Pranjal Dhole (M.Sc.)

Contact Information

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Research and Professional Experience

05.2016 - 11.2016 **Doctoral Researcher**
Department of Behviour and Brain Organization
Research Center caesar, Bonn

09.2015 - 04.2016 **Research Intern**
Department of Behviour and Brain Organization
Research Center caesar, Bonn

08.2014 - 09.2015 **Student Assistant**
Bonn-Cologne Graduate School (BCGS) office, Bonn
Main tasks: Organization of the intranet system, assistance in administrative tasks.

11.2013 - 03.2014 **Student Assistant**
University of Bonn, Bonn
Task: 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**
University of Bonn, Germany
CGPA: 1.8[1]

06.2009 - 05.2012 **Bachelor of Science in Physics, Mathematics and Chemistry (triple major)**
Christ University, Bangalore, India
CGPA: 3.42[2]

2007 - 2008 **Higher Secondary School Certificate**
Maharashtra State board, India

Projects and Theses

09.2015 - 04.2016 **Extended 3D model for pupil-tracking**, *Research Internship*
Supervisor: Dr. David Greenberg
Project Description: My project at CAESAR consisted of extending the 3D model for pupil-tracking from circular pupil, as previously done in lab [Wallace et al., *Nature*, 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 perspective**[3], *M.Sc. Thesis*
Supervisor: Prof. Dr. Claus Kiefer

[1]The 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.

[2]Grading 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).

[3]The 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**, *Masters Colloquium* University of Bonn.
19.04.2015	**Emergent Gravity - Thermodynamic Perspective**, *Invited Talk* 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

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.
2013	**Planck Conference**, University of Bonn, Germany.
2009	**Research Education Advancement Program (REAP)**, Nehru Planetarium, Bangalore, India.

Technical Skills

Programming skills	Python, MatLab, C++, ROS.
Web development	HTML, CSS, jQuery, JavaScript.
Algebra	Mathematica.
Media	LaTeX, 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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E-mail: kiefer@thp.uni-koeln.de

Prof. Dr. Pavel Kroupa
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Work Reference

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