

Pranjal Dhole (M.Sc.)

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Research and Professional Experience

07.2017 - present	Research Assistant Department of Computer Science Hochschule Bonn-Rhein-Sieg, Sankt Augustin
09.2015 - 11.2016	Ph.D. Student Department of Behaviour and Brain Organization Research Center caesar, Bonn
08.2014 - 09.2015	Student Assistant Bonn-Cologne Graduate School (BCGS) office, Bonn <u>Main tasks:</u> Organization of the intranet system, assistance in administrative tasks.
11.2013 - 03.2014	Student Assistant University of Bonn, Bonn <u>Task:</u> Preparation of lecture notes for course 'Advanced atomic, molecular and optical physics' taught by Prof. Dr. Michael Köhl at University of Bonn during WS2013-14.

Education

03.2016 - present	Master in Autonomous Systems Hochschule Bonn-Rhein-Sieg, Sankt Augustin, Germany
10.2012 - 08.2015	Master of Science in Physics CGPA: 1.8 ¹ University of Bonn, Germany
06.2009 - 05.2012	Bachelor of Science in Physics, Mathematics and Chemistry (triple major) CGPA: 3.42 ² Christ University, Bangalore, India
2007 - 2008	Higher Secondary School Certificate Maharashtra State board, India

Projects and Theses

09.2015 - 04.2016	Extended 3D model for pupil-tracking Supervisor: Dr. David Greenberg <u>Project Description:</u> My project at CAESAR consisted of extending the 3D model for pupil-tracking from circular pupil, as previously done in lab [Wallace et al., <i>Nature</i> , 2013], to elliptical pupil and implementation of the pupil-tracking algorithm in the eye-tracking software developed at the lab.
05.2014 - 05.2016	Emergent Gravity and Cosmology: Thermodynamic perspective³, M.Sc. Thesis Supervisor: Prof. Dr. Claus Kiefer

¹The CGPA is according to the German Grading system. Grading scheme: 1.0 - 1.5 = very good ■ 1.6 - 2.5 = good ■ 2.6 - 3.5 = satisfactory ■ 3.6 - 4.0 = sufficient ■ 4.1 - 5.0 = fail.

²Grading scheme: 4.0 = Outstanding(A) ■ 3.67 = Excellent(A-) ■ 3.33 = Very Good(B+) ■ 3.00 = Good(B) ■ 2.67 = Average(B-) ■ 2.33 = Satisfactory(C+) ■ 2.00 = Pass (C) ■ 1.00 = Pass(D).

³The slides of my thesis defense are available at <http://www.thp.uni-koeln.de/gravitation/mitarbeiter/dhole.html>

Awards, Grants and Prizes

09.2015 - 03.2016	Scholarship €6,000 in total, Stiftung caesar, for period of 6 months.
2011	2nd place in Convergence – Inter-collegiate Mathematics fest.
2011	2nd place in Eureka – Intercollegiate Physics Festival.
2011	3rd place in Chemicus – Intercollegiate chemistry fest in crosswords (B. Sc. 5th Semester).
2011	2nd place in Chemicus – Intercollegiate chemistry fest in 20 questions (B. Sc. 5th Semester).
2010	2nd place in Intercollegiate Mathematics Quiz (B. Sc. 3rd semester).
2010	1st place in Intercollegiate Mathematics Quiz at NMKRV (B. Sc. 3rd Semester).
2010	2nd place in Intra-collegiate Mathematics Quiz (B. Sc. 2nd Semester).
2010	1st place in Intra-collegiate Mathematics Mega Event (B. Sc. 2nd Semester).
2009	3rd place in Inter-collegiate Science Quiz (B. Sc. 1st semester).

Invited Talks and Seminars

22.05.2015	Emergent Gravity and Cosmology: Thermodynamic Perspective , <i>Masters Colloquium</i> University of Bonn, Bonn, Germany.
19.04.2015	Emergent Gravity - Thermodynamic Perspective , <i>Invited Talk</i> BCGS Weekend Seminar at the Physikzentrum, Bad Honnef, Germany.

Courses

M.Sc.	Physics Modules General Relativity and Cosmology 1 & 2 Quantum Field Theory 1 Advanced Quantum Mechanics Advanced Laboratory Course Seminar on Advanced General Relativity X-ray and radio observations of dark matter and dark energy Quasars and Microquasars Physics of Particle detectors Condensed Matter Physics Photonic devices Computer Science Modules Evolutionary Computation: Theory and Application Artificial Intelligence for Robotics Advanced Software Technology
B.Sc.	Mathematics Modules Logics Advanced Calculus Differential equations Vector analysis Abstract Algebra Fourier transforms Real and complex analysis Numerical methods Physics Modules Classical Mechanics Electrodynamics Optics Quantum Mechanics Electronics and Instrumentation Astrophysics Nuclear Physics Chemistry Modules Physical Chemistry Inorganic Chemistry Organic Chemistry General Chemistry Biochemistry

Attended Conferences and Graduate Schools

07.07.2016 - 08.07.2016	ESI Systems Neuroscience Conference (ESISync) , FIAS, Frankfurt, Germany.
09.10.2015 - 10.10.2015	Heidelberg Neuronal Ensemble Conference (HeiNEC) , Heidelberg, Germany.
09.03.2015 - 14.03.2015	Conference on Extended theories of Gravity , Nordic Institute for Theoretical Physics (NORDITA), Stockholm, Sweden.
28.07.2014 - 01.08.2014	569 WE-Heraeus-Seminar: ‘Quantum Cosmology’ , the Physikzentrum, Bad Honnef, Germany.
23.04.2014 - 25.04.2014	From Classical to Quantum GR: Applications to Cosmology , Graduate school, University of Sussex, Brighton, UK.

Technical Skills

Programming skills	Python, MatLab, C++, ROS.
Modelling tools	Mathematica, OpenFOAM, gmsh, Paraview.
Web development	HTML, CSS, jQuery, JavaScript.
Media	L ^A T _E X, Microsoft Visual Basic, Adobe Illustrator.
Operating systems	Linux (Ubuntu and its variants), Windows 7 (proficient).

Languages

English	Fluent
German	limited working proficiency (B1.1)
Marathi	Native language
Hindi	Native language

Academic References

Prof. Dr. Claus Kiefer
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Work Reference

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