Holland), "Women in Space World Space Week" presentation, October 9, 2021
12. Featured in Scientia Magazine, Pakistan: "A Glimpse into the Cosmos with Dr. Nahar", September 2020
13. Featured among the prominent female scientists in the UGC (University Grant Commission) lecture "Women in STEM Subjects" under the National Women Studies course participated by University members from all over India covering all areas and broad casted held at UGC Center at Aligarh during Sep 3 - 18, 2020
14. "Featured Physicist Activity Sultana Nahar", Prof. Dimitri Dounas-Frazer, Course "Matter and Energy in Physical System", Western Washington University, USA, Spring 2020
15. Featured woman of Voice of America Bangla news "Naree Kantho: Conversation with scientist Dr. Sultana Nurun Nahar" (video news and featured article at VOA website), April 25, 2019
16. Featured Physicist Activity: "Dr. Sultana Nurun Nahar", Prof. Dimitri Dounas-Frazer, Course "Matter and Energy in Physical System", Western Washington University, USA, Spring 2019
17. Featured news story of the OSU Office of International Affairs "Astronomy professor awarded Adjunct professorship at Cairo University", August 6, 2018
18. Feature article in Bangladesh newspaper "Pratham Alo" (wide circulation): "A Source of Inspiration Sultana Nahar", by Dr. Raiful Alam (U of Penn), January 17, 2018
19. OH-TECH press release feature "Educating the masses: OSC helping Nahar share computational knowledge in Columbus, around the world", August 24, 2017
20. OSC Annual Report 2016-2017 article "OSC HELPING NAHAR SHARE COMPUTATIONAL KNOWLEDGE IN COLUMBUS, AROUND THE WORLD", p.8-10 (p.10-12 on webfile), OH-TECH 2017
21. "Prof. Sultana Nahar: The Lady with Vision and Action", Sabiha Parveen (Chemistry, AMU), National Seminar on "Global Contribution of Muslim Women in Natural and Social Sciences, Aligarh Muslim University, India, November 6, 2017
22. Featured as an implicit co-founder in- AMU News, April 2017: "AMU establishes Center of Excellence in STEM-ER - AMU News, April 2017 "AMU establishes Centre of STEM-ER in consonance with Ohio State University" -OSU OIA News, April 28, 2017: "Indo-US Center of Excellence in STEM-ER is established" - OSU Arts and Sciences news, 2017: "Indo-US STEM Initiative Celebrates Success, Announces New Center"
23. Featured in OH-TECH blog on lecture course in Cairo University "Recent workshop illustrates OSC's support", S.N. Nahar, December 2016

24. Featured in Chapter 5: "Dreaming of the Star Treatment" of the book "Science Unshackled" (Renee James, Fall 2014, Johns Hopkins U press) describes astronomical study that led to cancer treatment that we proposed and includes section 35 "The Iron Lady and the Gold Standard", 2014
25. Featured along with Pradhan in OSC-OH-TECH profiles of research collaboration in May 20214 at OH-TECH website  
[https://www.oh-tech.org/profiles/sultana\\_nahar\\_and\\_anil\\_pradhan](https://www.oh-tech.org/profiles/sultana_nahar_and_anil_pradhan), 2014
26. Featured with title "Finding a cancer treatment in space", in dedicated magazine titled "Moments of Discovery" of Wayne State Alumni Magazine, Vol 27, No. 4, Winter 2013
27. Featured her work in the article describing cancer research findings (RNPT) as one of the four important contributions of Astronomy to human life "What has astronomy done for you lately?" in (4 items: GPS, wireless internet, RNPT, and laser surgery of eyes), Astronomy Magazine, p.31-35, May 2012
28. Featured in "Excellence to Eminence" recognition (featuring the most significant news of the month at OSU) with title "What Success Looks Like", September 11, 2011, Ohio State University - on research news of x-rays in medical treatment "Astronomers reach for the stars for new cancer therapy", September 11, 2011, Ohio State University, onCampus article: "Astronomers reach for the stars for new cancer therapy", July 13, 2011
29. OSU press release: "ASTRONOMERS REACH FOR THE STARS TO DISCOVER NEW CANCER THERAPY", Ohio State University, June 22, 2011 (reported over 100 news media)
30. OSC Annual Research Report,: Biomed Research summary "Applying High-end X-rays to Cancer Treatment" published among the Noteworthy Research Activities (p.16), 2010
31. Ohio Supercomputer Center (OSC) press release "X-ray researchers turn focus from black holes to cancer", Columbus, OH, January 28, 2010 (refers "Iron Lady")
32. In OSC highlighted feature on i) "2009 Research Highlights by Ohio Supercomputer Center (OSC)" (refers Nahar "Iron Lady"), ii) calendar page (February 2010) on "High Precision Atomic Astrophysics X-ray research for black holes and in nanobiotechnology" featuring *ground-breaking studies by the Ohio leading researchers using OSC resources*, 2010 iii) Highlighted in OSC Achievements at the 25th Anniversary of OSC, 2013
33. Featured with a short bio in the list of "Pioneer Women of Bangladesh" as the "First Female Astrophysicist", Voice of the Voiceless Women of Nareekantha Foundation of Bangladesh, featured in 12 First Women calendar 2008, Bangladesh; news published in "onCampus": Ohio State's faculty/staff news, (Recognition section, alphabetical order) June, 2008
34. Featured by Thikana (Bengali newspaper published in New York) editor on research and related issues after interview, article spanning three pages, first week issue of weekly newspaper Thikana in April, 2006

35. Featured in an article on educational and charity activities in Bangladesh, Bengali newspaper Thikana, New York, 2005
36. OSU: Featured in the first annual magazine of the Astronomy Department (for circulation outside): "Meet the Iron Lady" on Sultana's research on irons, p. page 21, 2004
37. Featured in "Pride of Bangladesh Dr. Sultana Nahar: ...", Top press release on the front page detailing astrophysics research impact and life, THIKANA (the most widely circulated Bangla newspaper in the US and Canand), Vol 15, No.6, March 26, 2004
  - THIKANA Editor's comment: "Dr. Sultana is our pride", in the news Highlights of 2004
  - Modified versions of the 2004 THIKANA article were published by a number of newspapers in Bangladesh; Ittefaq, Prathom Alo etc, 2004
  - Featured with news in THIKANA a number of times - have made OSU known to most Bangladeshi Americans
38. In various Wikipedia: i) "Muslim Astronomers and Astrophysicists of 21st century" (among the 8 listed), CHOWK ilogs, November 1, 2009 (<http://www.chowk.com/ilogs/74478/51363>); ii) Siasat website iii) "Is there Muslim Astronomers or Astrophysicists", Islamic Glory website, in "List of Women Astronomers" Wikipedia ([http://en.wikipedia.org/wiki/List\\_of\\_women\\_astronomers](http://en.wikipedia.org/wiki/List_of_women_astronomers)), iv) "Sultana N. Nahar", v) "List of Wayne State University people (under Science section)", vi) "University of Dhaka alumni", vii) "list of Women Astronomers", viii) "Bangladeshi astronomers", ix) "Bengali astronomers", x) "Bengali physicists", xi) "Bangladeshi physicist", xii) "Bangladeshi scientists", xiii) "Bangladeshi Scientists Snipview"



## Sultana N Nahar

### v) Featured in articles/ presentations for STEM education and Research contributions: 14

(web: <https://www.astronomy.ohio-state.edu/nahar.1/stemer-publications.html#featured>)

1. OSU Leadership and Community Engageent of Office of Student Life webpage "Sultana Nahar, Title: Student Organization Outstanding Advisor Award", OSU 2025
2. Middle East Studies Center news story, Sep 23: "Professor Sultana Nahar's Research and Educational Collaborations Make OSU STEM Resources Visible in the Middle East", College of Arts and Sciences, Middle East Studies Center, OSU 2024
3. Featured in series "Bangladeshi teachers in US universities" (translation from Bengali) carrying out research, Bangla weekly newspaper, New York, January 27, 2024
4. Featured in OSU Middle East Studies Center news webpage article "New Chapter of International Society of Muslim Women in Science Inaugurated", Nov 7, 2022
5. Featured as OSU Office of International Affairs-India Gateway celebrated the visibility and achievements of Ohio State women faculty and alumnae via social media posts and featured 5 Ohio State faculty (including atomic physicist Sultana Nahar of College of Arts and Sciences) "who are at the forefront of their fields and are engaged with partners in India", International Women's Day 2021 (OIA-OSU post April 2, 2021)
6. Featured along with Pradhan in ASC news story: "Two astronomy faculty launch programs around the world to uplift STEM professionals", OSU, Dec 11, 2019
7. Featured at Lotus STEMM stories: "Rendezvous with Sultana N Nahar", October 15, 2019 (LOTUS is a web-based platform featuring women in STEMM from South Asia)
8. SPAN Magazine (US Department of State): "Training Future Teachers", January/February 2018
9. Featured in a number of Urdu newspapers as the Director of the program "Women in STEM Roadshow" conducted in India, 2018
10. Featured as an implicit co-founder in - AMU News, April 15, 2017: "AMU establishes Center of Excellence in STEM-ER  
- AMU News, April 24, 2017: "AMU establishes Centre of STEM-ER in consonance with Ohio State University"  
- OSU OIA News, April 28, 2017: "Indo-US Center of Excellence in STEM-ER is established"  
- OSU Arts and Sciences news, 2017: "Indo-US STEM Initiative Celebrates Success, Announces New Center" (p.2)

11. Recognized in "ENGAGED SCHOLARS" series of OSU newspaper THE LANTERN: with feature "Ohio State professor connects cultures to promote science", page 1, Year 137, Issue 4, January 24, 2017  
- "Engaged Scholars" is a series highlighting Ohio State faculty who have made an impact in OSU communities through their community-engaged research and teaching.
12. Featured in FIP news: "Sultana Nahar, FIP Executive Committee Member, Winner of the John Wheatley Award", p. 11, Spring 2013
13. Featured in FIP APS newsletter: "Newly Elected to the FIP Executive Committee", p.7-8, Spring 2012
14. Featured in FIP-APS web profile "Sultana N. Nahar The Ohio State University Candidate for Member-at-Large", 2012