Pranjal Dhole (M.Sc.)

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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

Work Experience

05.2015 - 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.

[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).

Talks and Invited Seminars

- Masters Colloquium: 'Emergent Gravity and Cosmology: Thermodynamic Perspective', University of Bonn, May 22, 2015.
- Invited Talk - 'Emergent Gravity - Thermodynamic Perspective', BCGS Weekend Seminar at the Physikzentrum, Bad Honnef, Germany, April 19, 2015.

Awards and Prizes

- Scholarship €6,000 in total, Stiftung caesar, for period of 6 months starting Sept., 2015.
- 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) 2011.
- 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) 2010.
- 3rd place in Inter-collegiate Science Quiz (B. Sc. 1st semester) 2009.

Attended Conferences and Graduate Schools

- ESI Systems Neuroscience Conference (ESISync), at FIAS, Frankfurt, Germany, July 7-8, 2016.
- Heidelberg Neuronal Ensemble Conference (HeiNEC), at Heidelberg, Germany, Oct. 9-10, 2015.
- Conference on Extended theories of Gravity, at Nordic Institute for Theoretical Physics (NORDITA), Stockholm, Sweden, March 9–14, 2015.
- 569 WE-Heraeus-Seminar: 'Quantum Cosmology', at the Physikzentrum, Bad Honnef, Germany, July 28 – August 01, 2014.
- Graduate school 'From Classical to Quantum GR: Applications to Cosmology', held at University of Sussex, Brighton, UK, April 23-25, 2014.
- Participation in the hosting committee for Planck Conference - 2013, University of Bonn, Germany.
- Attended Research Education Advancement Program (REAP)-2009, Nehru Planetarium.

Projects and Theses

Research internship (09.2015 - 04.2016)	**Extended 3D model for pupil-tracking** 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.
M.Sc. Thesis (05.2014 - 05.2016)	**Emergent Gravity and Cosmology: Thermodynamic perspective**[3] Supervisor: Prof. Dr. Claus Kiefer

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

Computer Skills

Programming skills	PYTHON; MatLab; Some knowledge of C++ and GPU computing
Algebra	Mathematica
Operating systems	Linux (Ubuntu and its variants), Windows 7 (proficient).
Web	HTML; CSS.
Media	LaTeX; Microsoft Visual Basic; Adobe Illustrator.

Languages

English	Advanced level
German	Beginner level (A2)
Marathi	Native
Hindi	Native

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

Academic References

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Work Reference

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