Sriram Gopalakrishnan

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INTERESTS Scientific Computing, Applied Math, Device Physics, Quantum Information

EDUCATION

University of Waterloo 2020-23
MSc. in Physics Dr. B. Yoshida
Affiliation: Perimeter Institute, Institute for Quantum Computing

IIT Madras 2016-20
B.Tech. in Engineering Physics (grade: 8.74/10) Dr. U. Khankhoje
Project: Vector 3D FEM for electromagnetic scattering in C++

PAST EMPLOYMENT

Tata Institute of Fundamental Research 2019
Research Intern (VSRP fellowship) Dr. R. Vijay
Awarded best project in condensed matter physics & material science

Homi Bhabha Centre for Science Education 2017-18
Research Intern (NIUS fellowship) Dr. P. Pathak

RESEARCH

Ring-resonator-based coupling architecture for enhanced connectivity in a superconducting multi-qubit network [doi]
S. Hazra, A. Bhattacharjee, M. Chand, K.V. Salunkhe, **SG**, M.P. Patankar, R. Vijay
Physical Review Applied (2021)
Coverage: *Nature* in-brief

Landau quantization of a circular Quantum Dot using the BenDaniel-Duke boundary condition [doi]
SG, S. Biswas, S. Handa
Superlattices and Microstructures (2020)

SELECTED COURSEWORK

Waterloo: Methods in Computational Physics, Quantum Algorithms, Theory of QI
IIT Madras: Stochastic Processes, Dynamical Systems, Convex Optimization

TEACHING EXPERIENCE

- Assisted teaching large undergraduate physics classes at UWaterloo. Duties included tutorials, lab presentations, office hours, grading, proctoring, and problem setting

ECE 106	: Electricity and Magnetism
PHYS 111L	: Mechanics Lab
PHYS 175	: Introduction to the Universe
PHYS 359	: Statistical Mechanics

- Dr. R. Epp: "Thanks for grading the midterm test so carefully and conscientiously, and also thank you for the huge amount of work keeping up with the physepp emails!"
- Dr. A. Jamison: "It is always nice to see them learn something new from you"
- lab feedback: PHYS 111L, example problem set: ECE 106

OTHER PROJECTS

Convex Optimization: solved three practically interesting optimization tasks in CVX
- recovering sparse signal from noisy measurement [via second-order-conic-programming]
- revenue maximization [via linear-programming]
- low-rank matrix completion [via semidefinite-programming]