

Rúben André Barreiro

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Quantum Optimization (with IBM Quantum)

Teaching Team: Julien Gacon, Dr. Daniel J. Egger,
Dr. Stefan Woerner, Lucía Cuervo Valor

Duration:	24.05.2023 - 06.06.2023	Exam:	2 hours, 20 questions
Language:	English		(multiple choice)
Teaching form:	Online Course		

Course Topics:

- Types of optimization problems and advantage of using quantum computing
- Mapping combinatorial optimization problems to Ising Hamiltonians, suitable to solve on annealers and gate-based quantum computers
- Quantum approximate optimization and Grover Adaptive Search
- Implementation aspects of quantum algorithms on superconducting hardware
- Possible applications, challenges, and outlook of quantum optimization

Result:

17.8 out of 20.0 possible points (89.0%)

Is part of the top 20% active course participants.



Prof. Dr. Christoph Meinel
openHPI Director



Julien Gacon
Course Guidance



Potsdam, June 6, 2023

Verify online: <https://open.hpi.de/verify/xeceh-nokas-renad-lotig-hutym>



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