

dheera venkatraman

graduate student :: massachusetts institute of technology

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[objective]

Seeking internships involving research in electrical engineering and applied physics. Particularly interested in applications to quantum devices, optics, semiconductors and nanotechnology. Also interested in design and innovation with information, electronics and computers. United States citizen.

[education]

Institute: Massachusetts Institute of Technology, Cambridge, MA, USA

Degrees received: SB EE 2006, SB Physics 2007, MEng EE 2007

Degrees in progress: PhD candidate, Electrical Engineering

GPA: 4.6/5.0 (undergraduate), 4.8/5.0 (graduate)

[coursework]

Physics: Quantum Mechanics 3 / Experimental Physics 2 / Solid-State Physics / Statistical Mechanics / Superconductivity

Mathematics: Differential Equations / Real Analysis / Topology / Probability / Game Theory

Engineering: Stochastic Processing / Communication and Control / Computation Structures / Nanoprocessing Technology / Power Electronics / Quantum Optical Communication

[skills]

Computer languages: Perl / C / PHP / MATLAB / SQL / DHTML / LaTeX / Java

Hardware: microcontrollers / digital circuit design / lasers / optics / cryogenics / basic fabrication

Operating systems: Linux / UNIX / Windows

Human languages: English (first language and fluent) / Mandarin / German

[experience]

MIT Research Laboratory of Electronics / Cambridge, MA, USA / 01.2008 - current

Working toward a PhD degree completing various experiments related to quantum sensing.

ETHZ Quantum Electronics Group / Zürich, Switzerland / 06.2007 - 08.2007

Worked with photoluminescence excitation and polarization of quantum dots.

MIT Research Laboratory of Electronics / Cambridge, MA, USA / 11.2005 - 06.2007

Constructed a PM Er-doped pulsed fiber laser and other experiments useful for fiber-coupled entangled photon sources.

Trumpf-Laser GmbH + Co. KG / Schramberg, Germany / 05.2005 - 08.2005

Experimented with high-power pulsed laser amplifiers over continuous-wave lasers as a technology for material processing.

A-STAR Institute of Bioengineering and Nanotechnology / Singapore / 05.2004 - 08.2004

Performed frequency response analysis on the human ear components to help design better prosthetic replacements.

[awards & honors]

Recipient, ThinkSwiss Research Scholarship 2007

National Finalist, Hertz Foundation Graduate Fellowship 2007

Slashdotted, 07-Jan-2007 and 21-Oct-2006

Anthony Sun Fellowship recipient, MIT-International Science and Technology Initiatives 2005

Engineering Design Award (team), MIT Mobile Autonomous Systems Robotics Competition 2005

Letter of commendation, Experimental Physics I and II 2004

Second Place (team), International Council of Systems Engineering Robotics Competition 2003

National Finalist, Intel Science Talent Search 2002

[activities]

Institute activities: Ashdown House Executive Committee (08-09), Teaching Assistant (07), 6.186 robotics competition staff and electrical manager (06), Simmons Orchestra (02-06), Intramural Badminton and Table Tennis

Personal interests: Piano, Violin, Studying cultures/languages/history/food, Travelling, Cycling, Hiking, Building gadgets