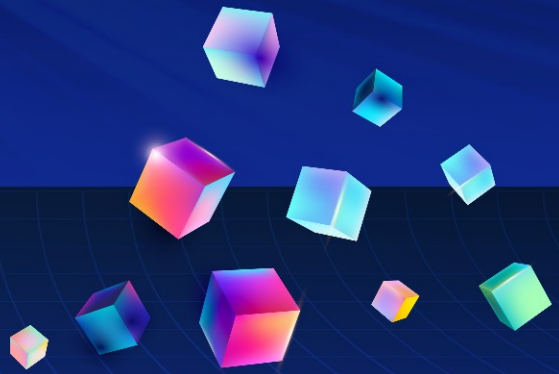
ICICLE



Partnership

Partner	Partnership contributions
Lenovo & Intel	$250,000 for options of either OneAPI, ICASE Students etc.
Lenovo & Nvidia/Mellanox	Free of Charge UFM licensing worth £331,000
Lenovo & Nvidia	2xDeep Learning Institute Workshops
Lenovo	Water cooling workshop worth $4,000
Lenovo	Report into the Carbon Footprint of the final solution
Lenovo	Hybrid cloud workshop worth $4,000
Lenovo	HPC tailored managed service to assist with operational support
Lenovo/UCL/ICL	SW Stack Collaboration
Lenovo	Exascale to Everyscale Advisory Council Member

Lenovo

intel®

Imperial College London

Lenovo

Intel proposed a 5-year collaboration with Imperial College and Lenovo, through a single upfront investment of $250,000 payable on the commencement of the agreement.
This payment is to fund the program at a pro-rata equivalence of $50K per annum over the five-year period. The funds are to be utilized to enable some/all of the aspects of the proposals discussed above and/or to fund member/s of staff to work on the Intel code optimization, next gen accelerator technology and potential inclusion into the Intel *oneAPI COE program.

oneAPI Centre of Excellence

Port critical open-source HPC and/or AI applications to oneAPI. Applications must be widely used worldwide.

Create peer-reviewed articles that describe the practical use of oneAPI in heterogeneous parallel application development and oneAPI pedagogy.

Teach Intel created undergraduate course material on oneAPI in the classroom at Imperial College.

Emerging Technologies

Intel is at the forefront of emerging technologies and with Lenovo we propose to provide early access and support in the use of these technologies. In the first instance, this would take the form of remote access into the Intel DevCloud and latterly Intel providing Software Development Platforms (SDPs) through Lenovo to Imperial College. A good example of this could be early access to Intel's forthcoming CPU Sapphire Rapids and Sapphire Rapids HBM as well as the new Ponte Vecchio GPU. Intel's Habana Gaudi line of training and inference processors are also an example of technologies that will also be available.

ICASE

Nurturing the next generation of HPC and AI scientists is not only the work of academic institutions but also a responsibility of the tech industry. As part of the collaboration, we would propose that Imperial utilize some of the funding to potentially sponsor a number (yet to be determined) PhD students at Imperial College. Through the UKRI iCase programme, the cost is typically one-third of the student's stipend with the academic partner picking up the other two-thirds. Estimated to be ~ £8,000 per student per year.

Industrial Engagement

Collaboration between academia and industry with a particular focus on Productivity and AI. Establish a work stream that would prospect, engage, and bring industrial collaborators to Imperial College, perhaps under the ICICLE banner to do their computational science as well as jointly bid for funding. This may take the form of government establishments such as TfL, Office for National Statistics through to smaller SMEs located in the UK who lack both the computational skills and access to infrastructure to improve

Longer Term Research

Intel recently launched our Quantum SDK Beta version; this is a software package that allows users to interface with Intel's Quantum Computing Stack. Intel would grant Imperial College users access to this stack to explore writing quantum algorithms with our tools and to provide feedback on their experience.

STEMM / Gender Balance in Computing and Student Ambassadors

Initiating an outreach program to schools supported by Imperial College to deliver technology driven skills.

This Student Ambassadors program is focused on undergraduate and graduate students who are passionate about technology and working with developer communities to promote learning, sharing, and collaboration. It provides opportunities for students to enhance their oneAPI skills, expand their network, and learn about the cutting-edge Intel® hardware and software product

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