Mohammad Mahmudul Hasan, PhD

Associate Professor
Department of Electrical and Electronic Engineering

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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 Researcher
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

Inaamullah Khan, **Mohammad Mahmudul Hasan**, Michael Cheffena Gebresilassie, "Transmitter-Assisted Joint Data-Aided Channel Estimation and PAPR Reduction Scheme in Wireless Fading Channels", **Scientific Reports**, 2026 (accepted on 19.12.2025) — **(2026)**

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 — **(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 — **(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)

Citizenship & Residency

Nationality (Bangladeshi), Permanent Residency (Norway)

References

Dr. Michael Cheffena Gebresilassie
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I certify that the above statements are true to the best of my knowledge.

– Mohammad Mahmudul Hasan