Ana Lucia Varbanescu awarded Horizon 2020 project
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Dr Ana Lucia Varbanescu, MacGillavry Fellow and Assistant Professor at the Systems and Networks Engineering group of the Informatics Institute, has received funding as partner in the European project 'Exploiting eXascale Technology with Reconfigurable Architectures (EXTRA)'.

The project has been awarded almost €4 million as part of the FET-PROACTIVE Horizon 2020 call 'Towards exascale high performance computing'.

In this project, the University of Amsterdam will work together with partners from the UK (Imperial College London, University of Cambridge, Maxeler), Italy (Politecnico di Milano), Greece (Telecommunications Systems Institute, Synelixis), and Germany (Ruhr-Universität Bochum). Ghent University is the coordinating partner. The funding the University of Amsterdam receives (in excess of €500,000) will support the research of a PhD student and a postdoctoral researcher for a period of three years.

Performance hungry applications

The EXTRA project focuses on tackling the huge computational challenges of future exascale High Performance Computing (HPC) applications through ultra-efficient heterogeneous systems. To reduce power and increase performance, such systems will be built from compute nodes with reconfiguration as an intrinsic feature. On such systems, HPC applications can be optimally accelerated at all times, even if they regularly change over time.

To support this development, the researchers aim to create a new and flexible exploration platform for developing reconfigurable architectures, design tools and HPC applications with built-in run-time reconfiguration. The idea is to enable the efficient co-design and joint optimization of architecture, tools, applications and reconfiguration technology in order to prepare for the necessary HPC hardware nodes of the future.

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