KEMENTERIAN PENDIDIKAN TINGGI, SAINS, DAN TEKNOLOGI
DIREKTORAT JENDERAL RISET DAN PENGEMBANGAN
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Laman www.kemdiktisaintek.go.id

Nomor : 0225/C2/DT.04.00/2025 10 September 2025
Lampiran : 4 halaman
Hal : Pendaftaran Webinar Internasional *High-Performance Computing (HPC): What it can do for my research?*

Yth.

1. Pimpinan Perguruan Tinggi Negeri/Swasta
2. Kepala LLDikti Wilayah I s.d XVII

di lingkungan Kementerian Pendidikan Tinggi, Sains, dan Teknologi

Perkembangan teknologi informasi dan komunikasi di era digital telah mendorong peningkatan kebutuhan komputasi berskala besar di berbagai bidang. Pemrosesan data dalam jumlah masif dengan tingkat kompleksitas tinggi tidak lagi dapat ditangani oleh infrastruktur komputasi konvensional. Kementerian Pendidikan Tinggi, Sains, dan Teknologi melalui Direktorat Jenderal Riset dan Pengembangan bekerja sama dengan ASEAN HPC Task Force akan menyelenggarakan Webinar Internasional: *High-Performance Computing* (HPC): *What it can do for my research*?

Berkenaan dengan hal tersebut, mohon bantuan Saudara untuk dapat menyampaikan informasi kepada dosen/peneliti/asisten peneliti dan mahasiswa pascasarjana untuk mendaftar dan mengikuti kegiatan dimaksud dengan ketentuan sebagai berikut:

1. Webinar dilaksanakan tanggal **26 September 2025**, dimulai pukul 14.00 WIB;
2. Peserta adalah dosen/ peneliti di lingkungan Kementerian Pendidikan Tinggi, Sains, dan Teknologi;
3. Melakukan registrasi melalui: https://bit.ly/HPCwebinar1
   paling lambat tanggal **21 September 2025** pukul 16.00 WIB;
4. Peserta webinar wajib melakukan registrasi dengan **email aktif**. Peserta yang lolos verifikasi akan dikrimkan tautan webinar melalui email terdaftar paling lambat **1 hari sebelum** webinar berlangsung;
5. Kapasitas webinar sebanyak 800 dosen/peneliti/asisten peneliti dan mahasiswa pascasarjana terverifikasi; dan
6. Webinar bersifat gratis dan tidak dipungut biaya.

Balai Besar Sertifikasi Elektronik
Catatan :
1. UU ITE No. 11 Tahun 2008 Pasal 5 Ayat 1 "*Informasi Elektronik dan/atau Dokumen Elektronik dan/atau hasil cetaknya merupakan alat bukti yang sah.*"
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Informasi lebih lanjut dapat menghubungi narahubung selama jam kerja melalui Sdri. Rininta (WhatsApp 0813-9415-2891) atau Sdri. Rani (WhatsApp 0819-9787-6543).

Atas perhatian dan kerja sama yang baik, kami ucapkan terima kasih.

Direktur Bina Talenta Penelitian dan Pengembangan,

Heri Kuswanto

NIP 198203262003121004

Tembusan:

Direktur Jenderal Riset dan Pengembangan

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WEBINAR AGENDA

Time	Session	Speaker/ Facilitator
14.00	Welcome & Opening Remarks	Director General, Research & Development, MOHEST
14.05	Welcome & Opening Remarks Introduction to ASEAN HPC Taskforce Webinar Objectives and Agenda Overview	J. W. Saputro, ASEAN HPC Taskforce, Co-Chair
14.10	Keynote: The Future of High-Performance Computing • Current Global State of HPC • Model for a Shared intl HPC Facility: LUMI • Breakout (AI) and Emerging (quantum) Technologies • Environmental Considerations	Dr. Kimmo Koski, CEO, CSC, Finland
14.30	HPC for Material Sciences: Case Study	Dr. Sean Smith, Founder & CEO, SSPL, Australia
14.50	User Experience and Future Expectation from Exascale	Dr. Moh. Adhib Ulil Absor, Universitas Gadjah Mada
15.10	Q&A Session - Interactive Discussion on HPC Fundamentals	Moderated by ASEAN HPC Taskforce
15.25	Break & Networking - Virtual Networking Opportunity	All Participants
15.35	HPC for Biomedical & Life Sciences: Case Study	Prof. Tin Wee Tan, National University of Singapore
15.55	HPC for Physical Sciences: Case Study	Prof. Supa Hannongbua, Kasetsart University, Thailand
16.15	Experiences with University Level Cluster Computing	Dr. rer. nat I Made Wiryana, Universitas Gunadarma
16.45	Q&A Session & Panel Discussion	All Speakers
16.50	Closing Remarks & Next Steps • Summary of key takeaways • Follow-up actions and collaboration opportunities	J W Saputro, ASEAN HPC Taskforce, Co-Chair

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Keynote Speakers – Biographies

Dr. Sean Smith – Founder & CEO, Australia

Dr. Sean Smith is a distinguished computational chemist and former Director of Australia's National Computational Infrastructure (NCI), where he led the nation's premier high-performance computing facility from 2018 to 2024. During his tenure at NCI and as Professor of Computational Nanomaterials Science and Technology at the Australian National University, he oversaw the operation of Australia's largest public supercomputer and advanced the country's computational research capabilities across multiple scientific disciplines.

With a PhD in Chemistry from the University of Canterbury, New Zealand, Professor Smith has built an internationally recognized career spanning prestigious institutions including the University of California Berkeley, The University of Queensland, Oak Ridge National Laboratory (where he directed the Center for Nanophase Materials Sciences), and UNSW Sydney (where he founded the Integrated Materials Design Centre). His expertise encompasses computational chemistry and nanomaterials science, research infrastructure management, and international research collaboration frameworks.

Prof. Tin Wee Tan – National University of Singapore

Professor Tan Tin Wee is an Associate Professor in the Department of Biochemistry at the National University of Singapore and serves as Chief Executive of the National Supercomputing Center (NSCC) Singapore. He holds a PhD in Molecular Biology from the University of Edinburgh (1990), a Master of Science in Molecular Biology and Biotechnology from University College London and studied Biochemistry at the University of Cambridge. As a distinguished bioinformatician and technology leader, Prof Tan has dedicated his career to advancing computational biology, supercomputing infrastructure, and Internet technologies across Singapore and the Asia-Pacific region.

Prof Tan is internationally recognized as a pioneer of the Internet, having been inducted into the prestigious Internet Hall of Fame in 2012 alongside the founding fathers of the Internet. He is credited as the inventor and founder of multilingual internationalized domain names (IDN), a groundbreaking innovation that enabled non-Latin script domain names worldwide. His leadership extends to developing Singapore's first nationwide research network (TechNet) in 1990, establishing the country's first Gopher Server, and spearheading the InfiniCortex project in 2014, which demonstrated the first high-speed InfiniBand connection between three continents. Under his guidance, the National Supercomputing Center has positioned Singapore at the forefront of high-performance computing capabilities.

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Dr. Kimmo Koski – CEO, Finland

Dr. Kimmo Koski started as a CEO at CSC in August 2004 with a mission to support Finnish research providing world-class e-infrastructure and related services. In addition to building the HPC Ecosystem in Finland, he has been involved in various European and global collaborations in high-performance computing, data management, networks and cloud activities. Examples include EU initiatives, such as EuroHPC, EUDAT, EOSC and PRACE.

One of the major success stories is the eco-efficient datacenter in a former paper mill located in Kajaani Finland, where CSC is hosting the LUMI EuroHPC supercomputer. The most recent work is the successful application for AI Factories -call, due to which there will be the continuation of the current LUMI system from 2026/27 onwards. Increasing focus for his activities is how to promote the development of the balanced European HPC Ecosystem including different kind of computing elements, AI, quantum and data analytics – in addition to the main asset, namely competent people.

Dr. Moh. Adhib Ulil Absor – Universitas Gadjah Mada, Indonesia

Dr. Moh. Adhib Ulil Absor is an Associate Professor in the Department of Physics, Faculty of Mathematics and Natural Sciences at Universitas Gadjah Mada, Indonesia. He earned his B.Sc. and M.Sc. in Physics from Universitas Gadjah Mada, followed by a Ph.D. in Mathematical and Physical Sciences from Kanazawa University, Japan. Dr. Absor has held several key leadership positions, including Head of the Advanced Material Functional Research Group and Secretary of the Senate, Faculty of Mathematics and Natural Sciences since 2021 till date. He maintains strong international collaborations as a Collaborative Professor at Kanazawa University, Japan since 2018 and has received notable recognition, including the Penghargaan Satya Lencana from the President of Indonesia (2023) and nomination for the Young Scientist Award from the Asian Union of Magnetics Societies in 2024.

Dr. Absor's research expertise centers on computational material design in condensed matter physics, with particular focus on the development of quantum and spintronic materials using advanced quantum simulations and density functional theory calculations. His research encompasses the theory of electronic properties in real solids, including structural, magnetic, electronic, optical, and chemical properties of bulk solids, interfaces, surfaces, and nanostructures relevant to nanoelectronics and spintronics applications. He has extensive experience with high-performance computing systems, including the ITO supercomputer at Kyushu University, the Supercomputer at Institute for Solid State Physics (ISSP) University of Tokyo, and the MAHAMERU HPC systems at BRIN. Dr. Absor has published over 54 papers in reputable international journals, with his work focusing on twodimensional materials, Rashba effects, spin-orbit coupling, and computational material design for energy harvesting applications, including fuel cells, solar cells, and catalysts. His contributions to the field have established him as a leading researcher in theoretical condensed matter physics and computational materials science.

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Dr. rer. nat. I Made Wiryana – Universitas Gunadarma, Indonesia

Dr. rer. nat. I Made Wiryana serves as the Head of AI Center of Excellence and Coordinator of International Collaborations at the Faculty of Computer Science and Information Technology, Universitas Gunadarma, Jakarta, Indonesia. With his doctoral degree (Dr. rer. nat.) demonstrating his advanced expertise in natural sciences and technology, he has established himself as a prominent leader in artificial intelligence research and international academic cooperation. His dual leadership roles position him at the forefront of Indonesia's AI development initiatives while fostering global collaborations that advance research capabilities and knowledge exchange in the field of artificial intelligence and computer science.

His expertise spans a comprehensive range of cutting-edge technologies including artificial intelligence applications, deep learning systems, cybersecurity frameworks, and advanced data analytics. His notable contributions include pioneering work in AI-powered tax evasion detection systems for complex corporate networks, sophisticated intrusion detection systems using deep neural networks, and innovative applications of machine learning in various domains including healthcare analytics and business intelligence. With a significant research impact evidenced by over 20,000 reads on academic platforms and an extensive publication record covering topics from big data analytics to cybersecurity protocol verification, Dr. Wiryana continues to drive innovation in AI research while mentoring the next generation of computer scientists.

Prof. Supa Hannongbua – Kasetsart University, Thailand

Prof Supa Hannongbua is a distinguished academic leader and researcher in computational chemistry and drug discovery. She obtained her B.Sc. in Chemistry and M.Sc. in Physical Chemistry from Chulalongkorn University, Thailand, followed by a Dr.rer.nat from Innsbruck University, Austria, where she later pursued postdoctoral studies in 3D-QSAR Advanced Technique for Drug Design. She has held significant leadership positions including Head of Chemistry Department, Dean of Faculty of Science, and member of Kasetsart University Council. Her exceptional contributions have been recognized through prestigious awards including the Young Scientist Award, TWAS Young Scientist Award, and L'Oreal for Women in Science. She is a member of the Thai Academy of Science and Technology and Secretary-general of the Federation of Asian Chemical Societies, also serving as President of the Chemical Society of Thailand since 2017 until present, and in various IUPAC leadership roles.

Her research expertise centers on computational drug discovery, encompassing Computer-Aided Molecular Design, natural products and drug discovery, protein-based drug design, bioinformatics, cheminformatics, and nanomaterials. Her research is organized around three complementary platforms: first, a Computational Drug Discovery platform incorporating structural modification of natural products, QSAR, quantum chemical calculations, virtual screening, molecular dynamics simulations, and ADME/T prediction; second, a biological-physicochemical experimental platform utilizing enzyme assays, X-ray crystallography, NMR spectroscopy, and isothermal titration calorimetry for ligand-receptor interaction studies; and third, development of methodology and polymeric compounds for fluoro-energy transfer materials leading to high throughput screening technologies. With approximately 170 publications and 5 book chapters, she has established herself as a leading researcher in computational chemistry and drug discovery.

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