

CONNECTING THE DOTS



ISC EESP 2025



1st Workshop on Energy Efficiency with Sustainable Performance: Techniques, Tools, and Best Practices

June 13, 2025, 9 am -- 1 pm, Hamburg, Germany
In conjunction with ISC High Performance 2025

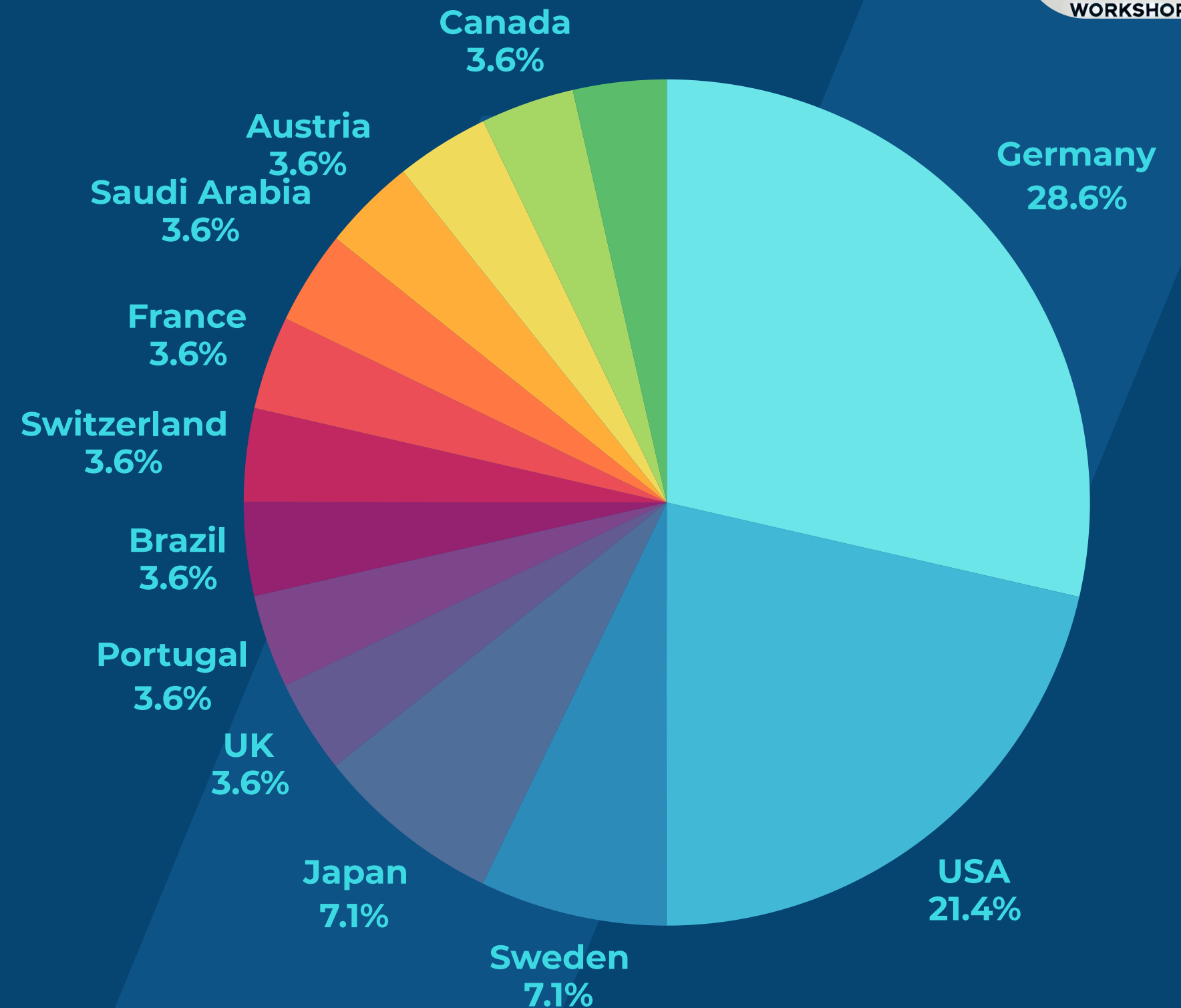
Ayesha Afzal

General Chair. ISC EESP workshop 2025

ISC EESP PLANNING & PROGRAM TEAM



1. Ayesha Afzal, general chair - Erlangen National High Performance Computing Center
2. Sarah Neuwirth, program chair - Johannes Gutenberg University Mainz
3. Natalie Bates, program chair - Energy Efficient HPC Working Group (EE HPC WG)
4. Siddhartha Jana, program chair - Intel
5. Radita Liem, proceedings chair - RWTH Aachen University
6. Aditya Deshpande - Samsung Semiconductor, USA
7. Andy Turner - University of Leeds, England
8. Aleksandar Ilic - University of Lisbon, Portugal
9. Arthur F. Lorenzon - UFRGS, Brazil
10. Bronis De Supinski - Lawrence Livermore National Laboratory, USA
11. Can Hankendi - Boston University, USA
12. Dirk Pleiter - KTH Royal Institute of Technology, Sweden
13. Diana Goehringer - Technische Universität Dresden, Germany
14. Fumiyoshi Shoji - RIKEN Center for Computational Science, Japan
15. Florina M. Ciorba - University of Basel, Switzerland
16. Gabriel Hautreux - National Computer Center for Higher Education (CINES), France
17. Georg Hager - Regionales Rechenzentrum Erlangen (RRZE), Germany
18. Hatem Ltaief - King Abdullah University of Science and Technology, Saudi Arabia
19. Harald Köstler - Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
20. Kento Sato - RIKEN Center for Computational Science, Japan
21. Markus Diesmann - Forschungszentrum Jülich, Germany
22. Markus Rampp - Max Planck Computing and Data Facility, Germany
23. Martin Frank - Karlsruhe Institute of Technology, Germany
24. Matthias Maiterth - Oak Ridge National Laboratory, USA
25. Michael Ott - Leibniz Supercomputing Centre, Germany
26. Nathan R. Tallent - Pacific Northwest National Laboratory, USA
27. Paolo Bientinesi - Umeå University, Sweden
28. Ralf Schneider - High Performance Computing Center Stuttgart, Germany
29. Radu Prodan - University of Klagenfurt, Austria
30. Raphael Vitti - Lawrence Berkeley National Laboratory, USA
31. Robert Schöne - Technische Universität Dresden, Germany
32. Roman Wyrzykowski - Czestochowa University of Technology, Poland
33. Ryan E. Grant - Queen's University, Canada
34. Stefano Markidis - KTH Royal Institute of Technology, Sweden
35. Thomas Gruber - Erlangen National High Performance Computing Center, Germany
36. Ondřej Vysocký - IT4Innovations National Supercomputing Center, Czech Republic
37. Zhengji Zhao - Lawrence Berkeley National Laboratory, USA



ISC EESP COLLABORATORS



Erlangen National High Performance
Computing Center (NHR@FAU), Germany



Energy Efficient HPC Working Group
(EE HPC WG), USA



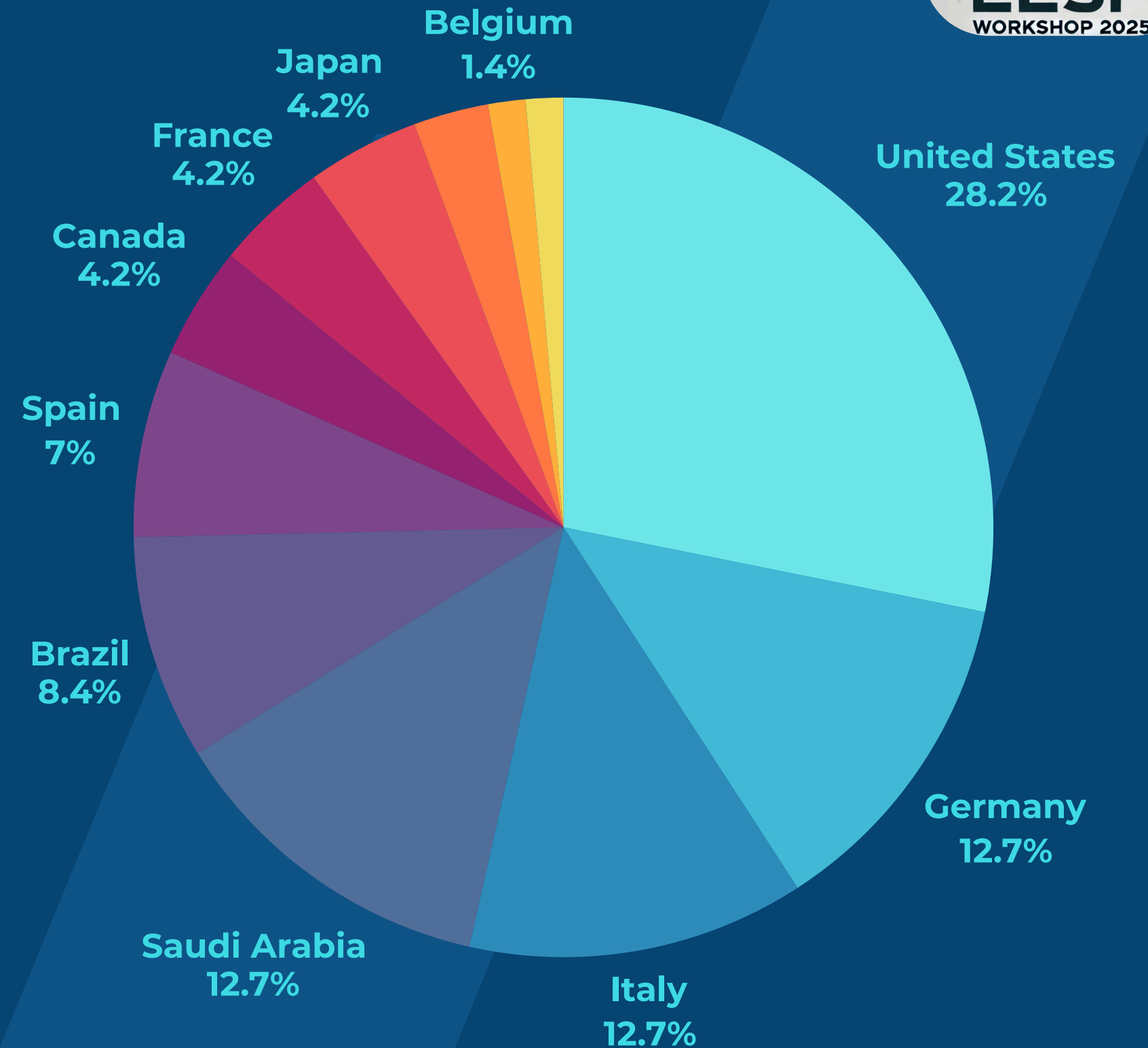
<https://ayeshaafzal91.github.io/eesp>

ISC EESP SUBMISSION STATISTICS



General Statistics

- Submissions: 22
- Accepted: 8
- Acceptance rate: 0.36
- Reviews per submission: 3-4



ISC EESP PROGRAM SCHEDULE



9:00 a.m. – 9:05 a.m. — Welcome remarks & Best Paper announcement

■ Session 1: Keynote and Best Paper Presentation

Session chair: Ayesha Afzal - Erlangen National High Performance Computing Center (NHR@FAU), Germany.

- 9:05 a.m. – 9:40 a.m. — Keynote speech with Q&A, "Codesign for Energy Efficient Computing" by John Shalf.
- 9:40 a.m. – 10:00 a.m. — Best Paper talk with Q&A, "What A Waste" by Shaina Smith, Jordan M. Abt, and Ryan E. Grant

■ Session 2: Energy-Efficient GPU Computing

Session chair: Zhengji Zhao - Lawrence Berkeley National Laboratory (NERSC), USA

- 10:00 a.m. – 10:20 a.m. — "Experience on clock rate adjustment for energy-efficient GPU-accelerated real-world codes" — Giorgio Amati, Matteo Turisini, Andrea Monterubbiano, Mattia Paladino, Elisabetta Boella, Daniele Gregori, and Danilo Croce
- 10:20 a.m. – 10:40 a.m. — "Characterizing GPU Energy Usage in Exascale-Ready Portable Science Applications" — William Godoy, Oscar Hernandez, Paul Kent, Maria Patrou, Kazi Asifuzzaman, Narasinga Miniskar, Pedro Valero-Lara, Jeffrey Vetter, Matthew Sinclair, Jason Lowe-Power, and Bobby Bruce

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■ Session 3: System-Level Strategies for Energy-Efficient Computing

Session chair: Hatem Ltaief - King Abdullah University of Science and Technology, Saudi Arabia

- 10:40 a.m. – 11:00 a.m. — "Running Energy-Efficient HPL on APUs: Strategies and Best Practices" — Jean-Yves Vet and Gabriel Hautreux
- 11:00 a.m. – 11:30 a.m. — Coffee Break
- 11:30 a.m. – 11:50 a.m. — "DARE-ML: Democratized Accessible Resource Environment for Machine Learning in the SUPERCOM platform" — Matteo Mendula, Caterina Leonelli, Marco Miozzo, and Paolo Dini

■ Session 4: Power Profiling and Energy Tuning Techniques

Session chair: Fumiyoshi Shoji - RIKEN Center for Computational Science (R-CCS), Japan

- 11:50 a.m. – 12:10 p.m. — "Pinpointing Idle-Power Regressions in Linux" — Hannes Tröpgen, Till Smejkal, Thomas Ilsche, Robert Schöne, and Horst Schirmeier
- 12:10 p.m. – 12:30 p.m. — "Power Capping Metric Evaluation for Improving Energy-Efficiency in HPC Applications" — Maria Patrou, Thomas Wang, Wael Elwasif, Markus Eisenbach, Ross Miller, Oscar Hernandez, and William Godoy
- 12:30 p.m. – 12:50 p.m. — "Analysis of Application Power Characteristics Using Performance Counters on A64FX" — Ryoma Ohara, Keiji Yamamoto, and Toshihiro Hanawa

12:50 p.m. – 1:00 p.m. — Closing remarks

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EESP NEXT EDITION?



Workshop Collaborators 2025



- Next edition: Open to collaborate? (✉ ayesha.afzal@fau.de)
 - Organising Committee
 - Program Committee
 - Collaborators (industry, laboratories, research centers)

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THANK YOU

<https://ayeshaafzal91.github.io/eesp>