

Digital Europe: Path towards Exascale and Quantum Computing. Opportunities for materials modelling and digital transformation.

Matteo Mascagni

¹ European Commission, DG Communications Networks, Content and Technology - High Performance Computing & Quantum Technologies Unit - L-2920 Luxembourg,

matteo.mascagni@ec.europa.eu

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Abstract:

Next computing frontiers are essentially “exascale” and “quantum” computing.

Exascale Computing is the use of extremely powerful computers for applications across all branches of science, industry and public sectors related to modelling and simulation. Exascale Computers will be able to perform billions of billions of floating point operations per second and are an essential infrastructure for the Digital Economy and the digital transformation of society and industry.

Quantum Computers – funded on quantum mechanics principles - are able to tackle computation problems – such as integer factorization - substantially faster than ordinary computers.

The European Commission has been supporting the path towards Exascale and Quantum Computing and technologies as fundamental infrastructures for enabling the data revolution.

The presentation will expose the challenges in the European path towards Exascale and Quantum Computing, including opportunities for material modelling and simulation.