Kaustubh Hakim

PERSONAL INFORMATION

Email: hakim.kaustubh@gmail.com Webpage: http://www.exokaustubh.com

Phone: +31 20 525 8476 Citizenship: Indian API Institute for Astronomy University of Amsterdam Science Park 904 1098 XH Amsterdam, Netherlands

EDUCATION

Sep. 2014 – present, Ph.D. (expected), Astrophysics, University of Amsterdam, The Netherlands

Supervisors: Prof. Carsten Dominik & Prof. Wim van Westrenen

Thesis: Mineralogy and structure of rocky exoplanets

Sep. 2012 – July 2014, M.Sc., Astronomy & Astrophysics, KU Leuven, Belgium

Supervisors: Prof. Tim Van Hoolst & Dr. Attilio Rivoldini

Thesis: The interior structure of super-Earths

Aug. 2006 - July 2010, B.Tech., Electronics Engineering, IIT Kharagpur, India

Supervisor: Prof. Raja Datta

Thesis: s-MAC protocol for Wireless Sensor Networks

DISTINCTIONS

July 2014, Graduated M.Sc. degree with magna cum laude, KU Leuven

July 2010, Graduated B.Tech. degree with *Honours*, IIT Kharagpur

Apr. 2006, Secured 99.9 percentile among 0.5 million candidates in all-India engineering entrance examinations, IIT-JEE and AIEEE

Publications (Refereed)

Hakim, K., Rivoldini, A., Van Hoolst, T., Cottenier, S., Jaeken, J., Chust, T., Steinle-Neumann, G. (*Icarus 313*, 61–78). A new ab initio equation of state of hcp-Fe and its application to the interior structure and mass-radius relation of rocky super-Earths.

Hakim, K., Spaargaren, R., Grewal D.S., Rohrbach A., Brendt J., Dominik, C., van Westrenen, W. (submitted). A laboratory approach to probe the mineralogy of carbon-rich rocky exoplanets.

Hakim, K., van Westrenen, W., Dominik, C. (in preparation). Instability of silicon carbide in rocky exoplanets.

Publications (Non-Refereed)

Hakim, K., van Westrenen, W. and Dominik, C. Mineralogy of Carbon-Enriched Rocky Extra-Solar Planets from Laboratory Experiments. Lunar Planetary Science Conference, 48th meeting, # 2259.

Hakim, K., Rivoldini, A., Cottenier, S., Van Hoolst, T., Chust, T. and Steinle-Neumann, G. A New Ab Initio Equation of State of hcp-Iron and Its Application to the Interior Structure of Rocky Super-Earths. Lunar Planetary Science Conference, 48th meeting, # 2279.

COMPUTATIONAL SKILLS

Languages: Python, Shell scripting, Java, MySQL, C, Fortran 90

Software: Mathematica, MATLAB

TEACHING/ SUPERVISION EXPERIENCE $2015-2017,\ Teaching\ Assistant$ for Interstellar & Circumstellar Matter, MSc in Astronomy & Astrophysics, University of Amsterdam

Feb. – July 2016, *Primary Supervisor* for the Bachelor thesis of Rob Spaargaren, led to cum laude double BSc in Earth Sciences and Physics & Astronomy, Vrije University Amsterdam

Kaustubh Hakim

SELECTED
Conference
TATES

Apr. 2017, Formation and Dynamical Evolution of Exoplanets, Aspen, Colorado, USA

Mar. 2017, the 48th Lunar and Planetary Science Conference, Houston, Texas, USA

May 2016, the 71st Netherlands Astronomy Conference, Nunspeet, The Netherlands

Apr. 2016, the 13th Netherlands Geology Congress, Veldhoven, The Netherlands

May 2015, Exoplanet Conference, Lund, Sweden

SEMINAR

Apr. 2017, Department of Geophysics, University of Chicago, Chicago, Illinois, USA

ADVANCED TRAINING COURSES

July 2016, New Directions in Planet Formation, Lorentz Center, Leiden, The Netherlands

Oct. 2015, Application of X-ray metrology for material science research, University of Twente, Enschede, The Netherlands

Mar. 2015, the 45th Saas-Fee course on From Protoplanetary Disks to Planet Formation, Swiss Society for Astrophysics & Astronomy, Les Diablerets, Switzerland

SERVICE/ ORGANIZATIONAL WORK

Sep. 2016 – Sep. 2017, *PhD Representative*, PhD-PostDoc Council, API Institute for Astronomy, University of Amsterdam

May 2015, Organizer, Planetary and Exo-Planetary Science Network (NWO-PEPSci) PhD-PostDoc Meeting, University of Amsterdam

Sep. 2012 – July 2014, *Student Representative*, Permanent Education Committee, MSc in Astronomy and Astrophysics, KU Leuven

SCIENCE COMMUNICATION/ OUTREACH

Mar. 2017, Participated in FameLab Amsterdam – a science communication workshop and competition

Aug. 2016, Gave a science talk for bachelor students at University of Los Andes, Bogotá, Colombia

Oct. 2014–2016, Volunteered during Public Science Day, University of Amsterdam, The Netherlands

FORMER RESEARCH EXPERIENCE

July – Aug. 2014, Nicolaus Copernicus Astronomical Center, Warsaw, Poland Data reduction pipeline of *Canada-France-Hawaii-Telescope* for *SuperWASP* exoplanets

Sep. – Oct. 2013, Mercator Telescope, Roques de las Mouchachos Observatory, La Palma, Spain Spectroscopic study of three Kepler planet candidates

Mar. – June 2013, Belgian Institute for Space Aeronomy, Brussels, Belgium Study of Earth's magnetopause based on the data from Ampte/IRM and Cluster spacecrafts

INDUSTRY EXPERIENCE

July 2010 – Aug. 2012, *Analyst* at Nomura, Mumbai, Product development and maintenance for global equities trade monitoring tools

May–July 2007–2009, Summer Traineeships at IBM, Bangalore (2009), Omega Electronics, Jaipur (2008) and TATA Power, Mumbai (2007)