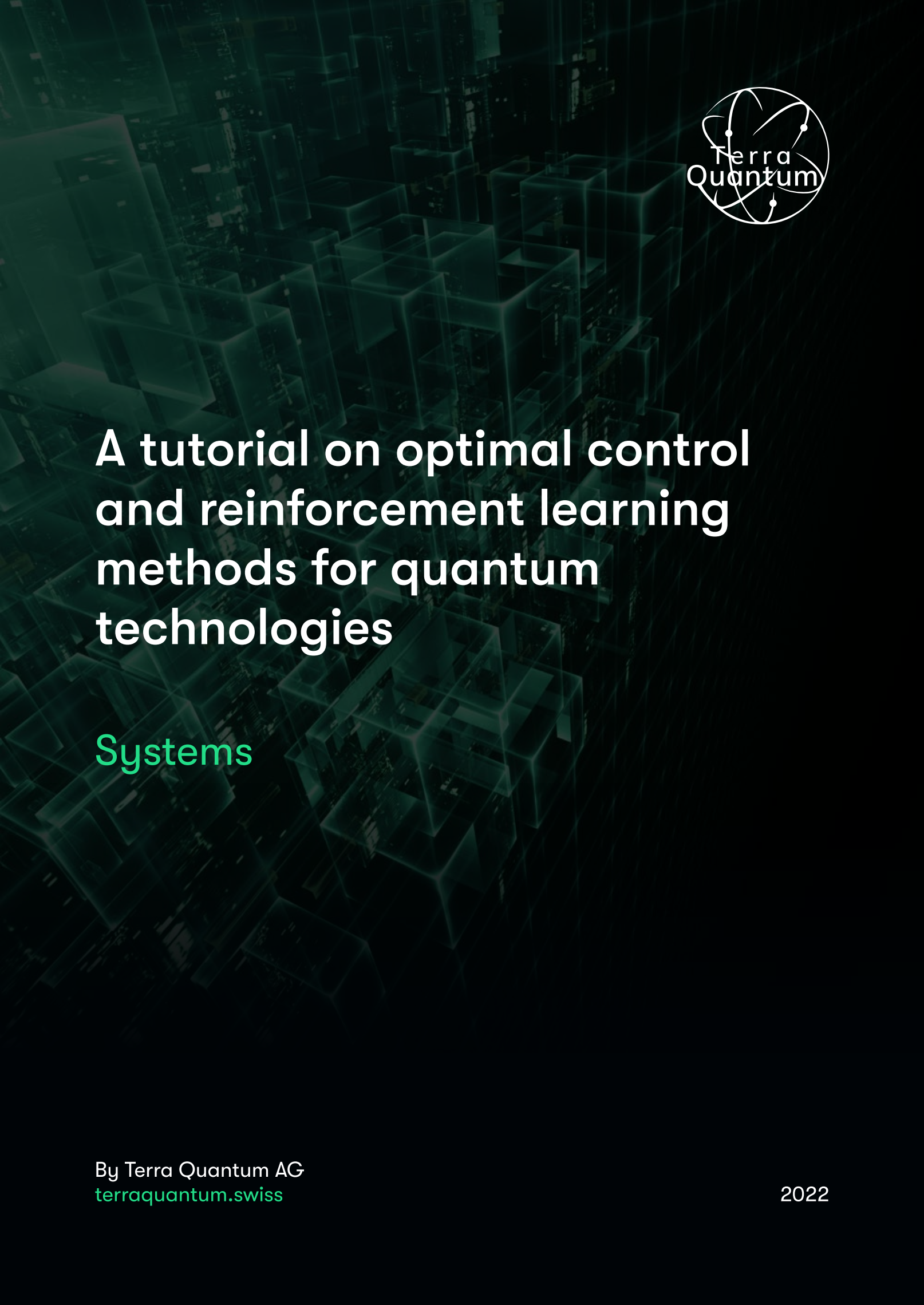


# A tutorial on optimal control and reinforcement learning methods for quantum technologies

## Systems

By Terra Quantum AG
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2022

# A tutorial on optimal control and reinforcement learning methods for quantum technologies

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## ABSTRACT

Quantum Optimal Control is an established field of research which is necessary for the development of Quantum Technologies. In recent years, Machine Learning techniques have been proved useful to tackle a variety of quantum problems. In particular, Reinforcement Learning has been employed to address typical problems of control of quantum systems. In this tutorial we introduce the methods of Quantum Optimal Control and Reinforcement Learning by applying them to the problem of three-level population transfer. The *jupyter* notebooks to reproduce some of our results are open-sourced and available on *github*[1].

*The full article can be found here:*
*https://www.sciencedirect.com/science/article/abs/pii/S0375960122001360?via%3Dihub*