HOMEYRA AKTER, PhD

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Google Scholar
ResearchGate

NO. OF PUBLICATIONS AND AWARDS

1. International Journals, Number of publications - 5
2. International Conferences, Number of publications - 3
3. National Conferences, Number of publications -1
4. Number of award - 7

EDUCATION

- **Ph.D. in Interdisciplinary Intelligent Systems Engineering** (2020-2023)
  Department of Electrical & Electronic Engineering
  University of the Ryukyus, Okinawa, Japan
  Research Areas: Power System Optimization
  Grade: CGPA 4.0 out of 4.0
  Graduation date: September 19, 2023
  Medium of Instruction: English

- **Master of Engineering in Electrical and Electronics Engineering** (2018-2020)
  University of the Ryukyus, Japan.
  Research Areas: Power System Optimization
  Grade: CGPA 3.93 out of 4.0
  Graduation date: September 16, 2020
  Medium of Instruction: English

- **B.Sc. in Computer Science & Engineering** (2014-2018)
  University of Asia pacific, Dhaka, Bangladesh
  Grade: CGPA 3.86 out of 4.0
  Graduation date: April, 2018
  Merit position: 3rd
  Medium of Instruction: English

- **HSC in Science group**
  Govt. Azizul Haque College, Bogura
  Grade: GPA 5.00 out of 5.00
  Graduation year: 2012

- **SSC in Science group**
  Bogura Govt. Girls' High School, Bogura
  Grade: GPA 5.00 out of 5.00
  Graduation year: 2010

ACTIVITY AND EXPERIENCES

- **Assistant Professor**, University of Asia Pacific, Bangladesh – 07/2024 – Present
- **Training on Outcome-based Education (OBE) –** 23-24 May, 2025
- **Hands-on Orientation for Tier-1 Program Evaluators** – 29-30 August, 2025
- **Research Assistance**, University of the Ryukyus – 10/2020 – 09/2023
- **Event Co-Chair and Organizing Committee**, IES 2019 Symposium, Japan

RESEARCH INTEREST

Optimization, ML for Big Data Analysis, AI for Multi-Agent Based Decision Making, Sustainability Analysis, Energy efficient computing, Microgrid, Smart grid, Power Systems Modeling, Renewable Energy, Demand Response, Programming Language and Algorithm.

PUBLICAION LIST

1. Journal Paper

i. **Homeyra Akter,** Harun Or Rashid Howlader, Fariha Mamud, Ahmed Y. Saber, Atsushi Yona, and Tomonobu Senjyu. (2024). Optimal sizing and performance analysis of hybrid microgrid for remote island of developing country: Effect of sustainable parameters, benefits and installation barriers. *Franklin Open*, 100074.

ii. **Homeyra Akter,** Harun Or Rashid Howlader, Ahmed Y. Saber, Paras Mandal, Hiroshi Takahashi, and Tomonobu Senjyu. (2021). Optimal Sizing of Hybrid Microgrid in a Remote Island Considering Advanced Direct Load Control for Demand Response and Low Carbon Emission. *Energies*, *14*(22), 7599.

iii. **Homeyra Akter,** Harun Or Rashid Howlader, Akito Nakadomari, Md. Rashedul Islam, Ahmed Y. Saber, and Tomonobu Senjyu. (2022). A Short Assessment of Renewable Energy for Optimal Sizing of 100% Renewable Energy Based Microgrids in Remote Islands of Developing Countries: A Case Study in Bangladesh. *Energies*, *15*(3), 1084.

iv. Makoto Sugimura, Mahmoud M. Gamil, **Homeyra Akter,** Narayanan Krishnan, Mamdouh Abdel-Akher, Paras Mandal and Tomonobu Senjyu. (2020). Optimal sizing and operation for microgrid with renewable energy considering two types demand response. *Journal of Renewable and Sustainable Energy*, *12*(6), 065901.

v. Md. Rashedul Islam, **Homeyra Akter,** Harun Or Rashid Howlader, and Tomonobu Senjyu. (2022). Optimal Sizing and Techno-Economic Analysis of Grid-Independent Hybrid Energy System for Sustained Rural Electrification in Developing Countries: A Case Study in Bangladesh. *Energies*, *15*(17), 6381

2. International Conference Paper

i. **Homeyra Akter,** Harun Or Rashid Howlader, Ahmed Y. Saber, Ashraf M. Hemeida, Hiroshi Takahashi, and Tomonobu Senjyu (2021, August). Optimal Sizing and Operation of Microgrid in a Small Island Considering Advanced Direct Load Control and Low Carbon Emission. In *2021 International Conference on Science & Contemporary Technologies (ICSCT)* (pp. 1-5). IEEE.

ii. **Homeyra Akter,** Harun Or Rashid Howlader, Ahmed Y. Saber, Fariha Mamud and Tomonobu Senjyu (2020, December). An Optimal Techno-Economic Assessment under Transactive Energy Framework. In *2020 23rd International Conference on Computer and Information Technology (ICCIT)* (pp. 1-5). IEEE.

iii. Harun Or Rashid Howlader, **Homeyra Akter,** Ahmed Y. Saber, Paras Mandal, Narayanan Krishnan, and Tomonobu Senjyu (2019, May). Independent Energy Storage Systems can Minimize Uncertainty of Profit for Retailers in ISO Market. In *2019 IEEE International Conference on Electro Information Technology (EIT)* (pp. 584-589). IEEE.

3. National Conference Paper

i. **Homeyra Akter,** Harun Or Rashid Howlader, Ahmed Y. Saber, and Tomonobu Senjyu (2019. December). Renewable Energy Optimization with Considering Transactive Energy Framework", *Proceeding of the 2019 Joint Conference of the IEEJ and IEJCE,* Okinawa, Japan, December, 2019.

MAJOR AWARD AND ACHIEVEMENT

1. Japanese Govt. (MEXT) Scholarship, October 2020 – September 2023
2. Best paper award, IEEJ Conference in Okinawa, December 2019
3. Japanese Govt. (MEXT) Scholarship, October 2018 – September 2020
4. VC award for excellent result in 4 semesters out of 8 semesters, University of Asia Pacific
5. Dean award for excellent result in 3 semesters out of 8 semesters, University of Asia Pacific

PROJECT

1. Smart City Human Resources Development Program
2. Soccer Robot
3. Online Result and Waiver Management System

SKILLS

Programming Language

MATLAB, PYTHON, JavaScript, HTML, CSS, PHP, C

Application Tool

HOMER, LATEX, MICROSOFT OFFICE

Operating System

WINDOWS, LINUX, RASPBIAN

LANGUAGE SKILLS

- ✓ **English** Near Native Level.
- ✓ **Bengali** Native (Mother tongue).
- ✓ **Hindi** Intermediate Level.
- ✓ **Japanese** Basic Level.

PROFESSIONAL MEMBERSHIP

- Member of Institute of Electrical and Electronic Engineers (IEEE), USA
- Member of IEEE Young Professionals, USA
- Member of Institute of Electrical Engineers Japan (IEEJ)

PERSONAL DETAILS

Nationality : Bangladesh (By birth)
Sex : Female
Marital Status: Married

References

1. Prof. Tomonobu Senjyu
   Professor
   Faculty of Engineering, University of the Ryukyus
   1-Senbaru, Nishihara-cho, Nakagami, Okinawa 903-0213, Japan
   Tel.: +81-98-895-8686 Fax: +81-98-895-8686
   E-mail: b985542@tec.u-ryukyu.ac.jp

2. Prof. Naomitsu Urasaki
   Professor
   Faculty of Engineering, University of the Ryukyus
   1-Senbaru, Nishihara-cho, Nakagami, Okinawa 903-0213, Japan
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   E-mail: urasaki@tec.u-rukyu.ac.jp

3. Dr. Aloke Kumar Saha
   Professor
   Department of Computer Science and Engineering University of Asia Pacific, Dhaka, Bangladesh
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   E-mail: aloke@uap-bd.edu