

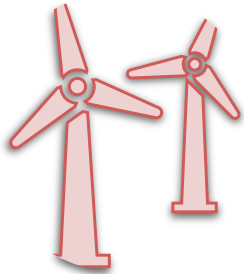
The Industry-Academic Forum on EMC 2026

Welcome to Sønderborg!

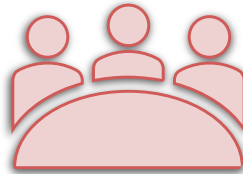
Event Chair:
Mohamed Kheir
kheir@sdu.dk

29-30 June 2026

The EMC Forum: Motivations



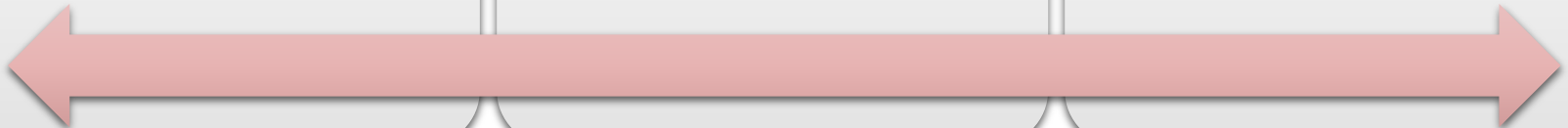
EMC challenges are growing across all branches of the electronics industry



Need for a stronger academia-industry dialogue

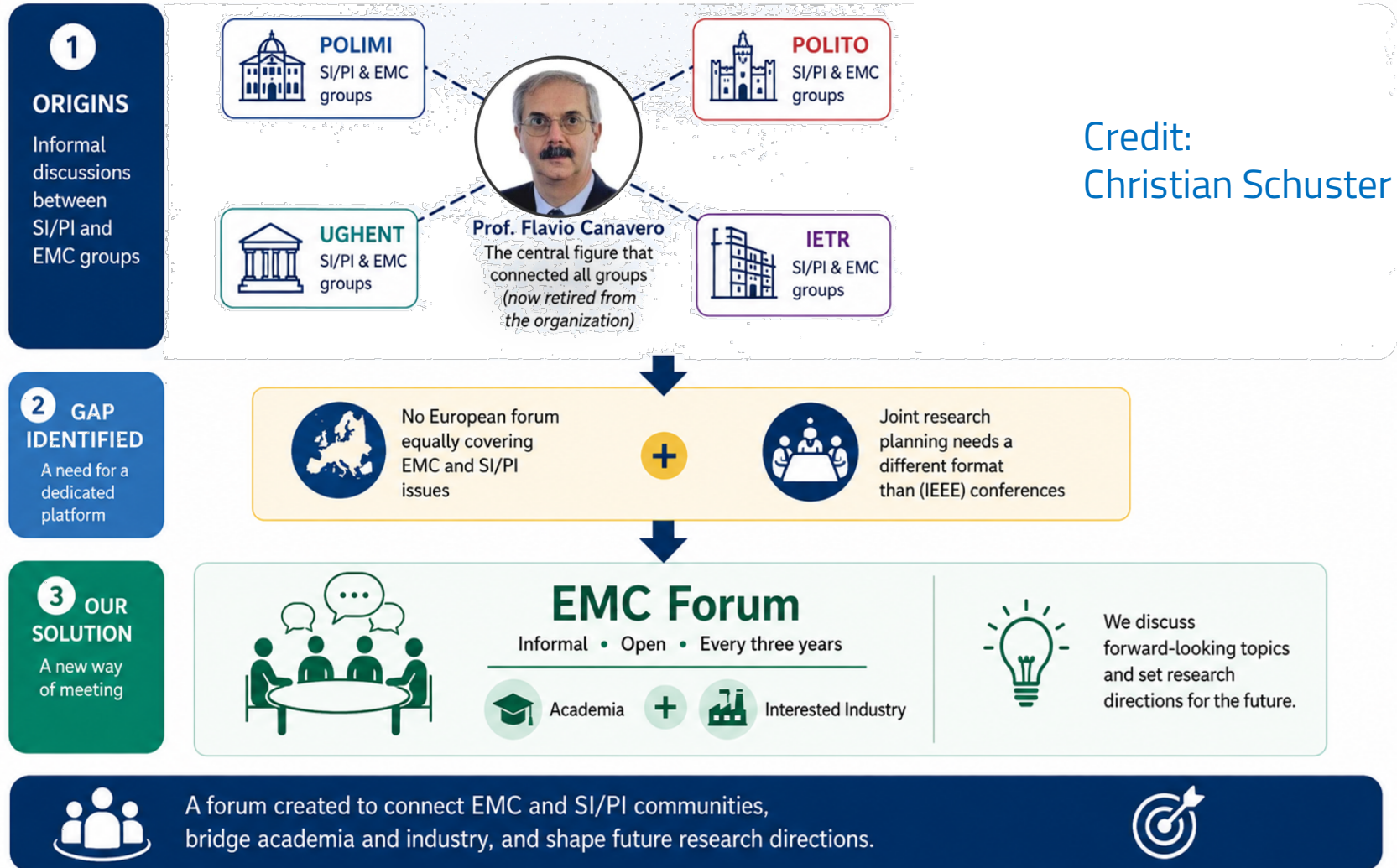


Aim: ideas exchange, collaboration, and future projects



The EMC Forum: History

Credit:
Christian Schuster



The EMC Forum: Mission

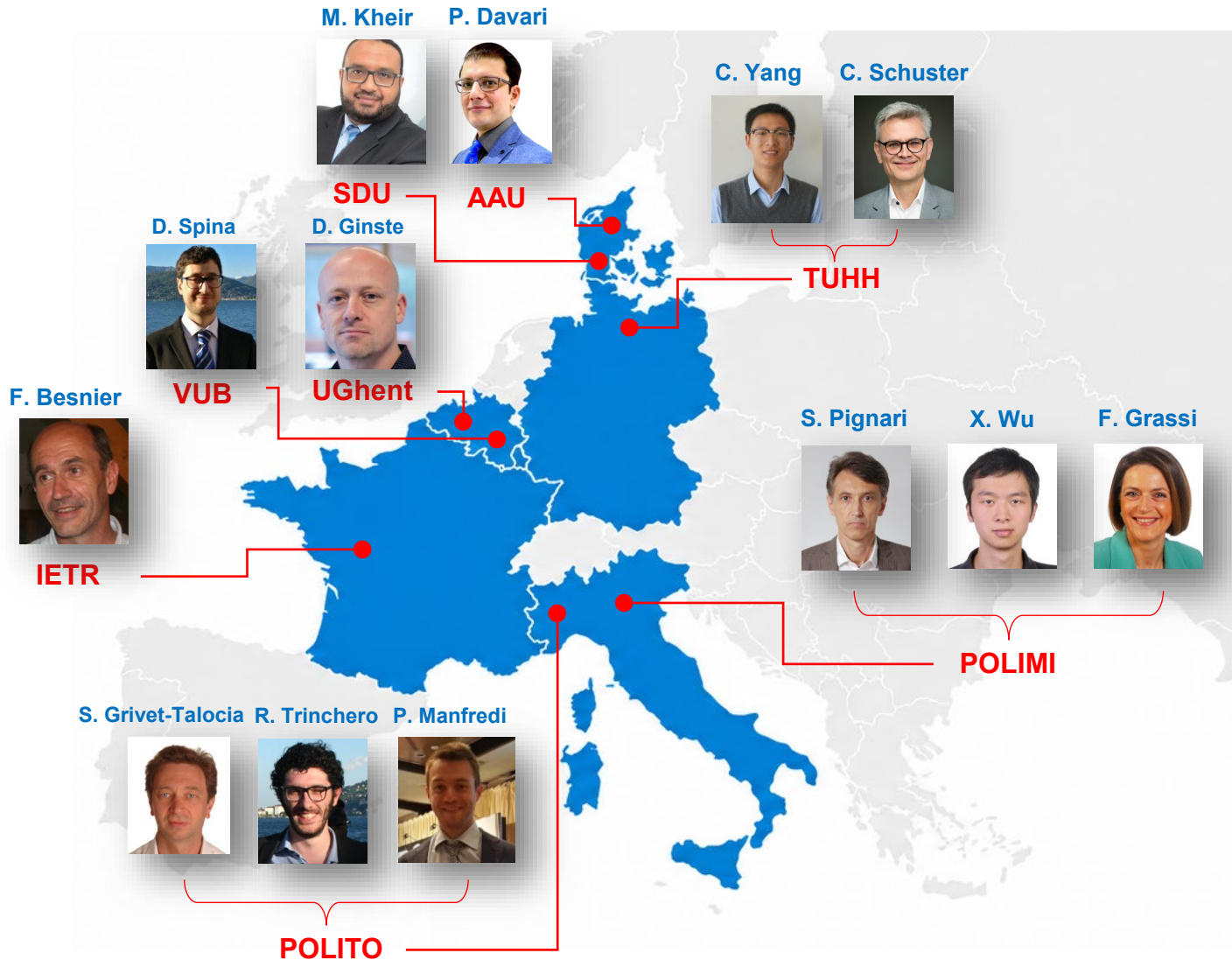
**Brings together experts
from industry and academia
in EMC, SI/PI**

**Provides a platform to
discuss latest trends,
research results, and
practical challenges**

**Encourages knowledge
exchange, networking, and
collaboration across Europe**

**Helps identify future
research directions and
industry-relevant
EMC/SI/PI needs**

The EMC Forum: Members



More Information

EMC Forum 2020 – POLITO, Italy



Source: <https://www.emcforum.eu/>



More Information

EMC Forum 2023 – TUHH, Germany



Source: <https://www.emcforum.eu/>



More Information

EMC Forum 2026 Highlights

55 participants,
from academia
and industry,
representing **8 EU**
countries

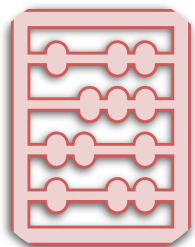
Poster
presentations by
PhD students,
supporting
research exchange

A balanced
program featuring
10 academic and
9 industry talks

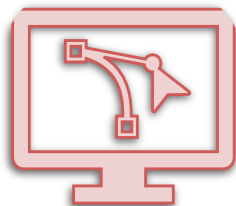
A dedicated
session
introducing helpful
tips for the **Marie-
Curie Doctoral
Networks** call

Open discussions
on future
collaboration and
potential
formation of a
joint EU project

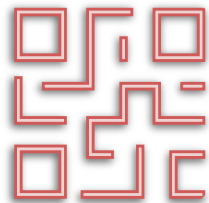
Key Topics of the 2026 EMC Forum



AI/ML and
Data-Driven
EMC/SI/PI



Physics-
Informed
and
Surrogate
EM Modeling



PCB,
Interconnect
Packaging,
and Cable
Modeling



Near-Field
Scanning,
and EMC
Digital Twins



Power
Electronics,
Industrial
EMC, and
Debugging



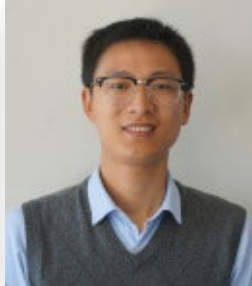
Meta-
materials,
RIS and 6G

When EMC Meets AI

Speakers from Academia



Mohamed Kheir
SDU, Denmark



Cheng Yang
TUHH, Germany



Philippe Besnier
IETR, France



Pooya Davari
AAU, Denmark



Christian Schuster
TUHH, Germany



Stefano Grivet-Talocia
POLITO, Italy



Domenico Spina
VUB, Belgium



Paolo Manfredi
POLITO, Italy



Xinglong Wu
POLIMI, Italy



Martijn Huynen
UGHENT, Belgium



Biographies

Speakers from Industry



Thomas Kjaer Nowak
Danfoss, Denmark



Stefan Hoffmann
Fraunhofer IZM,
Germany



Bernhard Wunsch
ABB, Switzerland



Arne Schröder
Hitachi Energy,
Switzerland



Kai Numssen
IU International University,
m4 wireless GmbH,
Germany



Dominik Schröder
Fraunhofer ENAS,
Germany



Christian Wolf
GRUNDFOS,
Denmark



**Henrik Nygård
Henriksen**
Force Technology
Denmark



Samuel Hildebrandt
Lumiloop GmbH,
Germany



Morten Sørensen
FORCE Technology,
Denmark



Biographies

EMC Knowledge Cafe

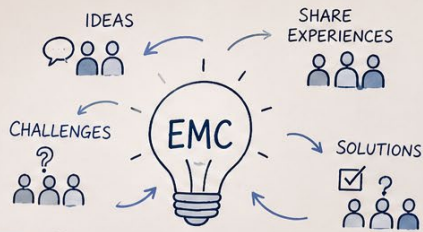
Four topics, four groups: each group will rotate through all discussion tables



EMC Knowledge Café

Interactive EMC Roundtable:
Challenges & Future Directions

This interactive session brings together participants in moderated small-group discussions to explore key challenges and opportunities in EMC, building on the topics presented during Day 1.



IDEAS

SHARE EXPERIENCES

SOLUTIONS

CHALLENGES

EMC



TABLE 3

LET'S SHAPE THE FUTURE OF EMC TOGETHER!

ROUNDTABLE THEMES



AI in EMC:
potential, limitations,
and industrial
adoption



EMC in early
design phases
and system-level
challenges



Simulation vs.
measurement:
closing the gap



EMC challenges
in complex
industrial
systems

HOW IT WORKS

- Engage in focused, moderated group discussions
- Exchange experiences, identify key challenges, explore solutions
- Share key insights in a plenary wrap-up



The goal is to foster meaningful exchange between academia and industry and to generate actionable ideas for future collaboration.



AI-Generated Image

EMC Lab Tour



Don't miss the lab tour tomorrow!

Forum Dinner: Today at 18:00



Torve-Hallen Restaurant

[Nørre Havnegade 28, 6400 Sønderborg](#)

**Main course is covered for participants.
Drinks, desserts, and extra orders are paid individually.**

Many thanks to the IEEE EMC Society!



Lunches and Coffee Breaks

Lunches and coffee breaks are covered by our valued sponsors.

Many thanks!



The Organizing Team

Special Support



Prof. Pooya Davari



Amelia Aniela Dulian



Berit Nielsen Balle

Enjoy your time and make new connections 😊

Academic Talks

Academic Talk 1

Prof. Christian Schuster, TUHH, Germany

The SI/PI-Database at TUHH: S-Parameters for ML/AI Applications



Christian Schuster received the Diploma degree in physics from the University of Konstanz, Germany, in 1996, and the Ph.D. degree in electrical engineering from the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, in 2000.

Since 2006 he is full professor and head of the Institute of Electromagnetic Theory at the Hamburg University of Technology (TUHH), Germany. Prior to that he was with the IBM T. J. Watson Research Center, Yorktown Heights, NY, where he was involved in high-speed optoelectronic package and backplane interconnect modeling and signal integrity design for new server generations. His current interests include signal and power integrity of digital systems, multiport measurement and calibration techniques, and development of electromagnetic simulation methods for communication electronics. Christian Schuster is a Fellow of the IEEE and an Associate Editor for the Transactions on EMC.

Academic Talk 2

Prof. Philippe Besnier, IETR, France

Controlled Stratification for Determining Extreme Quantiles in Electromagnetic Compatibility Risk Analysis



Philippe Besnier received the Ph. D. degree in electronics from the University of Lille in 1993. Following a one-year period at ONERA he was with the laboratory of radio-propagation and electronics (LRPE), University of Lille, as a researcher at the Centre National de la Recherche Scientifique (CNRS) from 1994 to 1997. From 1997 to 2002, he was the director of Centre d'Etudes et de Recherches en Protection Electromagnétique (CERPEM) based in Laval, France. He co-founded TEKCEM in 1998 a small business company specialized in turnkey systems for EMC measurements. Back to CNRS in 2002, he has been since then with the Institute of Electronics and Telecommunications of Rennes (IETR). Philippe Besnier was appointed as CNRS senior researcher in 2013. He was co-head of the "antennas and microwave devices" research department of IETR between 2012 and 2016. Since July 2017, he is now a deputy director of IETR. His research activities are mainly dedicated to interference analysis on cable harnesses (including electromagnetic topology), theory and application of reverberation chambers, near-field probing and uncertainty quantification in EMC modeling.

Academic Talk 3

Prof. Stefano Grivet-Talocia , POLITO, Italy

Modeling SI/PI and EMC Problems Through Data: Deterministic, Parametric, and Stochastic Perspectives - Part 1



Stefano Grivet-Talocia a Full Professor of electrical engineering with the Politecnico di Torino. From 1994 to 1996, he was with the NASA/Goddard Space Flight Center, Greenbelt, MD, USA. He co-founded the academic spinoff company IdemWorks in 2007, where he served as the President until its acquisition by CST in 2016. He has authored over 150 journal and conference papers. His current research interests include passive macromodeling of lumped and distributed interconnect structures, model-order reduction, modeling and simulation of fields, circuits, and their interaction, wavelets, time–frequency transforms, and their applications. He received the IBM Shared University Research Award in 2007, 2008, and 2009. He was General Chair of the 20th and 21st IEEE Workshops on Signal and Power Integrity. He is an Associate Editor of IEEE TRANS. on CPMT. He is a Fellow of the IEEE.

Academic Talk 4

Prof. Paolo Manfredi, POLITO, Italy

Modeling SI/PI and EMC Problems Through Data: Deterministic, Parametric, and Stochastic Perspectives - Part 2



Paolo Manfredi received the M.Sc. degree in electronic engineering from the Politecnico di Torino, Italy, in 2009, and the Ph.D. degree in information and communication technology from the Scuola Interpolitecnica di Dottorato, Politecnico di Torino, in 2013. He is currently an Associate Professor with the EMC Group at Politecnico di Torino. From 2014 to 2017, he was a Postdoctoral Research Fellow of the Research Foundation-Flanders (FWO) at Ghent University, Belgium. His research interests encompass the several aspects of circuit and interconnect modeling and simulation, with emphasis on uncertainty quantification, surrogate modeling, signal integrity, and electromagnetic compatibility. Dr. Manfredi received multiple awards at international conferences, including the Outstanding Young Scientist Award at the 2018 Joint IEEE International Symposium on EMC & APEMC. He is currently serving as an Associate Editor for the IEEE Journal on Multiscale and Multiphysics Computational Techniques and the International Journal of Circuit Theory and Applications, and as an Academic Editor for Mathematical Problems in Engineering. He is a Senior Member of the IEEE.

Academic Talk 5

Dr. Martijn Huynen, UGHENT, Belgium

Broadband Boundary Integral Equation Modelling for Signal Integrity and EMC Assessment

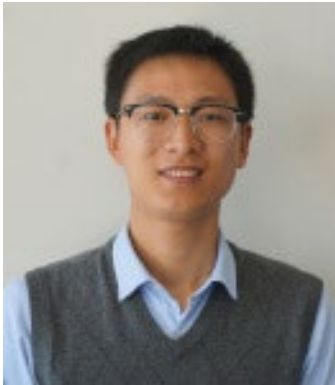


Martijn Huynen (Member, IEEE) received the M.Sc. and Ph.D. degrees in electrical engineering from Ghent University, Ghent, Belgium, in 2014 and 2019, respectively. From May to July 2023, he was a Visiting Scientist with the Department of Electrical and Computer Engineering, University of Manitoba, Winnipeg, MB, Canada. He is currently an Assistant Professor at the Research Lab Quest/IDLab, Department of Information Technology, Ghent University-imec, Ghent. His research focuses on computational electromagnetics, more specifically boundary integral equations, with applications in interconnect modeling, electromagnetic compatibility analysis, and antenna design. Dr. Huynen received the Best Student Paper Award at the 2017 Applied Computational Electromagnetics Society (ACES) Symposium.

Academic Talk 6

Dr. Cheng Yang, TUHH, Germany

Adaptive On-the-Fly Near-Field Scanning via Gaussian Process Regression and Bayesian Optimization



Cheng Yang received his B.S. degree in electronic science and technology from Wuhan University (WHU), Wuhan, China, in 2009, the M.S. degree and the Ph.D. Degree with electromagnetic field and microwave technology from the National University of Defense Technology (NUDT), Changsha, China, in 2012 and 2016. Since 2019 he has been a chief engineer of the Institute of Electromagnetic Theory, Technische Universität Hamburg (TUHH), Hamburg, Germany. From 2013 to 2015, he was funded by the Chinese Scholarship Council (CSC) as a joint-PhD student at TUHH. From 2017 to 2019, he was a Faculty Member of the State Key Laboratory of Millimeter Wave at Southeast University (SEU), Nanjing, China. His current research interests include computational electromagnetics, radio frequency (RF) discretized modeling, near-field measurements, machine learning and its application in electromagnetic compatibility and biology electromagnetics. Dr. Yang is a senior member of the IEEE and serves as the coordinator for distinguished lecture program in the IEEE German EMC Chapter since 2020.

Academic Talk 7

Prof. Domenico Spina, VUB, Belgium

Physic-Informed Machine Learning Techniques for EMC Problems



Domenico Spina (Senior Member, IEEE) received the M.S. degree (cum laude) in electronics engineering from the University of L'Aquila, Italy, in 2010, and the joint Ph.D. degree in electrical engineering from Ghent University, Belgium, and the University of L'Aquila in 2014. From 2015 until 2023, he has been a Member of the Internet and Data Science Lab (IDLab) of

the Department of Information Technology (INTEC), Ghent University - imec, first as Postdoctoral Researcher and then as R&D Technical Lead. He is currently a professor at the ELEC department of the Vrije Universiteit Brussel. His research interests include modeling and simulation, uncertainty quantification, and machine learning for EMC/SI/PI problems.

Academic Talk 8

Prof. Xinglong Wu, POLIMI, Italy

Modeling Cable Harnesses for EMC in Automotive and Industrial Applications



Xinglong Wu (Senior Member, IEEE) received the double M.Sc. degrees from Xi'an Jiaotong University, Xi'an, China and Politecnico di Milano, Milan, Italy, in 2015, and the Ph.D. degree (cum laude) from Politecnico di Milano, in 2019, all in electrical engineering.

He is currently an Associate Professor with the Department of Electronics, Information and Bioengineering, Politecnico di Milano. In March 2017 and June 2017, he was a Visiting Scientist with the Electromagnetics Group, Department of Information Technology, Ghent University, Belgium. From 2019 to 2020, he was a Postdoctoral Research Fellow with Politecnico di Milano. His research interests include distributed parameter circuit modeling, statistical techniques for electromagnetic compatibility (EMC), experimental procedures and setups for EMC testing, power electronics EMC, and system-level EMC.

Dr. Wu was the recipient of the International Union of Radio Science (URSI) Young Scientist Award from the 2020 URSI General Assembly and Scientific Symposium and the 2024 John Howard Memorial EMC Education Grant. In 2025, he served as an IEEE EMC Society Young Professional (YP) Ambassador.

Academic Talk 9

Prof. Pooya Davari, AAU, Denmark

Supra-EMC: Supraharmonics ElectroMagnetic Compatibility Strategies in Power Electronic Based Power Grid



Pooya Davari (S'11–M'13–SM'19) received the B.Sc. and M.Sc. degrees in electronic engineering in 2004 and 2008, respectively, and the Ph.D. degree in power electronics from QUT, Australia, in 2013. From 2005 to 2010, he was involved in several electronics and power electronics projects as a Development Engineer. From 2013 to 2014, he was with QUT, as a Lecturer. He joined Aalborg University, in 2014, as a Postdoc, where he is currently a Professor.

He has been focusing on EMI, power quality and harmonic mitigation analysis and control in power electronic systems. He has published more than 200 technical papers. Dr. Davari served as a Guest Associate Editor of IET journal of Power Electronics, IEEE Access Journal, Journal of Electronics and Journal of Applied Sciences. He is an Area Editor for IEEE Transactions on Transportation Electrification and Associate Editor of IEEE Transactions on Power Electronics, Transactions on Transportation Electrification, Journal of Emerging and Selected Topics in Power Electronics, Editorial board member of Journal of Applied Sciences and Journal of Magnetics. He is member of Joint Working Group six and Working Group eight at the IEC standardization TC77A. Dr. Davari is the recipient of Equinor 2022 Prize and 2020 IEEE EMC Society Young Professional Award for his contribution to EMI and Harmonic Mitigation and Modeling in Power Electronic Applications. He has received five journal and conference best paper awards. He is currently Editor-in-Chief of Circuit World Journal. He is founder and chair of IEEE EMC SOCIETY CHAPTER DENMARK.

Industry Talk 1

Prof. Mohamed Kheir, SDU, Denmark

Reinventing Electromagnetic Simulation with Physics-Informed AI



Received his MSc degree in Communications Technology from Ulm University in 2005, and the PhD degree (with honors) in Information Engineering and Technology from the German University in Cairo jointly with Magdeburg University in 2011.

From 2012 till 2015, he was a Lecturer at Kiel University where he was involved in teaching and research. From 2015 to 2020, he was a Senior RF/EMC Expert with IMS Connector Systems Group and Keysight Technologies. Since 2020 till 2023, he has been a Technical Leader at Nokia Networks, Ulm-Germany. Right now, he is an Assoc. Professor and the EMC Group Leader at SDU Denmark.

His professional experience spans RF and EMC design, analysis, simulation and measurement for automotive and wireless technologies.

He also serves as an Associate Editor at both IEEE Access and IEEE Internet of Things Journal and a TPC-member for many conferences. He was the recipient of numerous prestigious awards and honors from different conferences and organizations worldwide. Moreover, he is honored by being an active professional and a Lecturer at the IEEE EMC German Society. He is an IEEE Senior Member.

His research interests focus on ML-Driven Techniques for EMI/EMC Simulations and Smart EMI Shielding.

Industry Talks

Industry Talk 1

Thomas Kjaer Nowak, Danfoss, Denmark

EMC Challenges at Danfoss Power Solutions



Thomas Kjær Nowak is an electronics design engineer at Danfoss Power Solutions, where he has worked for the past two years on the development of 12V/24V systems for the agricultural industry. With a background as an electronics technician, he holds a B.Sc. in Applied Industrial Electronics from Aalborg University, Esbjerg, and an M.Sc. in Electronics from the University of Southern Denmark, Sønderborg. His work includes circuit design, PCB development, and hands-on troubleshooting with a focus on high reliability. He has a strong interest in EMC, ranging from practical design techniques to broader PCB-level considerations, and he enjoys working with all facets of electronics from concept to troubleshooting.

Industry Talk 2

Dr. Stefan Hoffmann, Fraunhofer IZM, Germany

Practical EMI Troubleshooting of Power Electronic Devices – A Methodical Approach



Research associate in the Power Electronics research group at the Fraunhofer Institute for Reliability and Micro-integration IZM in Berlin, Germany since 2011.

Completion of his PhD thesis titled “Optimization Strategies in Public Grid-Connected Power Electronic Systems Using High Pulse Frequencies” at the Aalborg University in 2024.

Industry Talk 4

Dominik Schröder, Fraunhofer ENAS, Germany

How Near-Field Scanning can support EMC Simulations



M.Sc. Dominik Schroeder was born in 1989 in Paderborn, Germany. He studied electrical engineering at the University of Paderborn and finished his studies with a masters degree in 2016. Since 2011 he is part of the Fraunhofer ENAS team, starting as a student assistant working mainly of wireless power transfer. Since 2017 he is a research assistant and his main research is about EMC near-field scanning and simulation techniques. Dominik is heading for a PhD in the field of EMC near-field scanning

Industry Talk 5

Dr. Christian Wolf, GRUNDFOS, Denmark

Current EMC Challenges at Grundfos



Lead Specialist at Grundfos Holding A/S. He received M.Sc. and Ph.D. degrees in electrical engineering from the Technical University of Denmark, Copenhagen, Denmark, in 1990 and 1996, respectively.

From 1992 to 1995, he was with Grundfos Holding A/S as an industrial Ph.D. student. In 1995 he got a permanent position at Grundfos in the electronic hardware department as an engineer. In 1998 he became a senior engineer at Grundfos specialized in power module design. He joined Grundfos NoNOx developing dosing pumps for NOx catalytic converter for commercial vehicles in 2009. In 2010 he again joined the electronic hardware development department in Grundfos Holding A/S as a Senior Engineer.

Currently, Dr. Wolf is a lead specialist at Grundfos Holding A/S. His current research interests include power factor correction converters, electromagnetic interference in power electronics, and switch-mode power supplies design, layout and EMC.

Industry Talk 6

Henrik Nygård Henriksen, FORCE Technology, Denmark

Overview of Force Technology and highlighting our contribution to EMC validation in Scandinavia



Sales Executive at Force Technology
Responsible for developing business within EMC testing, Electrical safety, and climate/reliability testing.

Industry Talk 7

Dr. Arne Schröder, Hitachi Energy, Switzerland

Application of Parameterized Macromodels in Power Electronic Converter Design: An Example of Successful Industry-Academia Collaboration



Arne Schröder received the Diploma and Ph.D. degrees in electrical engineering from the Hamburg University of Technology, Hamburg, Germany, in 2009 and 2014, respectively.

From 2014 to 2017, he was a Postdoctoral Researcher with the Institute of Applied Physics, University of Bern, Bern, Switzerland. He joined ABB Corporate Research in 2017 and since 2020, he has been with Hitachi Energy Research, Baden-Dättwil, Switzerland. His research interests include electromagnetic design and analysis of power electronic equipment as well as modeling of complex and multiscale systems.

Metamaterial Technology for Wireless Communication Systems



Kai Numssen is professor of electrical engineering at the IU International University of Applied Sciences in Frankfurt am Main and Düsseldorf since October 2021 and in September 2021 he founded the deeptech startup m4 wireless GmbH in Berlin, together with a colleague from the TU Berlin, which he runs as managing director. His research interests focus on metamaterials and applications of metamaterial concepts for 5G and 6G mobile communication systems.

Prior to that he joined the management board of Telegärtner Karl Gärtner GmbH, a worldwide operating supplier of connectivity solutions and leader in connector technologies, in September 2018 and assumed the position of the Vice President R&D and Quality Management. Before that, he was with IMS Connector Systems from January 2016 to July 2018 being responsible for the R&D division and for innovation. Until end of 2015 he headed the innovation management of the Spinner Group with a strong focus on various novel RF technologies, including 1D metamaterial and electromagnetic bandgap structures and dielectric filters, as well as wireless power transmission.

He received the doctoral degree in physics from the Technical University of Munich, and he dedicated his research in Karlsruhe and Munich to transport properties of high-temperature superconductors, materials research and thin film deposition.

Industry Talk 9

Samuel Hildebrandt, Lumiloop GmbH, Germany

How to Laser-Power Everything, and How to Start a Business Based on That



Samuel Hildebrandt studied electrical engineering at the Technical University of Dresden (diploma in 2007). He subsequently researched the reliability of ceramic wiring carriers in the field of packaging and interconnection technology. His passion for application- and customer-oriented work led to the co-founding of LUMILOOP GmbH in 2015 via an EXIST research transfer project. There, he intensively supported the laser-fed E-field probe LSProbe, from product development and production support to documentation. In addition to managing the company, he has also been responsible for technical sales since 2020, helping users find the best solutions for their everyday EMC laboratory work.

Industry Talk 10

Dr. Morten Sørensen, FORCE Technology, Denmark

3D Full-Wave Simulations in an Industrial Context



Morten Sørensen holds a Master's degree in Physics from Aarhus University and a Ph.D. in Electrical Engineering from Aalborg University, both in Denmark. He worked as an EMC and antenna specialist at Bang & Olufsen in Struer from 2006 to 2017. Between 2017 and 2019, he was a visiting assistant research professor at the EMC Laboratory at Missouri University of Science and Technology in the U.S. From 2019 to 2022, he served as an associate professor at the Centre for Industrial Electronics at the University of Southern Denmark. Since September 2022, he has been working as a Senior EMC Specialist at FORCE Technology, a Danish research and technology organization. He works across all areas covered by the acronym EMC, with a particular focus on PCB layout, system-level design and troubleshooting, numerical simulation methods, near-field scanning, and RF design.