Mohammad Mahmudul Hasan, PhD

Curriculum Vitae

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Education

Norwegian University of Science and Technology, Norway 05.2022 – 06.2025
Doctor of Philosophy
Information and Communication Technology

Brno University of Technology, Czech Republic 08.2024 – 01.2025
Visiting Research Fellow
Design and Process Engineering

KIIT University, India 07.2008 – 06.2010
Master of Technology
Communication Systems Engineering

KIIT University, India 07.2004 – 06.2008
Bachelor of Technology
Electronics and Telecommunication Engineering

Work Experience

University of Information Technology and Science, Bangladesh 01.2011 – Present (FT)
- Associate Professor, Electrical and Electronic Engineering 07.2022 – Present
- Assistant Professor, Electrical and Electronic Engineering 01.2011 – 05.2022
- Head of the Department, Electronics and Communication Engineering 02.2019 – 04.2022
- Director, Information and Communication Technology Cell 12.2020 – 04.2022
- Project Manager, Enterprise Resource Planning 03.2020 – 04.2022
- Editorial Board Member, Journal of Science and Engineering 10.2020 – 04.2022
- Member, Self-Assessment Committee, IQAC 07.2017 – 07.2018
- Member, Finance Committee 03.2020 – 04.2022
- Advisor, Information Technology 01.2018 – 04.2022

Norwegian University of Science and Technology, Norway 05.2022 – 06.2025 (FT)
- Research Fellow, Faculty of Engineering

Sanyo Engineering & Construction Inc., Japan 04.2018 – 01.2019 (PT)
- Industrial Trainer, BJIT Limited, Bangladesh

KIIT University, India 02.2009 – 12.2010 (FT/PT)
- Assistant Professor, Electronics and Telecommunication Engineering 07.2010 – 12.2010 (FT)
- Teaching Assistant, Electronics and Telecommunication Engineering 02.2009 – 06.2010 (PT)

Selected Publications

Mohammad Mahmudul Hasan, Onur Alev, Pavel Skrabanek, Gabriela Soukupová, Fatima Hassouna, and Michael Cheffena Gebresilassie, "Microwave MIMO E-Nose for Wireless Communication and Selective Detection of VOC Mixtures with Concentration Estimation", **ACS Sensors 2025**, vol. 10. nol. 9, 6446–6463 (2025)

Inaamullah Khan, **Mohammad Mahmudul Hasan**, Michael Cheffena Gebresilassie, "A Novel Low-Complexity Peak-Power-Assisted Data-Aided Channel Estimation Scheme for MIMO-OFDM Wireless Systems", **IEEE Open Journal of Signal Processing 2025**, 6, 992 – 1003 (2025)

Onur Alev, **Mohammad Mahmudul Hasan**, Emel Tuğba Ertuğrul, Selçuk Birdoğan, Okan Özdemir, Eda Goldenberg, Michael Cheffena, "Hydrothermally Synthesized Molybdenum disulfide Nanoflakes: Structural, Electrical, and Antenna-based Gas Sensing Characteristics", **Sensors & Actuators: A. Physical**, vol. 393, 116756, 2025 (2025)

- **Mohammad Mahmudul Hasan**, Onur Alev, Pavel Skrabanek, and Michael Cheffena Gebresilassie, "Molecularly Imprinted Polymer-Based Electronic Nose for Ultrasensitive, Selective Detection and Concentration Estimation of VOC Mixtures", **IEEE Sensors Journal**, vol. 25, no. 10, 2025 (2025)
- **Mohammad Mahmudul Hasan**, Todd Cowen, Onur Alev and Michael Cheffena Gebresilassie, "MIMO Microwave Sensor for Selective and Simultaneous Detection of Methanol and Ethanol Gases at Room Temperature," **IEEE Transactions on Instrumentation & Measurement**, vol. 74, 9511613, 2025 (2025)
- **Mohammad Mahmudul Hasan**, Onur Alev and Michael Cheffena Gebresilassie, "Dual-Functional Antenna Sensor for Highly Sensitive and Selective Detection of Isopropanol Gas Using Optimized Molecularly Imprinted Polymers," **ACS Sensors**, vol. 10, no. 3, pp. 2147–2161, 2025 (2025)
- **Mohammad Mahmudul Hasan**, Onur Alev, Eda Goldenberg and Michael Cheffena Gebresilassie, "MoS2/MoOx Nanoflake-Based Dual-Functional Antenna Sensors for Highly Sensitive and Selective Detection of Volatile Organic Compounds," **ACS Applied Nano Materials**, vol. 7, no. 21, pp. 25065–25077, 2024 (2024)
- **Mohammad Mahmudul Hasan**, Todd Cowen and Michael Cheffena Gebresilassie, "A Novel Molecularly Imprinted Polymer-Based Carbon Nanotube-Coated Microwave Sensor for Selective Detection of Methanol Gas," **IEEE Sensors Letters**, vol. 8, no. 5, 6004904, 2024 (2024)
- **Mohammad Mahmudul Hasan**, Onur Alev, Eda Goldenberg and Michael Cheffena Gebresilassie, "A Novel Molybdenum Disulfide-Based High-Precision Microwave Sensor for Methanol Gas Detection at Room Temperature," **IEEE Microwave and Wireless Technology Letters**, vol. 34, no. 6, pp. 691 – 694, 2024 (2024)
- **Mohammad Mahmudul Hasan**, Michael Cheffena Gebresilassie, "Adaptive Antenna Impedance Matching Using Low-Complexity Shallow Learning Model", **IEEE Access**, vol. 11, pp. 74101 – 74111, 2023 (2023)
- **Mohammad Mahmudul Hasan**, Michael Cheffena Gebresilassie, Slobodan Petrovic, "Physical-layer Security Improvement in MIMO OFDM Systems using Multilevel Chaotic Encryption", **IEEE Access**, vol. 11, pp. 64468 – 64475, 2023 (2023)
- Inaamullah Khan, Michael Cheffena Gebresilassie, **Mohammad Mahmudul Hasan**, "Data Aided Channel Estimation for MIMO-OFDM Wireless Systems Using Reliable Carriers", **IEEE Access**, vol. 11, pp. 47836 – 47847, 2023 (2023)
- **Mohammad Mahmudul Hasan**, Mohammad Mahadi Hasan Foad, "Modified Gamma Correction Companding for PAPR Reduction in OFDM Systems Considering Solid State Power Amplifier and Wireless Channels", **Circuits, Systems, and Signal Processing**, vol. 37, no. 10, pp. 4431- 4454, 2018 (2018)
- **Mohammad Mahmudul Hasan**, Mohammad Mahdi Hasan Faisal, "IGCC for PAPR Reduction in OFDM Systems over the Nonlinearity of SSPA and Wireless Fading Channels", **Circuits, Systems, and Signal Processing**, vol. 35, no. 8, pp. 2855–2880, 2015 (2015)
- **Mohammad Mahmudul Hasan**, "PAR Reduction in SU/MU-MIMO OFDM Systems using OPF Precoding over the Nonlinearity of SSPA", **Wireless Personal Communications**, vol. 83, no. 3, pp. 2225-2248, 2015 (2015)
- **Mohammad Mahmudul Hasan**, "A Novel CVM Precoding Scheme for PAPR Reduction in OFDM Transmissions", **Wireless Network**, vol. 20, no. 6, pp. 1573-1581, 2014 (2014)
- **Mohammad Mahmudul Hasan**, "A New PAPR Reduction Scheme for OFDM Systems Based on Gamma Correction", **Circuits, Systems, and Signal Processing**, vol. 33, no. 5, pp. 1655-1668, 2014 (2014)
- **Mohammad Mahmudul Hasan**, "A New PAPR Reduction Technique in OFDM Systems Using Linear Predictive Coding", **Wireless Personal Communications**, vol. 75, no. 1, pp. 707-721, 2014 (2014)
- **Mohammad Mahmudul Hasan**, "VLM Precoded SLM Technique for PAPR Reduction in OFDM Systems", **Wireless Personal Communications**, vol. 73, no. 3, pp. 791-801, 2013 (2013)
- **Mohammad Mahmudul Hasan**, "PAPR Reduction in OFDM Systems Based on Autoregressive Filtering", **Circuits, Systems, and Signal Processing**, vol. 33, no. 5, pp. 1637-1654, 2013 (2013)

See more at **Google Scholar**

Professional Certifications

Brno University of Technology, Czech Republic 08.2024 – 01.2025
Professional Competence, Electrical Engineering – NV No. 194/2022 Coll.

GrameenPhone Ltd., Bangladesh 07.2007 – 10.2007
Intern Engineer, Transmission Planning Division

All India Radio & Doordarshan (Prasar Bharati), India 05.2007 – 07.2007
Industrial Training, Broadcasting Corporation of India

Red Hat Bhubaneswar, India 04.2006 – 07.2006
Industrial Training, Red Hat Linux RHEL 4

Grants & Awards

Research Recognition 06.2025
Nominated for best doctoral thesis in *Sensors*
Norwegian University of Science and Technology

Research Grant 08.2024
Awarded 146,000 NOK
The Research Council of Norway

Chancellor's Gold Medal 12.2010
Awarded for securing the highest CGPA (10/10)
KIIT University, India

Founder's Gold Medal 12.2010
Awarded for securing the first position in Master of Technology
KIIT University, India

Language Proficiency

Bengali (native), English (fluent), Hindi (fluent), and Norsk-Bokmål (Level 1- A2/B1)

Hobbies & Interests

Hiking, Skiing (cross-country), Bowling, Canoeing, and Camping

Citizenship & Residency

Nationality (Bangladeshi), Permanent Residency (Norway)

References

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I certify that the above statements are true to the best of my knowledge.

– Mohammad Mahmudul Hasan