

## Monday August 27, 2012

10:30 – 10:45      **Opening Remarks**  
*Nader Haghighipour*

### **Current State of (Habitable) Planet Detection I** (Chair: *Magali Deleuil*)

10:45 – 11:15      **Detecting Habitable Planets and Activities in East Asia (Invited)**  
*Bunei Sato (Tokyo Institute of Technology)*

11:15 – 11:45      **Patterns of Planet Occurrence from Doppler and Kepler (Invited)**  
*Andrew Howard (Institute for Astronomy, University of Hawaii)*

11:45 – 12:00      **Bayesian Statistics and Habitable Extrasolar Planets**  
*Turner Edwin (Princeton University)*

12:00 – 12:15      **The Dependence of the Frequency of Planets on the Mass of the Host Stars**  
*Eike Guenther (Thuringer State Observatory)*

12:15 – 12:30      **Stellar Variabilities: Challenges for the Detection and Characterization of Low-Mass Planets**  
*Isabelle Boisse (Center for Astrophysics, University of Porto)*

12:30 – 14:00      **Lunch Break**

### **Current State of (Habitable) Planet Detection II** (Chair: *Alan Boss*)

14:00 – 14:30      **The Exoplanet Population at short Orbital Period Explored by CoRoT (Invited)**  
*Deleuil Magali (CoRoT Team, Laboratoire d'Astrophysique de Marseille)*

14:30 – 14:45      **New low-mass planets from the Anglo-Australian Planet Search**  
*Hugh Jones (University of Hertfordshire)*

14:45 – 15:15      **Current and Future of Microlensing Exoplanet Search (Invited)**  
*Takahir Sumi (Osaka University)*

15:15 – 15:30      **Microlensing constraints on the abundance of extrasolar planets**  
*Arnaud Cassan (Institut d'Astrophysique de Paris)*

15:30 – 16:00      **Break**

## **Detecting Signatures of Earth-Like Planets (Chair: *Alan Boss*)**

- 16:00 – 16:30      **Possible False Positive Signatures of Life in Planetary Atmospheres Around M-dwarfs (Invited)**  
*Feng Tian (CESS/Tsinghua University)*
- 16:30 – 16:45      **Signatures of Earth-like Planets in the Chemical Composition of Solar-Type Stars**  
*Jorge Melendez (Universidade de Sao Paulo Brazil)*
- 16:45 – 17:00      **2012 MOST Photometry of the 55 Cancri System**  
*Diana Dragomir (University of British Columbia)*
- 17:00 – 17:15      **A Campaign for the Detection of Earth-Mass Planets in the Habitable Zone of Alpha Centauri**  
*Rob Wittenmyer (University of New South Wales)*
- 17:15 – 17:30      **Exoplanets Surveys at Universidad de Chile**  
*Patricio Rojo (Universidad de Chile)*
- 17:30 – 17:45      **The PLATO Mission**  
*Giampaolo Piotto (Universita' di Padova)*
- 17:45 – 18:00      **Exploring the cosmic context of Earth**  
*Martin Dominik (University of St Andrews)*

## Tuesday August 28, 2012

8:30 – 10:00      **The Kepler Mission: NASA's ExoEarth Census (Plenary Invited)**  
*Natalie Batalha (Kepler Team, NASA Ames)*

10:00 – 10:30      **Break**

### **Kepler Mission and Other Techniques** (Chair: *Andrew Howard*)

10:30 – 10:45      **Eta-Sub-Earth: New Projection from Kepler Data**  
*Wesley Traub (JPL)*

10:45 – 11:00      **The Kepler Completeness Study: Implications for Rocky Planets**  
*Jessie Christiansen (SETI, NASA Ames)*

11:00 – 11:15      **Auto-Vetting Transiting Planet Candidates Identified by the Kepler Science Pipeline**  
*Jon Jenkins (SETI, NASA Ames)*

11:15 – 11:30      **Evidence for Solid Planets from Kepler's Near-Resonance Systems**  
*Man Hoi Lee (The University of Hong Kong)*

11:30 – 11:45      **On the Asymmetrical Distribution of Kepler's Near-Resonance Planets**  
*Ji-Wei Xie (University of Toronto)*

11:45 – 12:00      **Kepler's Rocky Planets Orbiting M Dwarfs**  
*John Johnson (Caltech)*

12:00 – 12:15      **Detection and Characterization of Transiting Systems with Smaller Exoplanets**  
*Teruyuki Hirano (University of Tokyo)*

12:15 – 12:30      **Microarcsecond Relative Astrometry from the Ground Using a Diffractive Mask and Multi-Conjugate Adaptive Optics**  
*Mark Ammons (Lawrence Livermore National Laboratory)*

12:30 – 14:00      **Lunch Break**

### **Terrestrial Planets in Solar System and Earth's Water** (Chair: *Rudolf Dvorak*)

14:00 – 14:30      **The Basic Dynamical Model of Terrestrial Planet Formation (Invited)**  
*Eiichiro Kokubo (National Astronomical Observatory of Japan)*

14:30 – 15:00      **Shaping of the Inner Solar System by the Gas-Driven Migration of Jupiter (Invited)**  
*Kevin Walsh (Southwest Research Institute)*

15:00 – 15:15      **Main-Belt Comets as Tracers of Ice in the Inner Solar System**  
*Henry Hsieh (IfA, Hawaii)*

15:15 – 15:30      **Frozen Volatiles in Comets and on the Moon**  
*Rita Schulz (ESA)*

15:30 – 16:00      **Break**

**Terrestrial Planets and Water Delivery in Extrasolar Planets**  
(Chair: *Rudolf Dvorak*)

16:00 – 16:30      **The Elemental Compositions of Extrasolar Planetesimals (Invited)**  
*Michael Jura (UCLA)*

16:30 – 16:45      **Possible Signs of Water in an Extrasolar Asteroid**  
*Jay Farihi (University of Cambridge)*

16:45 – 17:00      **Migration & Extrasolar Terrestrial Planets: Watering the Planets**  
*Jade Carter-Bond (University of New South Wales)*

17:00 – 17:15      **Observations of Terrestrial Planet Formation**  
*Carl Melis (University of California, San Diego)*

17:15 – 17:30      **Terrestrial Planet Formation in a Triple Stellar System**  
*Othon Winter (UNESP, Brazil)*

**Wednesday August 29, 2012**

**Planets in and around Binary Stars, Trojan Planets, Exomoons**

(Chair: *Natalie Batalha*)

- 10:30 – 10:45      **Recent Kepler Results on Circumbinary Planets**  
*William Welsh (San Diego State University)*
- 10:45 – 11:00      **Prospects of the Detection of Additional Circumbinary Extrasolar Planets**  
*Tobias Hinse (Korea Astronomy and Space Science Institute)*
- 11:00 – 11:15      **On the Habitability of Terrestrial Planets in Binary Star Systems**  
*Elke Pilat-Lohinger (Institute of Astrophysics, University of Vienna)*
- 11:15 – 11:30      **Habitability of Planet-Hosting Binary Star Systems: Calculating Habitable Zone for Circumprimary and Circumbinary Planets**  
*Nader Haghighipour (Institute for Astronomy, University of Hawaii)*
- 11:30 – 11:45      **Mutual Inclinations of Multi-Planet Systems and Circumbinary Planets and the Assembly of Proto-Planetary Disks**  
*Dong Lai (Cornell University)*
- 11:45 – 12:00      **Trojans in Exosystems with Two Massive Planets**  
*Rudolf Dvorak (Institute of Astrophysics, University of Vienna)*
- 12:00 – 12:15      **Exomoon Habitability Constrained by Illumination and Tidal Heating**  
*René Heller (Leibniz-Institute for Astrophysics)*
- 12:15 – 12:30      **Exoplanets Behaving Badly with Their Host Stars: Evidence of Transfer of Planet Orbital Angular Momentum to Their Host Stars - Case Study of the Hot Jupiter System HD 189733 (and other examples)**  
*Edward Guinan (Villanova University)*
- 12:30 – 14:00      **Lunch Break**

**Atmospheric Characterization: Giant Planets (Chair: *Elke Pilat-Lohinger*)**

- 14:00 – 14:30      **Atmospheric Characterization of Extrasolar Planets (Invited)**  
*Jean-Michel Desert (Harvard)*
- 14:30 – 14:45      **Atmospheric Dynamics of Short Period Planets**  
*Ian Dobbs-Dixon (University of Washington)*

- 14:45 – 15:00      **Near-infrared Thermal Emission of Hot Jupiters**  
*Bryce Croll (MIT)*
- 15:00 – 15:15      **Characterizing Hot Jupiter Atmospheres: New Results from Hubble WFC3**  
*Sukrit Ranjan (Harvard)*
- 15:15 – 15:30      **WASP-12b and 4b: Closing in on the Compositions of Highly-Irradiated Exoplanet Atmospheres**  
*Morgan Hollis (University College London)*
- 15:30 – 16:00      **Break**

**Atmospheric Characterization: Terrestrial Planets (Chair: Othon Winter)**

- 16:00 – 16:30      **Climate Regimes of Tidal-Locking Aqua-Exoplanets (Invited)**  
*Yongyun Hu (Peking University)*
- 16:30 – 16:45      **Temporal Variations in the Evaporating Atmosphere of the Exoplanet HD 189733b**  
*Alain Lecavelier des Etangs (IAP-CNRS)*
- 16:45 – 17:00      **Diversity of Planetary Atmospheric Circulations and Climates in a Simplified General Circulation Model**  
*Yixiong Wang (University of Oxford)*
- 17:00 – 17:15      **Photochemistry of Terrestrial Exoplanet Atmospheres and Applications in Searching for Biosignature Gases**  
*Renyu Hu (MIT)*
- 17:15 – 17:30      **Terrestrial Planet Atmospheric Characterization with HST: From Venus to 55 Cancri e**  
*David Ehrenreich (IPAG)*
- 17:30 – 17:45      **On the Climatic Impact of CO<sub>2</sub> Ice Particles in Atmospheres of Terrestrial Exoplanets**  
*Daniel Kitzmann (Berlin Institute of Technology)*
- 17:45 – 18:00      **Capabilities of the James Webb Space Telescope for Exoplanet Imaging**  
*Mark Clampin (NASA Goddard Space Flight Center)*

**Thursday August 30, 2012**

**Habitability of Planets Around Low-Mass Stars (Chair: *Wes Traub*)**

- 10:30 – 11:00      **The HARPS Search for Low-Mass, Habitable, Transiting Planets Around M dwarfs (Invited)**  
*Thierry Forveille (Observatoire de Grenoble)*
- 11:00 – 11:15      **Carmenes: A Radial-Velocity Survey for Terrestrial Planets in the Habitable Zones of M Dwarfs**  
*Andreas Quirrenbach (Universty Of Heidelberg)*
- 11:15 – 11:30      **Occurrence Rate of Habitable Planets Around M-dwarfs: Limits from Kepler**  
*Courtney Dressing (Harvard)*
- 11:30 – 12:00      **Planetary Climate in M-dwarf Systems (Invited)**  
*Raymond Pierrehumbert (University of Chicago)*
- 12:00 – 12:15      **The UV Radiation Environment of Exoplanets**  
*Linsky Jeffrey (JILA/University of Colorado)*
- 12:15 – 12:30      **Habitable Worlds Around M Dwarf Stars**  
*Alan Boss (DTM, Carnegie Institution)*

**Friday August 31, 2012**

**Super-Earths and their Interior Dynamics (Chair: *Ji-Lin Zhou*)**

- 8:30 – 9:00      **Habitable planets: Interior Dynamics and Long-Term Evolution (Invited)**  
*Paul Tackley (Institute of Geophysics, ETH Zurich)*
- 9:00 – 9:15      **Mass-Radius Relationships of Rocky Exoplanets**  
*Frank Sohl (DLR Berlin)*
- 9:15 – 9:30      **Consequences of the Tidal Disruption of Giant Planets: On the Connections With the Hot Super-Earths**  
*Shang-Fei Liu (Department of Astronomy, Peking University)*
- 9:30 – 9:45      **The Anelastic Equilibrium Tide in Exoplanetary Systems**  
Francoise Remus (Observatoire de Paris)
- 9:45 – 10:00     **Detecting Molecules and Magnetic Fields on Exoplanets**  
*Svetlana Berdyugina (KIS, Freiburg – UH/NAI, Hawaii)*
- 10:00 – 10:30    **Break**

**Planetesimal Formation and Disk-Planet Interaction (Chair: *Svetlana Berdyugina*)**

- 10:30 – 10:45    **From Dust to Planetesimals in the Habitable Zone**  
*Hubert Klahr (Max Planck Institute for Astronomy)*
- 10:45 – 11:00    **Planetesimal Formation in Zonal Flows Arising in Magneto Rotationally Unstable Protoplanetary Disks**  
*Karsten Dittrich (Max Planck Institute for Astronomy)*
- 11:00 – 11:15    **Laminar Accretion in the Habitable Zone of Protoplanetary Disks**  
*Xuening Bai (Princeton University)*
- 11:15 – 11:30    **Type I Planet Migration in Weakly Magnetised Laminar Discs**  
*Jérôme Guilet (DAMTP, University of Cambridge)*
- 11:30 – 11:45    **Accretion and Planet Formation in the dead Zones of Accretion Disks**  
*Wladimir Lyra (Jet Propulsion Laboratory)*
- 11:45 – 12:00    **Modeling Disc-Planet Interactions**  
*Jorge Cuadra (PUC, Chile)*
- 12:00 – 12:15    **Observational Constraints on Disk Evolution and the Initial Steps Towards Planet Formation**  
*Leonardo Testi (ESO)*



12:15 – 12:30 **Planetesimal Capture by an Evolving Giant Gaseous Protoplanet**  
*Morri Podolak s (Tel Aviv University)*

12:30 – 14:00 **Lunch Break**

**Surveys and Detection Programs I (Chair: Nader Haghighipour)**

14:00 – 14:15 **The Impact of Herschel on the Debris Disc-Exoplanet Connection**  
*Jonathan Marshall (Universidad Autonoma de Madrid)*

14:15 – 14:30 **The WFCAM Transit Survey: Search For Planets Around Cool Stars**  
*Sipőcz Brigitta (University of Hertfordshire)*

14:30 – 14:45 **Astrometric Detection of Earth-like Planets with Moderate Space Telescope**  
*Michael Shao (JPL)*

14:45 – 15:00 **Exoplanets Search and Characterization with the SOPHIE Spectrograph at OHP**  
*Guillaume Hébrard (IAP/OHP)*

15:00 – 15:15 **Homogeneous Studies of Transiting Extrasolar Planets: Current Status**  
*John Southworth (Keele University)*

15:15 – 15:30 **TFRM-PSES: Filling a Niche in Transit Surveys of Super-Earths Around M Dwarfs**  
*Octavi Fors (Universitat de Barcelona)*

15:30 – 16:00 **Break**

**Surveys and Detection Programs II (Chair: Nader Haghighipour)**

16:00 – 16:15 **The Arecibo Search for Radio Flares From Ultracool Dwarfs**  
*Alexander Wolszczan (Penn State University)*

16:15 – 16:30 **SPICES: A Mission Concept to Characterize Long-Period Planets From Giants to Super-Earths**  
*Anthony Boccaletti (Paris Observatory)*

16:30 – 16:45 **Exoplanet Occultation Spectrophotometry with SOFIA**  
*Daniel Angerhausen (Hamburg Observatory)*

16:45 – 17:00 **Characterising Super Earths with the ECHO Space Mission Concept**  
*Marcell Tessenyi (University College London)*

- 17:00 – 17:15      **Do Have Nanosatellites a Role in Detecting Exoplanets?**  
*Werner Weiss (University of Vienna)*
- 17:15 – 17:30      **The Planetary Astrobiological eXplorer (PAX) Project**  
*Alain Leger (PAXTeam, IAS)*
- 17:30 – 17:45      **Electric Field Break-Down in Mineral Clouds on Giant Gas Planets**  
*Christiane Helling (University of St Andrews)*
- 17:45 – 18:00      **Concluding Remarks**  
*Nader Haghighipour*