



Data Centre ► **HPC**

# Containerised HPC, cosmology, and much more Moore's Law: It's ISC 2018 in Frankfurt

Explore the far frontiers of supercomputing

By [David Gordon](#) 16 May 2018 at 14:15

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**Promo** The annual [ISC High Performance](#) conference always draws speakers, exhibitors and researchers from all over the world, and this year's event promises to be a bumper edition.

Aimed at revealing HPC technological development and its application in both scientific and commercial environments, ISC 2018 taking place in Frankfurt from 24-28 June will feature 162 exhibitors, 51 research

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A packed schedule of expert presentation will cover a broad range of themes:

- Beyond Moore's Law
- Exascale systems
- Climate change
- Big data analytics
- Cosmology and HPC
- HPC in medicine
- Future applications for quantum computers
- Cloud computing for HPC
- Programming models and languages
- The rise of containerised HPC

In her conference keynote speech, Dr Maria Girone, CTO of CERN Openlab, will discuss the challenges of storing and processing the huge volumes of data generated by the Large Hadron Collider (LHC) project. Adding to the pressure, the capacity demands of the world's most powerful particle accelerator will rise to 50 to 100 times greater than today when the next-generation High-Luminosity LHC is launched in 2026.

In Tuesday's [keynote Dr. Keren Bergman](#), Charles Batchelor professor of electrical engineering at Columbia University, will explore the ways embedded photonics can reduce the energy and communications costs of connecting HPC compute and memory resources.

Tuesday 26 June is also Industrial Day focusing on how leading organisations address future business needs, IT optimisation and the different technologies underpinning this transformation. A round table on the usage of HPC resources by leading industrial players will close the day.

Machine learning has become a vital topic within the HPC community and a one-day track will be devoted to the topic on Wednesday 27 June.

- How machine learning applications are changing HPC architectures
- Challenges towards scalable machine learning on HPC systems
- Software for machine learning on HPC


- How the technology is being applied by commercial users and researchers

Other highlights at the event include a presentation entitled 'Pushing digital computing to the limits', asking where are the really new ideas for digital computing in the future? What have Intel, IBM, ARM, AMD and Nvidia and others in their quivers? And you may be keen to discover the answer to this: 'Will HPC transform AI or will AI transform HPC?'

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