

IEEE Denmark (IEEE-DK)

Amjad Anvari-Moghaddam, Section Chair

Section Vitality

Section Elections:

- Last Elections: September 2024 (Chapter Chair, Chair, Vice-Chair, Treasurer)
Last elections have been in September 2024 and the following officers were selected for a 2-year term (2025-2026):
 - *vTools Coordinator: Chao Liu*
 - *Chapter Chair (Jt. Chapter VT06/AES10/IT12/COM19): Ramoni Adeogun*
 - *Student Representative: Mohib Ullah*
 - *Industry Relations Coordinator # 2: Vincenzo Esposito*
 - *Conference Coordinator: Yi Zhang*

Executive Committee (ExCom) Meetings:

- Frequency: Monthly (Online – Physical)
- Key Meeting: June 28, 2024 (Hybrid):
 - *IEEE DK Activities Overview*
 - *Joint Chapter Updates (Control System Society, Robotics and Automation Society, Computer Society, Signal Processing Society, Power & Energy Systems Society, Vehicular Technology Society, Aerospace and Electronic Systems Society, Information Theory and Communications Society, Industrial Electronics Society, Industry Applications Society, Power Electronics Society, Circuits and Systems Society, Electromagnetic Compatibility Society)*
 - *Public Relations and Young Professionals (YPR) Affinity Group Presentation*
 - *Women-in-Power/Student Activities*
 - *Financial Updates & Guidelines*
 - *IEEE DK Activity Boosters, Visibility Plan, Liaison, Plan for 2025*

Recent Membership Engagement Activities and Initiatives:

- *EmpowerHER: Women's Impact in the Renewable Energy Sector, 04 Oct 2024 02:00 PM, CH08704*
- *EPS Nordic Chapter Seminar: Software engineering and formal methods for improved chip design productivity, 02 Oct 2024 03:30 PM, CH08228*
- *Webinar on Nano Materials & Digital Technologies, 11 Sep 2024 10:00 AM, CH08067, R80025*
- *Joint IEEE Estonia-Denmark Annual Seminar, 05 Sep 2024 09:00 AM, R, 80025, Tallinn, Estonia*
- *A Workshop on "Power Electronics Technology for Sustainable Future", 26 Aug 2024 08:00 AM, R80025, Sønderborg, Sønderjyllands Amt*
- *IEEE Women in Engineering Webinar 2024 Event Theme – 'Digital Twin, 16 Aug 2024 02:00 PM, WE80025*
- *IEEE PES Distinguished Lecture by IEEE Fellow Prof. G. Kumar Venayagamoorthy on Distributed AI for Modern Power Systems, 09 Aug 2024 01:00 PM, CH08704, Kgs. Lyngby, Kobenhavns Amt*
- *Talk by Matthew Deakin: Reconfigurable Power Converters for Increasing Network Capacity in Power Distribution Systems, 01 Jul 2024 10:00 AM, CH08704, Kgs. Lyngby, Kobenhavns Kommune*
- *Joint Administrative Meetings of the BENELUX/GERM/SWITZ/AUSTR/POL/ DK / FR Chapters for Coordination of Events, 20 Jun 2024 01:30 PM, CH08176 - Germany Section Chapter, EMC27, CH08087 - Austria Section Chapter, EMC27, CH08443 - Poland Section Chapter, EMC27, CH08027 - Switzerland Section Jt. Chapter, AP03/MTT17/EMC27, CH08354 - Benelux Section Chapter, EMC27, CH08888 - Denmark Section Chapter, EMC27, CH08053 - France Section Chapter, EMC27*
- *IEEE Power and Energy Society Denmark - Chapter coordination meeting, 06 Jun 2024 01:00 PM, CH08704*
- *Women Bringing Innovation to Society and Engineering, 11 Mar 2024 04:00 PM, WE80025*

Students

- *Organizing rotating student engagement workshops at three major universities (AAU, SDU, and DTU), led by industry representatives.*
- *Election of a new chair for student branch (Mohib Ullah)*

Affinity Groups

One active student branch at AAU and Three affinity groups

- *Women in Engineering (chaired by Sanja Lazarova-Molnar - SDU)*
- *Young Professionals (chaired by Jacob Thomas Puthukeril - SDU)*
- *Public Relations (chaired by Jacob Thomas Puthukeril - SDU).*

Chapters

1. Joint Chapter Control System Society and Robotics and Automation Society

- *Chaired by Rafael Wisniewski, Prof. at Aalborg University (AAU), raf@es.aau.dk*
- *Vice Chair Roberto Galeazzi, Associate Prof. (DTU)*
- *Secretary Christoffer Sloth, Associate Prof. (SDU)*

List of past events:

- Lecture: “multi-robot task planning and control under spatiotemporal specifications” Prof. Dimos V. Dimarogonas KTH, Stockholm on September 25th, 2024.

Planned event:

- IEEE DK control meeting, December 13, 2024

2. Computer Society

- *Chaired by Jilin Hu, Associate Prof. at Aalborg University (AAU), hujilin@cs.aau.dk*
- *Vice Chair Kaixuan Chen, Assistant Prof. (AAU)*
- *Secretary Haomin Yu, Postdoc (AAU)*

3. Signal Processing Society

- *Chaired by Zheng-hua Tan, Prof. at Aalborg University (AAU), zt@es.aau.dk*
- *Vice Chair Tommy Sonne Alstrøm, Associate Prof. (DTU)*

List of past events:

- Invited Talk: Friday 31 May 2024 physically at Aalborg University, broadcasted to DTU and online
 - Speaker: Sarthak Yadav, Aalborg University
 - Title: Alternatives to global self-attention for self-supervised audio representation learning.

4. Power & Energy Systems Society

- *Chaired by Tilman Weckesser, Assistant Prof. (DTU), tweck@dtu.dk*
- *Vice Chair Saeed Peyghami, Assistant Prof. (AAU)*
- *Secretary Haris Ziras, Assistant Prof. (DTU)*

List of past events:

- EmpowerHER: Women's Impact in the Renewable Energy Sector 04 Oct 2024
- Evaluation of battery models for power system economics 10 Sep 2024
- IEEE PES Distinguished Lecture by IEEE Fellow Prof. G. Kumar Venayagamoorthy on Distributed AI for Modern Power Systems 09 Aug 2024
- 2nd International Conference on Renewable Energies and Smart Technologies (REST-24) 27 Jun 2024
- Talk by Matthew Deakin: Reconfigurable Power Converters for Increasing Network Capacity in Power Distribution Systems 01 Jul 2024
- IEEE Power and Energy Society Denmark - Chapter coordination meeting 06 Jun 2024
- Peer to Peer trading in energy systems: from concept to implementation 23 May 2024
- PhD Defense - Nina Kharlamova - Cyber-Secure Operation of Battery Energy Storage Systems Providing Grid Services 02 Apr 2024
- Cyber security for energy management & AI in Power Systems 02 Apr 2024
- PhD defense - Yannik Werner - Modeling Electrolyzers and Gas Networks for Integration with Power Systems 06 Mar 2024

- PhD Defense - Zhe Chen - Integration of cost-based active management in distribution networks planning and operation 05 Mar 2024
- PhD Defense Kristian Sevdari - Control and clustering of electric vehicle chargers for the provision of grid services 09 Feb 2024
- Invited talks by Line Roald and Josh Taylor 10 Jan 2024
- Invited talks on battery research by Prof. Erik Schartz and Prof. Simona Onori 10 Jan 2024
- PhD Defense Enrica Raheli - Physics-Aware Operation of Power-to-X and Natural Gas Systems 09 Jan 2024.

Planned events:

- e2flex – EV charging behaviour and its impact on flexibility provision

5. Joint Chapter Vehicular Technology Society, Aerospace and Electronic Systems Society, Information Theory and Communications Society (dissolved- new chair has been selected to reinstate the chapter)
6. Joint Chapter Industrial Electronics Society, Industry Applications Society and Power Electronics Society
 - *Chaired by Tomislav Dragičević, Prof. at the Danish Technical University (DTU), tomadr@dtu.dk*
7. Circuits and Systems Society
 - *Chaired by Farshad Moradi, Assoc. Prof. Aarhus University (AU), moradi@eng.au.dk*
 - *Vice Chair Alberto Nannarelli, Associate Prof. (DTU)*
 - *Treasurer Hooman Farkhani, Assistant Prof. (AU)*
 - *Secretary Sonal Shreya, Postdoc (AU)*

List of past events:

- How can the Danish chip ecosystem win in the future? : Denmark Section Chapter,CAS04, 27 Feb 2024 09:00 AM, CH08995, 8000 Aarhus, Arhus Amt
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8. Electromagnetic Compatibility Society

- *Chaired by Pooya Davari, Associate Prof. at Aalborg University (AAU), pda@et.aau.dk*
- *Vice Chair Morten Sørensen, Associate Prof. (SDU)*
- *Technical Activities, Per Thåstrup, Senior Technology Specialist (Force Technology)*
- *Secretary Zhongting Tang, Research Assistant (AAU)*

List of past events:

- Bimonthly meetings with EMC Europe Chapters (Germany, Poland, France, Sweden,...)
- Attending and presenting at IEEE DK Section Meeting , 28 June 2024.
- EMC Professional Talks1 (Webinar): Temperature-Dependent Analytical Modeling on the dV/dt and dI/dt of FS IGBT, Dr. Peng Xue, 11 Sept, 2024
- Attending and presenting at EMC Society region 8 meeting at EMC Europe Conference, Bruge, Belgium, 2024.

Planned Activities:

- EMC Professional Talks2 (Webinar): A Brief Introduction to Parasitic Capacitance in Magnetic Components, Dr. Hongbo Zhao, 30 Oct 2024.
- Annual meeting in Dec 2nd 2024 (EMC Club + EMC Society joint activity)

Industry

- IEEE Power Electronics Society Distinguished Lecture "Wide Bandgap (WBG) Power Electronics Systems for Heavy-Duty Vehicles" - [Link](#)
- A Workshop on "Power Electronics Technology for Sustainable Future"- [Link](#)

Diversity, Equity and Inclusion

The IEEE Denmark Section has demonstrated a strong commitment to diversity and inclusion through targeted initiatives and practices. Tracking various metrics, including gender, age, geography, and employment, the Section actively promotes diversity within its leadership and membership. New initiatives, such as the establishment of a Diversity and Inclusion Task Force and outreach programs, highlight the Section's dedication to fostering an inclusive environment. Best practices, such

as inclusive event planning and mentorship programs, ensure that diversity considerations are integrated into various aspects of Section activities. The progress made is evident in increased diversity within leadership roles, positive member feedback, and ongoing efforts to continually enhance the Section's inclusivity and representation.

Activities since the last report

As mentioned throughout the report, activities have been resuming, so we have a broad range of events organized by our chapters and affinity groups, which the section supports. We hope this will further improve as the pandemic situation resolves.

Here are the most important activities:

- Regular ExCom monthly/bimonthly meetings
- Regular quarterly meetings of ExCom and all chairs of Chapters and AGs
- Physical meeting in June for all of ExCom and all chairs of Chapters and AGs at the Denmark Technical University

Title	Date	Host	Location
<u>A Brief Introduction to Parasitic Capacitance in Magnetic Components</u>	30 Oct 2024 02:00 PM	CH08888	
<u>EmpowerHER: Women's Impact in the Renewable Energy Sector</u>	04 Oct 2024 02:00 PM	CH08704	<u>Kgs. Lyngby, Kobenhavns Amt</u>
<u>EPS Nordic Chapter Seminar: Software engineering and formal methods for improved chip design productivity</u>	02 Oct 2024 03:30 PM	CH08228	
<u>Temperature-Dependent Analytical Modelling on the dV/dt and dI/dt of FS IGBT</u>	11 Sep 2024 02:00 PM	CH08888	
<u>Webinar on Nano Materials & Digital Technologies</u>	11 Sep 2024 10:00 AM	CH08067, R80025	
<u>Evaluation of battery models for power system economics</u>	10 Sep 2024 11:00 AM	CH08704	
<u>Joint IEEE Estonia-Denmark Annual Seminar</u>	05 Sep 2024 09:00 AM	R80025	<u>Tallinn, Estonia</u>
<u>A Workshop on "Power Electronics Technology for Sustainable Future"</u>	26 Aug 2024 08:00 AM	R80025	<u>Sønderborg, Sonderjyllands Amt</u>

<u>IEEE Women in Engineering Webinar 2024 Event Theme – ‘Digital Twin</u>	16 Aug 2024 02:00 PM	WE80025	
<u>IEEE PES Distinguished Lecture by IEEE Fellow Prof. G. Kumar Venayagamoorthy on Distributed AI for Modern Power Systems</u>	09 Aug 2024 01:00 PM	CH08704	<u>Kgs. Lyngby, København Amt</u>
<u>Talk by Matthew Deakin: Reconfigurable Power Converters for Increasing Network Capacity in Power Distribution Systems</u>	01 Jul 2024 10:00 AM	CH08704	<u>Kgs. Lyngby, København Kommune</u>
<u>2nd International Conference on Renewable Energies and Smart Technologies (REST-24)</u>	27 Jun 2024 08:00 AM	CH08704	<u>Prishtina, Pristina</u>
<u>Joint Administrative Meetings of the BENELUX/GERM/SWITZ/AUSTR/POL/ DK / FR Chapters for Coordination of Events</u>	20 Jun 2024 01:30 PM	CH08176, CH08443, CH08354, CH08053	CH08087, CH08027, CH08888,
<u>IEEE Power and Energy Society Denmark - Chapter coordination meeting</u>	06 Jun 2024 01:00 PM	CH08704	
<u>Last Fridays Talks of Pioneer Centre for AI</u>	31 May 2024 02:00 PM	CH08238	<u>Aalborg Ø, Nordjyllands Amt</u>
<u>Wearable Electronics based on Stretchable Nanocomposites</u>	31 May 2024 10:00 AM	CH08228	<u>Kista, Stockholms lan</u>
<u>Peer to Peer trading in energy systems: from concept to implementation</u>	23 May 2024 10:00 AM	CH08704	
<u>Joint Administrative Meetings of the BENELUX/GERM/SWITZ/AUSTR/POL/ DK / FR Chapters for Coordination of Events</u>	02 May 2024 01:00 PM	CH08176, CH08443, CH08354, CH08053	CH08087, CH08027, CH08888,
<u>Cyber security of industrial IoT systems in the age of NIS2</u>	24 Apr 2024 02:00 PM	CH08885	<u>Kgs. Lyngby, København Kommune</u>

<u>PhD Defense - Nina Kharlamova - Cyber-Secure Operation of Battery Energy Storage Systems Providing Grid Services</u>	02 Apr 2024 01:00 PM	CH08704	
<u>Cyber security for energy management & AI in Power Systems</u>	02 Apr 2024 10:00 AM	CH08704	
<u>PhD Defense of Pere Izquierdo Gómez: Resource-efficient Machine Learning for Power Electronics Systems”</u>	20 Mar 2024 01:00 PM	CH08885	<u>Kgs. Lyngby, Kobenhavns Kommune</u>
<u>EPS Nordic Chapter Chalmers-KTH Seminar: Emerging Energy Storage and Harvesting Technologies</u>	20 Mar 2024 10:30 AM	CH08228	<u>Kista, Stockholms lan</u>
<u>PhD Defense of Mohammad Mehdi Mardani: Artificial Intelligence Aided Adaptive Control Strategies for Converter Based Power Systems</u>	19 Mar 2024 02:00 PM	CH08885	<u>Kgs. Lyngby, Kobenhavns Kommune</u>
<u>PhD defense of Yihao Wan: Advancing Intelligent DC Microgrids: AI-Enabled Control, Cyber security, and Energy Management</u>	18 Mar 2024 01:00 PM	CH08885	<u>Kgs. Lyngby, Kobenhavns Kommune</u>
<u>Women Bringing Innovation to Society and Engineering</u>	11 Mar 2024 04:00 PM	WE80025	
<u>Joint Administrative Meetings of the BENELUX/GERM/SWITZ/AUSTR/POL/ DK / FR Chapters for Coordination of Events</u>	07 Mar 2024 02:30 PM	CH08176, CH08443, CH08354, CH08053	CH08087, CH08027, CH08888,
<u>PhD defense - Yannik Werner - Modeling Electrolyzers and Gas Networks for Integration with Power Systems</u>	06 Mar 2024 01:00 PM	CH08704	
<u>PhD Defense - Zhe Chen - Integration of cost-based active management in distribution networks planning and operation</u>	05 Mar 2024 02:00 PM	CH08704	
<u>Path Representation Learning</u>	01 Mar 2024 10:50 AM	CH08263	

<u>Business Model Co-creation / Ideation for Digital Circular Economy in GlassFiber Large Scale Manufacturing</u>	01 Mar 2024 10:00 AM	CH08067, R80025	<u>Aarhus, Arhus Amt</u>
<u>How can the Danish chip ecosystem win in the future?</u>	27 Feb 2024 09:00 AM	CH08995	<u>8000 Aarhus, Arhus Amt</u>
<u>PhD Defense Kristian Sevdari - Control and clustering of electric vehicle chargers for the provision of grid services</u>	09 Feb 2024 01:00 PM	CH08704	
<u>Joint Administrative Meetings of the BENELUX/GERM/SWITZ/AUSTR/POL/ DK / FR Chapters for Coordination of Events</u>	11 Jan 2024 01:30 PM	CH08176, CH08443, CH08354, CH08053	CH08087, CH08027, CH08888,
<u>Invited talks by Line Roald and Josh Taylor</u>	10 Jan 2024 10:00 AM	CH08704	
<u>Invited talks on battery research by Prof. Erik Schaltz and Prof. Simona Onori</u>	10 Jan 2024 09:00 AM	CH08704	
<u>PhD Defense Enrica Raheli - Physics-Aware Operation of Power-to-X and Natural Gas Systems</u>	09 Jan 2024 01:00 PM	CH08704	<u>Kgs. Lyngby, Kobenhavns Amt</u>

Planned activities

Here are some examples of proposed activities that have been planned by our chapters and the section:

- Continue with all regular meetings.

Title	Date	Host	Location
<u>A Brief Introduction to Parasitic Capacitance in Magnetic Components</u>	30 Oct 2024 02:00 PM	CH08888	
Student Engement workshops led by industry representatives	25 Nov 2024, 24 Feb 2025		

How Region 8 can be of help to your Section, members, and activities

The IEEE Denmark Section faces several challenges that could benefit from support and discussion within Region 8. Challenges include maintaining consistent member engagement, especially during virtual events, ensuring diversity and inclusion initiatives are effective and impactful, and addressing resource constraints for organizing larger-scale activities. Support from Region 8 in terms of sharing best practices for virtual engagement, offering guidance on effective diversity and inclusion

strategies, and providing resources for organizing events would be valuable. Additionally, discussions during the R8 Committee meeting on fostering collaboration among neighboring Sections, addressing shared challenges, and exploring joint initiatives could provide insights and solutions. Suggestions for agenda items include a focus on member retention strategies, sharing successful virtual event models, and exploring collaborative opportunities to maximize the impact of IEEE activities in the region.

Any other issues of interest