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## Research profile

Saeed Peyghami received the B.Sc., M.Sc. and Ph.D. all in electrical power engineering from Sharif University of Technology, Tehran, Iran in 2011, 2013 and 2017 respectively. From 2017 to 2021, he was a Postdoctoral researcher at Aalborg University, where he is currently an Associate Professor. His research interest includes reliability and risk assessment in modern power systems, control and stability of power electronics based power systems, and Quantum computing applications in power systems.

## Qualifications

Electrical Engineering, PhD, Sharif University of Technology  
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## Employment

### Research outputs

**Optimizing Grid-Forming Wind Turbines Share for Frequency Regulation and LOLF Reduction in Modern Power Systems**  
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**A Proactive Operating Strategy for Microgrid Resilience Enhanced for Weather-induced Outages**  
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**Wear-Out Failure of a Power Electronic Converter Under Inversion and Rectification Modes**

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**Unified Power sharing Control in Hybrid AC/DC Microgrids Employing Synchronous Machine Principle**

Heyderi, R., Al hasheem, M., Peyghami, S., Dragicevic, T. & Blaabjerg, F., Sept 2018, *Proceedings of 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe)*. IEEE Press, p. 1-8 8 p. 8515648

**Autonomous Power Management in LVDC Microgrids based on a Superimposed Frequency Droop**

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**Distributed Primary and Secondary Power Sharing in a Droop-Controlled LVDC Microgrid with Merged AC and DC Characteristics**

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**System-Level Lifetime-Oriented Power Sharing Control of Paralleled DC/DC Converters**

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**Enhanced Frequency Droop Method for Load Sharing in LVDC Power Systems**

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**Synchronverter-Enabled DC Power Sharing Approach for LVDC Microgrids**

Peyghami, S., Davari, P., Mokhtari, H., Loh, P. C. & Blaabjerg, F., Oct 2017, In: *IEEE Transactions on Power Electronics*. 32, 10, p. 8089 - 8099 11 p.

**Decentralized Load Sharing in a Low-Voltage Direct Current Microgrid With an Adaptive Droop Approach Based on a Superimposed Frequency**

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**Hierarchical Power Sharing Control in DC Microgrids**

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**A New Secondary Control Approach for Voltage Regulation in DC Microgrids**

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**Smart Power Management of DC Microgrids in Future Milligrids**

Peyghami, S., Mokhtari, H., Davari, P., Loh, P. C. & Blaabjerg, F., Sept 2016, *Proceedings of 18th European Conference on Power Electronics and Applications (EPE'16 ECCE Europe), 2016*. IEEE Press, 10 p.

**Distributed Secondary Control in DC Microgrids with Low-Bandwidth Communication Link**

Loh, P. C., Blaabjerg, F., Peyghami, S. & Mokhtari, H., Feb 2016, *Proceedings of 7th Power Electronics and Drive Systems Technologies Conference (PEDSTC), 2016: PEDSTC2016*. IEEE Press, p. 641 - 645 5 p.

## Awards

**Pro-Risk: Pro-Risk: mathematical methods for Probabilistic Risk modeling of green electric power systems**  
Peyghami, S. (PI) & Frøstrup, S. (Project Coordinator)  
Independent Research Fund Denmark: DKK2,880,000.00  
01/04/2023 → 31/03/2026

## Projects

**Electromagnetic Interference Analysis and Mitigation of Highly Integrated Power Electronics in Motor Drives**  
Babu, P. (PI), Davari, P. (Supervisor), Blaabjerg, F. (Supervisor) & Peyghami, S. (Supervisor)  
01/10/2023 → 30/09/2026

**Integrated Design for Reliability of Motor Drives in High-Power High-Speed Machines**  
Ahooye Atashin, S. (PI), Blaabjerg, F. (Supervisor), Peyghami, S. (Supervisor) & Davari, P. (Supervisor)  
01/01/2024 → 31/12/2026

**Integrated Design of Microgrids Considering Reliability and Stability**  
Azizi, A. (PI), Blaabjerg, F. (Supervisor) & Peyghami, S. (Supervisor)  
01/11/2021 → 31/10/2024

**HIPo: Integrated High-speed Power Systems for Industry and Mobile Applications**  
Davari, P. (PI), Peyghami, S. (Project Participant), Blaabjerg, F. (Project Manager) & Frøstrup, S. (Project Coordinator)  
European Commission  
01/09/2022 → 31/08/2026

**Optimal Allocation of Hybrid Energy Storage Systems for Stackable Applications in Distribution Grid**  
Zhang, Y. (PI), Blaabjerg, F. (Supervisor), Peyghami, S. (Supervisor), Dragicevic, T. (Supervisor) & Anvari-Moghaddam, A. (Supervisor)  
01/05/2021 → 30/04/2024

**Pro-Risk: Pro-Risk: mathematical methods for Probabilistic Risk modeling of green electric power systems**  
Peyghami, S. (PI) & Frøstrup, S. (Project Coordinator)  
Independent Research Fund Denmark  
01/04/2023 → 31/03/2026

**RAWFaEL: Reliability Assessment of Wind Farm Electrical System**  
Peyghami, S. (PI), Hosseini, S. A. (Project Participant) & Frøstrup, S. (Project Coordinator)  
01/06/2023 → 31/07/2024

**RELIABILITY-ORIENTED DESIGN OF A MICROGRID SYSTEM**  
Sandelic, M. (PI), Blaabjerg, F. (Supervisor), Sangwongwanich, A. (Supervisor) & Peyghami, S. (Supervisor)  
01/10/2020 → 30/09/2023

**RelyPES: RelyPES: A Reliability and Risk Assessment Software Tool for Power and Energy Systems**  
Peyghami, S. (PI) & Frøstrup, S. (Project Coordinator)  
Innovation Fund Denmark  
01/01/2023 → 31/03/2024

**SOLARIS: SOLARIS**  
Peyghami, S. (PI), Davari, P. (Col) & Frøstrup, S. (Project Coordinator)  
Horizon Europe  
01/07/2024 → 30/06/2028

**System-Level Reliability Modelling and Evaluation in Power Electronic Based Generation Systems**

Davoodi, A. (PI), Blaabjerg, F. (Supervisor), Yang, Y. (Supervisor) & Peyghami, S. (Supervisor)

01/09/2019 → 31/08/2022