Mohammad Mahmudul Hasan, PhD

Curriculum Vitae

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EDUCATION

05.2022 – 06.2025 **Norwegian University of Science and Technology**
DOCTOR OF PHILOSOPHY
Information and Communication Technology

08.2024 – 01.2025 **Brno University of Technology**
VISITING RESEARCHER
Department of Automation

07.2008 – 06.2010 **KIIT University**
MASTER OF TECHNOLOGY (First Position)
Electronics and Telecommunication Engineering

07.2004 – 06.2008 **KIIT University**
BACHELOR OF TECHNOLOGY
Electronics and Telecommunication Engineering

WORK EXPERIENCE

01.2011 – PRESENT **University of Information Technology and Sciences**
01.2011 – PRESENT ASSOCIATE PROFESSOR (FT)
Department of Electrical and Electronic Engineering
02.2019 – 04.2022 HEAD OF THE DEPARTMENT
Electronics and Communication Engineering
12.2020 – 04.2022 DIRECTOR
Information and Communication Technology Cell
03.2020 – 04.2022 PROJECT MANAGER, Enterprise Resource Planning
10.2020 – 04.2022 EDITORIAL BOARD MEMBER
Journal of Science and Engineering

05.2022 – 06.2025 **Norwegian University of Science and Technology**
RESEARCH FELLOW (FT)
Faculty of Engineering

04.2018 – 01.2019 **Sanyo Engineering & Construction Inc., Japan**
INDUSTRIAL TRAINER (PT), BJIT Limited

02.2009 – 11.2010 **KIIT University**
07.2009 – 11.2010 ASSISTANT PROFESSOR (FT)
02.2009 – 06.2010 TEACHING ASSISTANT (PT)
Electronics and Telecommunication Engineering

PROFESSIONAL CERTIFICATIONS

08.2024 – 01.2025 **Brno University of Technology, Czech Republic**
Electrical Engineering (§6) – NV No. 194/2022 Coll.

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

05.2007 – 07.2007 **All India Radio & Doordarshan, India**
Industrial Training, Broadcasting Corporation of India

06.2006 – 07.2006 **Red Hat Bhubaneswar, India**
Industrial Training, Red Hat Linux RHEL 4

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**, 10(9), 6446–6463
- I. 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
- Onur Alev, **Mohammad Mahmudul Hasan**, E. T. Ertuğrul, S. Birdoğan, O. Özdemir, E. Goldenberg and Michael Cheffena Gebresilassie, "Hydrothermally Synthesized Molybdenum disulfide Nanoflakes: Structural, Electrical, and Antenna-based Gas Sensing Characteristics", **Sensors & Actuators: A. Physical 2025**, 393, 116756
- **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 2025**, 25(10), 18277 – 18290
- **Mohammad Mahmudul Hasan**, T. 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 2025**, 74, 9511613
- **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 2025**, 10(3), 2147 – 2161
- **Mohammad Mahmudul Hasan**, Onur Alev, E. Goldenberg and Michael Cheffena Gebresilassie, "MoS_2/MoOx Nanoflake-Based Dual-Functional Antenna Sensors for Highly Sensitive and Selective Detection of Volatile Organic Compounds," **ACS Applied Nano Materials 2024**, 7(21), 25065 – 25077
- **Mohammad Mahmudul Hasan**, T. 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 2024**, 8(5), 6004904
- **Mohammad Mahmudul Hasan**, Onur Alev, E. Goldenberg and Michael Cheffena Gebresilassie, "A Novel Molybdenum Disulfide-Based High-Precision Microwave Sensor for Methanol Gas Detection at Room Temperature," **IEEE**

HONORS AND AWARDS

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

12.2010 **Chancellor's Gold Medal**
Awarded for securing the highest CGPA (10.0/10.0)
KIIT University, India

12.2010 **Founder's Gold Medal**
Awarded for securing the first position
KIIT University, India

LANGUAGE PROFICIENCY

Bengali (native), English (fluent), Hindi (fluent), and Norsk (Level 1)

HOBBIES AND INTERESTS

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

CITIZENSHIP & RESIDENCY

RESIDENCY Permanent Residency in Norway
NATIONALITY Bangladeshi

REFERENCES

NAME **Dr. Michael Cheffena Gebresilassie**
POSITION Professor (PhD supervisor)
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Norwegian University of Science and Technology
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NAME **Dr. Pavel Škrabánek**
POSITION Associate Professor (PhD co-supervisor)
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I certify that the above statements are true to the best of my knowledge.

— Mohammad Mahmudul Hasan

Microwave and Wireless Technology Letters 2024, 34(6), 691 – 694

- **Mohammad Mahmudul Hasan**, Michael Cheffena Gebresilassie, "Adaptive Antenna Impedance Matching Using Low-Complexity Shallow Learning Model", **IEEE Access 2023**, 11, 74101 – 74111
- **Mohammad Mahmudul Hasan**, Michael Cheffena Gebresilassie, S. Petrovic, "Physical-layer Security Improvement in MIMO OFDM Systems using Multilevel Chaotic Encryption", **IEEE Access 2023**, 11, 64468 – 64475
- I. Khan, Michael Cheffena Gebresilassie, **Mohammad Mahmudul Hasan**, "Data Aided Channel Estimation for MIMO-OFDM Wireless Systems Using Reliable Carriers", **IEEE Access 2023**, 11, 47836 – 47847
- **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 2018**, 37(10), 4431 – 4454
- **Mohammad Mahmudul Hasan**, Mohammad Mahdi Hasan Faisal (2016). "IGCC for PAPR Reduction in OFDM Systems over the Nonlinearity of SSPA and Wireless Fading Channels", **Circuits, Systems, and Signal Processing 2015**, 35(8), 2855 – 2880
- **Mohammad Mahmudul Hasan**, "PAR Reduction in SU/MU-MIMO OFDM Systems using OPF Precoding over the Nonlinearity of SSPA", **Wireless Personal Communications 2015**, 83(3), 2225 – 2248
- **Mohammad Mahmudul Hasan**, "A Novel CVM Precoding Scheme for PAPR Reduction in OFDM Transmissions", **Wireless Network 2014**, 20(6), 1573 – 1581
- **Mohammad Mahmudul Hasan**, "A New PAPR Reduction Scheme for OFDM Systems Based on Gamma Correction", **Circuits, Systems, and Signal Processing 2014**, 33(5), 1655 – 1668
- **Mohammad Mahmudul Hasan**, "A New PAPR Reduction Technique in OFDM Systems Using Linear Predictive Coding", **Wireless Personal Communications 2014**, 75(1), 707 – 721
- **Mohammad Mahmudul Hasan**, "VLM Precoded SLM Technique for PAPR Reduction in OFDM Systems", **Wireless Personal Communications 2013**, 73(3), 791 – 801
- **Mohammad Mahmudul Hasan**, "PAPR Reduction in OFDM Systems Based on Autoregressive Filtering", **Circuits, Systems, and Signal Processing 2013**, 33(5), 1637 – 1654

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