

## **Elvira SHISHENINA, PhD**

Quantum Computing lead at BMW Group

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Elvira Shishenina joined the BMW Group's Quantum Computing (QC) initiative as a resident expert in January 2021. An École Polytechnique (Institut Polytechnique de Paris) Engineer, she has an Applied Mathematics and Computational Physics background with Master degrees from École Polytechnique and Novosibirsk State University.

In 2018 after a successful defence, she acquired a PhD degree in Mathematics from the French National Institute for Research in Digital Science and Technology (Inria). Her work resulted in a novel approach that reduces the numerical costs of simulations for Subsurface Imaging. The study was further pursued in the context of the Depth Imaging Partnership between Inria and Total Energies. Besides the PhD, she has more than ten years of scientific experience working for the Energy industry, including the Siberian Branch of the Russian Academy of Science (IPGG SB RAS) and Baker Hughes.

In 2019, following the transition to Quantum Computing, she helped grow the Quantum Computing project at Total Energies taking charge of QC-applications in Quantum Chemistry and Linear Algebra. While developing Total Energies' first in-house QC codes targeting the company's problematics, she also supervised multiple industrial and academic collaborations.

In 2020 with her peers from École Polytechnique, she founded QuantX - the alumni association devoted to QC technology. Besides popularizing Quantum Computing, QuantX facilitates the transfer of expertise from the academic and startup environment to mature industries. The BIG Quantum Hackathon organized by QuantX in 2021 became the world's biggest business-tech QC competition gathering industrial and financial companies, quantum providers, VCs, consulting groups, and academia.

Today Elvira Shishenina leads Quantum Computing research and applications in BMW Group, exploring the promising use cases across the automotive industry and the Group's activities.

