

# CURRICULUM VITAE

## Person

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Born 26. January 1978 in Bern (Swiss citizen)

## Education

**2010-2012:** Fellow of the Alexander von Humboldt foundation.

**2008-present:** Postdoctoral researcher at the theory group of the planet and star formation department at the Max Planck Institute for Astronomy in Heidelberg (PD Dr. H. Klahr).

**2004-2008:** PhD at the Theoretical Astrophysics & Planetary Science Research Group, University of Bern, subject “Extrasolar planet population synthesis” (Prof. W. Benz). PhD rating “Summa cum laude”.

**1999-2004:** Study of physics at the University of Bern with minor fields mathematics and astronomy. Master thesis “Planetesimal impacts into forming giant planets” (Prof. W. Benz). Award for the best master or doctoral thesis in physics of the year at the university.

**1993-1998:** Gymnasium Kirchenfeld, Bern. Matura Type B (Latin). Award for the best overall matura of the year at Kirchenfeld, special award for excellent achievements in physics, chemistry and biology.

## Teaching

**2011-2012:** Lecturer “Physics and numerics of planet formation”. Master student level, 2h/week, Univ. Heidelberg. Website at <http://www.mpia.de/~mordasini/lectureWS1112.html>.

**2012:** Co-Lecturer Numerical Lab Block Course UKNUM, University of Heidelberg

**2012:** Lecturer 5<sup>th</sup> Heidelberg Graduate Winter School on Fundamental Physics, Obergurgl, Austria

**2010-present:** Supervision of the Mini-research project “Observation of transiting exoplanets at MPIA” for undergraduate students. MPIA, Heidelberg.

**2010** Assistant lecturer “Practical Course: Numerical Practical Training”. Univ. Heidelberg.

**2004-2008:** Assistant in the Advanced Lab Course in Physics, experiment “Impact Cratering” and various exercise courses for students with minor in physics. Univ. Bern.

**2003-2004:** Hilfsassistent in the Introductory Lab Course in Physics, and in the exercise course for students of medicine. Univ. Bern.

**Observational activities**

**2004-present:** 9 observational missions at La Silla Observatory with HARPS (Radial velocity observation, PIs Prof. M. Mayor and Prof. S. Udry, University of Geneva).

**2004:** Observational mission at the Observatoire de Haute Provence OHP with ELODIE (Radial velocity observations).

**2002-2006:** Weekly astronomical observation for the Astronomical Institute in Bern, using the 1 meter ZIMLAT telescope at Zimmerwald Observatory (Near Earth objects observations).

**Special academic activities**

**2010:** Organizer international conference: “Ringberg Workshop on planetary population synthesis: The predictive power of planet formation theory”, website <http://www.mpia.de/~mordasini/ringberg> Ringberg castle, Germany.

**2006-2008:** Representative of the assistants in the faculty commission, member of the faculties strategy committee. Faculty of natural sciences, University of Bern.

**2003-2008:** Responsible person for the research group’s Linux computer clusters (ca. 160 CPUs in total). Phys. Institute, University of Bern.

**Membership**

Swiss Society of Astronomy & Astrophysics SSAA

European Astronomical Society EAS

HARPS Consortium

ESPRESSO Consortium

NEAT Consortium

SPHERE Consortium

EChO Science Team. Leader of the working Group 0 “Planet formation and evolution”

**Referee** ApJ, ApJL, MNRAS, Icarus, ANR

**Research leaves and schools** **2011:** SSAA Saas Fee Advanced course “From planets to life” (Switzerland).  
**2010:** Six weeks research leave “Exoplanets rising” (KITP, Santa Barbara, USA).  
**2004:** Canary winter school of astrophysics “Extrasolar Planets”.

**Languages** German (mother tongue), English (business fluent), French (business fluent), Italian (business fluent), Spanish (elementary).

**Computer Skills** Expert: Fortran 90/95, Fortran 77, Bash.  
Intermediate: Mathematica, MPI, Html.

### **Talks**

- 02.2012 Invited colloquium “Planetary population synthesis: comparing observations and theory”. (Jet Propulsion Laboratory, Pasadena, USA)
- 02.2012 Invited talk “Implications of space microlensing results for planet formation theory”. Conference “Science with a wide-field infrared telescope in space” (Pasadena, USA)
- 02.2012 Invited colloquium “Planetary population synthesis: comparing planet formation theory and observations”. (Institute for Advanced Study, Princeton, USA)
- 10.2011 Invited talk “Probing exoplanet models with large samples of RV and Gaia astrometric orbits”. Workshop “Pas de deux”. (Paris, France)
- 09.2011 Contributed talk “Planetary population synthesis”. Conference “Extreme solar systems II”. (Jackson Hole, USA)
- 05.2011 Invited review “Architecture of planetary systems 0.1-100 AU”. NASA conference “Exploring strange new worlds”. (Flagstaff, USA)
- 04.2011 Invited talk “Planet formation: the emerging picture”. 4<sup>th</sup> Sino-German Frontiers of science symposium of the Alexander von Humboldt society. (Berlin, Germany)
- 03.2011 Contributed talk “Predicting the most important physical characteristics of planets from formation theory”. EChO workshop. (Meudon, France)
- 12.2010 Invited colloquium “Comparing planet formation theory and extrasolar planet observations”. CAUP, Univ. Porto (Porto, Portugal)
- 11.2010 Review (together with S. Ida) “Planetary population synthesis: Method and results”. Workshop “Planetary population synthesis: The predictive power of planet formation theory”. (Schloss Ringberg, Germany)
- 10.2010 Contributed talk “Planet formation and evolution: Radii and luminosities”. IAU Symposium 276 (Torino, Italy)
- 08.2010 Invited review “Theory of planet formation and comparison with observations”. Conference “Detection and dynamics of transiting planets”. (OHP, France)
- 05.2010 Invited review “Theory of planet formation”. Workshop “Circumstellar disks and planets - Science cases for the second generation VLTI instrumentation”.

- (Kiel, Germany)
- 05.2010 Invited talk “Planetary population synthesis”. EGU general assembly 2010. (Vienna, Austria)
- 03.2010 Talk “Planetary population synthesis - comparing theory and observation”. KITP, UCSB (Santa Barbara, US)
- 12.2009 Invited colloquium “Planetary population synthesis”. Universita di Padova. (Padua, Italy)
- 11.2009 Contributed talk “Can disk form deuterium burning planets by core accretion?” ESO conference “From circumstellar disk to planetary systems”. (Garching, Germany)
- 08.2009 Invited review “Formation of giant planets by core accretion”. Conference “The dynamics of discs and planets”. (Newton Inst., Cambridge, UK)
- 05.2009 Contributed talk “A new model for the interaction of large meteoroids with planetary atmospheres”. Conference “Bolidés and Meteorite Falls”. (Prague, Czech Republic)
- 03.2009 Poster “Correlations of disk and planetary properties”. Conference “The Solar System and Extrasolar Planets”. (Tübingen, Germany)
- 04.2008 Talk “Extrasolar planet population synthesis: Comparing theory and observation”. MPIA PSF Seminar. (Heidelberg, Germany)
- 10.2007 Talk “Extrasolar planet population synthesis: Confronting observation and theory”. SGAA Annual assembly. (Bern, Switzerland)
- 10.2007 Outreach talk “Planètes extrasolaires: A la recherche d’une deuxième terre”. Société fribourgoise d’astronomie. (Fribourg, Switzerland)
- 08.2007 Invited talk “Extrasolar Planet Population Synthesis – Predictions for RV and Transit Surveys”. EAS JENAM Conference. (Yerevan, Armenia)
- 06.2007 Invited talk “Giant Planet Formation by Core Accretion”. Conference “Extreme solar systems”. (Santorini, Greece)
- 03.2007 Poster “Extrasolar giant planet formation: Monte Carlo simulations”. Conference “From Stars to Planets”. (UF, Florida)
- 07.2006 Poster “Monte Carlo simulations of the formation of giant extrasolar planets”. Conference “EuroPlanet”. (Berlin, Germany)
- 03.2006 Talk “Auf der Jagd nach extrasolaren Planeten mit HARPS”. Annual assembly Physikalisches Institut, Universität Bern. (Bern, Switzerland)
- 08.2005 Poster “Destruction of planetesimals in protoplanetary atmospheres”. Conference “Tenth Anniversary of 51-Peg b”. (OHP, France)

Heidelberg, 17.5.2012