### Kaustubh Hakim

## PERSONAL INFORMATION

November 22, 1988 hakim.kaustubh@gmail.com http://www.exokaustubh.com Science Park 904 1098 XH Amsterdam The 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. (magna cum laude), 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. (Honours), Electronics Engineering, IIT Kharagpur, India

Supervisor: Prof. Raja Datta

Thesis: s-MAC protocol for Wireless Sensor Networks

## Publications (Refereed)

Hakim, K., van Westrenen, W. and Dominik, C. (under revision, *EPSL*). A laboratory approach to probe the mineralogy of carbon-enriched rocky exoplanets.

Hakim, K., Rivoldini, A., Van Hoolst, T., Cottenier, S., Jaeken, J., Chust, T. and Steinle-Neumann, G. (under review, *Icarus*). 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., van Westrenen, W. and Dominik, C. (in preparation). Instability of silicon carbide in carbon-enriched 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.

#### 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

#### 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

SELECTED
Conference
TALKS

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

#### 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

#### SELECTED WORKSHOPS

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

# FORMER RESEARCH EXPERIENCE

July – Aug. 2014, Nicolaus Copernicus Astronomical Center, Warsaw, Poland

Supervisor: Dr. Alexis Smith

Data reduction pipeline of Canada-France-Hawaii-Telescope for SuperWASP exoplanets

Sep. – Oct. 2013, Mercator Telescope, Roques de las Mouchachos Observatory, La Palma, Spain Supervisors: Prof. Hans van Winckel & Dr. Andrew Tkachenko

Spectroscopic study of three Kepler planet candidates

Mar. – June 2013, Belgian Institute for Space Aeronomy, Brussels, Belgium

Supervisor: Dr. Johan de Keyser

Study of Earth's magnetopause based on the data from Ampte/IRM and Cluster spacecrafts

## INDUSTRY EXPERIENCE

July 2010 – Aug. 2012, Analyst, Nomura, Mumbai, India

Product development based on Java, Adobe Flex, Shell scripting and database management with MySQL for global equities trade monitoring

May 2009 – July 2009, Trainee, IBM, Bangalore, India

Software development based on C for the hardware verification of IBM PowerPC

May 2008 - July 2008, Trainee, Omega Electronics, Jaipur, India

Development and demonstration of a sales video for a RFID-based educational training kit

May 2007 - June 2007, Trainee, TATA Power, Mumbai, India

Analysis of the pressure-temperature calibration process of the transmitters of power station