

KARTHIK KRISHNAPPA CHANDRASHEKARA

Date of Birth 08 December 1995

website karthikkc.co.in

EDUCATION

	<i>Degree</i>	Master of Science
2016 - 2019		Bonn-Cologne Graduate School of Physics and Astronomy (BCGS) Rheinische Friedrich-Wilhelms-Universität Bonn Specialization in experimental Atomic, Molecular and Optical Physics
	<i>Degree</i>	Bachelor of Science
2013 - 2016		St. Joseph's College (Autonomous) Bangalore University Specialization in Physics, Chemistry and Mathematics

RESEARCH EXPERIENCE

	<i>Graduate</i>	Research Assistant, IAP, Bonn
2020		Engaged in projects that helped better understand a quantum gas experiment at a technical level from simulating atom cloud dynamics to image processing and building tools for controlling laboratory instruments.
	<i>Graduate</i>	Master Student, BCGS, Bonn
2019		TITLE: A HIGH POWER Ti:SA LASER SYSTEM FOR ATOMIC QUANTUM WALKS EXPERIMENTS Description: Quantified laser frequency noise by the use of an optical frequency discriminator and suppressed it by means of measuring and reducing optical path length differences to prevent spurious transport, heating and loss of ultracold Caesium atoms trapped in a two-dimensional state-dependent optical lattice (Please click here for the thesis). Advisor: Prof.Dr. Dieter MESCHDE
	<i>Undergraduate</i>	Student Intern, NCBS, Bangalore
2016		TITLE: BUILDING A NON-LINEAR "ARGUMENTAL" OSCILLATOR Description: Built a working model of a pendulum that oscillates with discrete amplitudes (Dobuchinski's pendulum) for use as a feasible alternative to non-linear oscillators in certain experiments at the intersection of Non-Linear Dynamics and Biology. Advisor: Dr. Shashi THUTUPALLI
	<i>Undergraduate</i>	Student Intern, NCBS, Bangalore
2015		TITLE: INVESTIGATION OF HEAD STABILIZATION IN THE OLEANDER HAWK-MOTH AND THE POSSIBLE ROLE OF MECHANO-SENSORS AND/OR VISION IN ITS MEDIATION Description: Experimentally investigated head stabilization in a moth in order to determine if they actively stabilize their vision mechanically when subjected to a roll perturbation. Advisor: Dr. Sanjay SANE

TEACHING EXPERIENCE

	<i>Graduate</i>	Teaching Assistant, BCGS, Bonn
Oct '18-Mar, '19		Tutored and graded students on problem sheets for the Advanced Quantum Theory course offered by Prof. Dr. Hartmut Monien.

EMPLOYMENT HISTORY

<i>Feb-Jun, 2020</i>	<i>Scientific Assistant</i> Institut für Angewandte Physik, Universität Bonn, Germany
<i>Oct '18-Mar, '19</i>	<i>Tutor</i> Physikalisches Institut, Universität Bonn, Germany

SCHOLARSHIPS

<i>Jul '20-Dec, '20</i>	<i>Graduate student scholarship</i> Provided by Prof. Dr. Dieter Meschede Institut für Angewandte Physik, Universität Bonn, Germany
<i>April '19-Dec, '19</i>	<i>Master student scholarship</i> Provided by Prof. Dr. Dieter Meschede Institut für Angewandte Physik, Universität Bonn, Germany

SCHOOLS, CONFERENCES, SEMINARS

<i>March 2019</i>	<i>Conference</i>	DPG Spring Meet Universität Rostock, Germany
<i>2017-2019</i>	<i>School</i>	Weekend Seminars DPG Physikzentrum, Bad Honnef, Germany
<i>Feb 2016</i>	<i>School</i>	Workshop on Modern Optics St. Josephs' College, Bangalore, India
<i>2013-2016</i>	<i>School</i>	Research Education Advancement Programme Jawaharlal Nehru Planetarium, Bangalore, India
<i>July 2014</i>	<i>School</i>	NCBS Physics of Life Monsoon School 2014 Simons Centre for the Study of Living Machines, NCBS, Bangalore, India

SKILLS

<i>Programming</i>	MATLAB - Extensive experience with the environment - have written entire classes for image analysis and correction, data analysis, modelling and simulation, instrument operation. PYTHON - Basic familiarity. MATHEMATICA - Basic familiarity.
<i>Hands-on</i>	Building basic electronics such as Low Pass Filters, Voltage Limiters, Regulators, Arduino/Raspberry-Pi based circuits, Control Systems design and implementation, familiarity with basic FPGA programming, operation of high-power Lasers, handling of Optics, Opto-Mechanics, use of precision instruments for measurement and data acquisition, hands-on experience with metal fabrication, 3D design and printing.
<i>Languages</i>	English (Full professional proficiency), German (Basic words and phrases)

REFERENCES

Prof. Dr. Dieter Meschede · meschede@iap.uni-bonn.de
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