Sunday 30 November

Astronomical Polarization Tutorials

09:30  The Physics of Polarization – Degl’Innocenti

10:30  Q&A/Coffee Break

11:00  Nighttime Polarimetry – Bagnulo

12:00  Q&A/Lunch

13:30  Daytime Polarimetry – Solanki

14:30  Q&A/Coffee Break

15:00  Planetary Atmospheres & Surfaces – Mishchenko

16:00  Q&A

17:00  Registration/Reception – PUT UP POSTER GROUP A

19:00  Close of Registration for the day
Monday 1 December

07:45  Registration

08:15  Welcome Address – A. Perez, University of Costa Rica

08:25  Welcome Remarks – B. Lites

SESSION I: Solar and Stellar Surface Magnetic Fields – I

CHAIR: S. Solanki

08:30  KEYNOTE: Two Centuries of Solar Polarimetry – Harvey (20 + 5 min)

08:55  KEYNOTE: Surface Magnetic Fields across the HR diagram – Landstreet (20 + 5 min)

09:20  One-Minute Poster Presentations, Poster Group A

09:40  Coffee Break/posters

CHAIR: J. Trujillo Bueno

10:40  INVITED: Small-scale solar and stellar surface fields
– Martínez González (17+3 min)

11:00  Do the quiet Sun magnetic fields vary with the solar cycle?
– Faurobert (12+3 min)

11:15  The magnetic flux history of supergranular cells in the photosphere of the Sun – Bellot Rubio (12 + 3 min)

11:30  Solar surface anisotropy on the magnetic field – Bommier (12 + 3 min)

11:45  The evolution of individual and groups of flux tubes as seen by IMaX/Sunrise
– del Toro Iniesta (12 + 3 min)

12:00  The persistence of apparent non-magnetohydrostatic equilibrium in NOAA 11035 – Jaeggli (Metcalf Travel Award Recipient) (12 + 3 min)

12:15  Lunch
CHAIR: O. Kochukhov

13:45 INVITED: Inferring the Unresolved Structure of Stellar Magnetic Fields
  – Petit (17 + 3 min)

14:10 The BCool project – Marsden (12 + 3 min)

14:25 Detection of magnetic fields in evolved low-intermediate mass stars
  – Sabin (12 + 3 min)

14:40 Full Stokes (IQUV) polarimetry of AGB and post-AGB stars
  – Lebre (12 + 3 min)

14:55 Polarimetric Observations of Beta CrB with the Catania Spectro-polarimeter
  – Martin (12 + 3 min)

15:10 Coffee Break/posters

16:10 Flare footpoint infrared spectropolarimetry including He I 1083 nm
  – Judge (12 + 3 min)

16:25 Photospheric and chromospheric polarimetry of solar flares
  – Kleint (12 + 3 min)

SESSION 2: Future Directions in Astrophysical Polarimetry – I

CHAIR: R. Casini

16:40 INVITED: Polarimetry and the Solar-C Mission – Ichimoto (17 + 3 min)

17:00 Polarization calibration and scheduling for the Daniel K. Inouye Solar
  Telescope – Elmore (12 + 3 min)

17:15 The Polarimetric and Helioseismic Imager on Solar Orbiter
  – Solanki (12 + 3 min)

17:30 A Large Coronagraph for Solar Coronal Magnetic Field Studies
  – Tomczyk (12 + 3 min)

17:45 Adjourn
Tuesday 2 December

SESSION 3: Physical Processes

CHAIR: P. Judge

08:30  **KEYNOTE:** Theoretical Tools for Spectro-Polarimetry – Casini (20 + 5 min)

08:55  **INVITED:** Atomic Scattering Polarization: Observations, Interpretation and Predictions – Trujillo Bueno (17 + 3 min)

09:15  **INVITED:** Scattering Polarization from Macroscopic Particles – Mishchenko (17 + 3 min)

09:35  **One-Minute Poster Presentations, Poster Group B**

09:55  **Coffee Break/posters**

10:55  Resolution of the D1 enigma: Physics of polarized scattering at multi-level systems – Stenflo (12 + 3 min)

11:10  Chromospheric diagnosis with forward-scattering Hanle effect in hydrodynamical models – Carlin Ramirez (12 + 3 min)

SESSION 4: Instrumentation for Astronomical Polarimetry

CHAIR: S. Jaeggli

11:25  **INVITED:** Challenges of Infrared Polarimetry of the Sun – Lin (17 + 3 min)

11:45  A ZIMPOL polarimeter system at GREGOR in Tenerife – Bianda (12 + 3 min)

12:00  Coronal Magnetograph (CorMag) for Space- and Ground-based Solar Observatories – Fineschi (12 + 3 min)

12:15  **Lunch**

14:00  **INVITED:** New Optics for Astronomical Polarimetry – Baur (17 + 3 min)

14:20  Preliminary Design of the Full- Stokes UV and Visible Spectropolarimeter for UVMag – Pertenais (12 + 3 min)

14:35  A near infrared imaging polarimeter: POLICAN – Rangaswamy (12 + 3 min)
14:50  Fast Solar Polarimeter – Feller (12 + 3 min)

SESSION 5: Data Analysis techniques for Polarization Observations

CHAIR:  J. C. del Toro Iniesta

15:05  INVITED: Pattern Recognition Techniques for Astronomical Polarization Measurements – Lopez Ariste (17 + 3 min)

15:20  Coffee Break/posters

16:20  INVITED: Multi-line Techniques for Inference of Stellar Magnetic Fields – O. Kochukhov (17 + 3 min)

16:40  INVITED: New generation Stokes inversion codes – Ramos (17 + 3 min)

17:00  Effect of cross-redistribution on the resonance scattering polarization of O I line at 1302 A – Bhasari (12 + 3 min)

17:15  Inhomogeneity and velocity fields effects on scattering polarization in solar prominences – Milic (12 + 3 min)

17:30  How to analyze millions of spectral profiles of an X1.0 flare efficiently and still feel good afterward – Sainz Dalda (12 + 3 min)

17:45  Spatially coupled inversion of spectro-polarimetric data – van Noort (12 + 3 min)

18:00  Adjourn – REMOVE POSTER GROUP A
**Wednesday 3 December**

**PUT UP POSTER GROUP B**

**SESSION 6: Future Directions in Astrophysical Polarimetry – II**

**CHAIR: B. Lites**

08:30  **INVITED: Polarization Measurements at ATST/DKIST**
       – Martinez Pillet (17 + 3 min, Presented by Elmore)

08:50  SolpeX: the soft X-ray flare polarimeter for ISS – Sylwester (12 + 3 min)

09:05  Sounding Rocket Experiment: Chromospheric Lyman-Alpha Spectro-Polarimeter (CLASP) – Kubo (12 + 3 min)

**SESSION 7: Solar and Stellar Surface Magnetic Fields – II**

**CHAIR: J. Landstreet**

09:20  **INVITED: Magnetic Fields in Early-Type Stars – Grunhut** (17 + 3 min, Presented by Neiner)

09:40  High Precision Polarimetry of Magnetic Massive Stars – Carciofi (12 + 3 min)

09:55  The origin of magnetic fields in hot stars – Neiner (12 + 3 min)

10:10  Ultra-weak magnetic fields and atmospheric dynamics of Am stars
       – Blazère (12 + 3 min)

10:25  **Coffee Break/posters**

**CHAIR: R. Centeno**

10:50  Full Stokes observations in the He 1083 nm spectral region covering a M3.2 class flare – Kuckein (12 + 3 min)

11:05  A two dimensional view of spicules from He 1083 nm triplet observations
       – Orozco Suarez (12 + 3 min)

11:20  Flux emergence event beneath an eruptive filament – Palacios (12 + 3 min)

11:35  Polar Faculae Magnetism – Pastor Yabar (12 + 3 min)

11:50  **Lunch**
12:50  Buses Leave for Excursion: Crocodile Rescue Center at Guacalillo Beach and Mangrove Forest Boat Tour on the Tárcoles River

17:00  Buses Return from Excursion, Poster Viewing

18:00  Adjourn
Thursday 4 December

SESSION 8: Polarization Diagnostics of Atmospheres & Circumstellar Environments

CHAIR: J. Vink

09:00  **KEYNOTE:** Circumstellar Polarimetry – Magalhaes (20 + 5 min)

09:25  INVITED: Probing Coronal and Chromospheric Magnetic Fields with Radio Imaging Polarimetry – Shibasaki (Presented by Ichimoto, 17 + 3 min)

09:45  INVITED: Polarimetry as a Window into of Supernova Explosions and Progenitors – Hoffman (17 + 3 min)

10:05  Polarimetry of Supernovae – Maund (12 + 3 min)

10:25  **Coffee Break/posters**

CHAIR: S. Gibson

11:25  Magnetic and electric fields inference in chromospheric jets using Paschen lines – Anan (12 + 3 min)

11:40  Intensity and Linear Polarization of Fe XIII 10747 and 10798 in the Corona – Plowman (12 + 3 min)

11:55  Polarimetric measurements in prominences observed by THEMIS – Schmieder (12 + 3 min)

12:10  The Coronal Structure of the Sun-Like Exoplanet- Host GJ 3021 – Alvarado-Gomez (12 + 3 min)

12:25  **Lunch**

CHAIR: F. Menard

14:00  Inferring condensate structures in ultracool dwarfs using linear polarimetry – Miles-Páez (12 + 3 min)

14:15  Linear line spectropolarimetry and circumstellar structures – Vink (12 + 3 min)

14:30  Modeling AB Aurigae's Envelope – Lomax (12 + 3 min)
14:45  The SEEDS High-Contrast Imaging Polarimetry Survey of Protoplanetary Disks – Wisniewski (12 + 3 min)

15:00  CARMA observations of magnetic fields in star-forming filaments – Hull (12 + 3 min)

15:15  Magnetic field structure in star-forming regions – Chakali (12 + 3 min)

15:30  **Coffee Break/posters**

16:30 On the Peculiarities of Manifestation of kG Magnetic Elements in Observations of the Sun with Low Spatial Resolution – Demidov (12 + 3 min)

**SESSION 9: Polarimetry as a Tool for Discovery Science – I**

**CHAIR: M. Mishchenko**

16:45  High contrast imaging of circumstellar disks in scattered light: the polarimetric approach of VLT/SPHERE – de Boer (17 + 3 min)

17:05  INVITED: Polarization Biosignatures of Planet Earth – Sterzik (17 + 3 min)

17:25  Polarimetry: a primary tool for the physical characterization of the Asteroids – Cellino (12 + 3 min)

17:40  Linear spectro-polarimetry: a new tool for the physical characterization of asteroids – Bagnulo (12 + 3 min)

17:55  **Adjourn**

19:00  **Symposium Banquet**
Friday 5 December

SESSION 10: Polarimetry as a Tool for Discovery Science – II

CHAIR: S. Bagnulo

09:00  Polarimetry as a tool to find and study habitable planets orbiting white dwarfs – Fossati (12 + 3 min)

09:15  Stellar magnetic activity and its influence on the habitability of exoplanets – Lueftinger (12 + 3 min)

09:30  Polarimetric detection of gas in the candidate disintegrating planet KIC1255754 8b – Palle (12 + 3 min)

SESSION 11: Numerical Modeling of Polarized Emission

CHAIR: M. Faurobert

09:45  INVITED: On the importance of partial frequency redistribution in modeling the scattering polarization – Nagendra (17 + 3 min)

10:05  Coffee Break/poster

11:05  INVITED: Three-dimensional simulations of Scattering Polarization and the Hanle Effect in MHD Chromospheric Models – Stepan (17 + 3 min)

11:25  INVITED: Modeling of Polarized Emission and Absorption from Protoplanetary Disks – Menard (17 + 3 min)

11:45  The impact of surface dynamo magnetic fields on the chemical abundance determination – Shchukina (12 + 3 min)

12:00  FINAL REMARKS

12:15  End of Symposium

12:15  Lunch
**Poster Group A: 30 November - 2 December 2014**

A1: Analytical modeling of thirty meter telescope polarization – Anche

A2: The importance of non-photon noise in astronomical spectro-polarimetry – Bagnulo


A4: Theoretical polarization spectrum of Na I D1 & D2 near the solar limb – Bommier

A5: The Chromosphere and Prominence Magnetometer – de Wijn

A6: An electronic inverter of the radiative transfer equation for polarized light – del Toro Iniesta

A7: On the cross-calibration of the Hsos Smat full disk longitudinal magnetograms with data sets from other instruments – Demidov

A8: Digital radar in Costa Rica: Design, tools and results – Garbanzo-Salas

A9: Design of full Stokes polarimeter for chromospheric measurements with SOLIS/VSM – Gosain

A10: Solar full-disk polarization measurement with the Fe I 15648 line – Hanaoka

A11: A simple low-resolution spectropolarimeter for Zeeman measurements of stellar magnetic fields – Hiriart

A12: Cyclic variation of internetwork magnetic fields – Jin *(Cancelled)*

A13: Paschen-Back effect involving fine and hyperfine structure states – Krishnamurthy (Presenter: Nagendra)

A14: Measurement of seeing induced spurious polarization – Krishnappa

A15: Unresolved mixed polarity magnetic fields at flux cancellation site in solar photosphere at 0".3 spatial resolution – Kubo

A16: Optical and near-infrared linear polarimetry of low mass stars, brown dwarfs – Miles-Páez

A17: The DAO liquid crystal spectropolarimeter dimaPol – Monin
Poster Group A: 2-5 December 2014

A18:  A revisit to model the Cr I triplet at 5204-5208 A and Ba II D_2 line at 4554 A in the second solar spectrum – Narayananmurthy (Presenter: Nagendra)

A19:  Magnetic field configuration in a flaring active region: emerging and shear regions – Palacios

A20:  Waves and Magnetism in the Solar Atmosphere (WAMIS) – Strachan

A21:  Inferring magnetic and plasma properties at multiple heights in the Sun's atmosphere with IBIS data – Tarr (Metcalf Travel Award Recipient)

A22:  Parallelization of the SIR code for the investigation of small- scale magnetic features in the solar photosphere – Thonhofer

A23:  Spectrograph for the Brazilian Solar Telescope – Vieira (presenter: Palacios)


A25:  Commissioning Results of a New Polarimeter, DUSTPol – Wolfe

Poster Group B: 3-5 December 2014

B1:  The high energetic particles released during the decline phases of solar cycle 24 – Abdel Hady

B2:  Line variations profile of a solar analog star, the search – Amazo-Gomez

B3:  Radiative transfer simulations of multiphase AGN tori: thermal emission and polarization – Baes

B4:  Is there life in our solar system? – Bagnulo

B5:  Barbarian asteroids: challenging open questions and constraints to the models of formation of the planetary system – Cellino

B6:  Modeling of the center-to-limb variation of the Ca I 4227 A line using FCHHT models – Dayananda (Presenter: Nagendra)

B7:  Assessing the behavior of modern solar spectropolarimeters and magnetographs – del Toro Iniesta

B8:  PRD effects on polarized lines formed in moving media in the presence of a weak magnetic field – Sampoorna (Presenter: Nagendra)

B9:  Forward modeling coronal magnetic fields – Gibson
B10: Probing disk inhomogeneities using spectropolarimetry in the extreme binary epsilon Aurigae – Geise

B11: Magnetic evolution of coronal hole and the associated filament – Gutiérrez

B12: Polarized continuum radiation from stellar atmospheres – Harrington

B13: Study of polarization in proto-planetary nebulae – Ibarra Garcia

B14: Magnetism, polarization processes and mass loss of red supergiant stars – Josselin

B15: Studies of supersonic downflows in sunspot penumbrae using spectropolarimetric data – Kim

B16: Mass Transfer in the V356 Sgr Binary System – Lomax

B17: TeV cosmic ray anisotropy from the turbulent magnetic field at the heliospheric boundary – Lopez-Barquero

B18: Optical and near-infrared linear spectropolarimetry of the Earth – Miles-Páez

B19: An Equation for Uranus Zonal Wind – Murillo

B20: Probing the geometry of type II-plateau supernovae explosions – Pignata

B21: Multi-wavelength comparative study of oscillations of sunspot and filament – Rojas

B22: Zeeman Doppler imaging of a cool star using all four Stokes parameters for the first time – Rosén

B23: Formation of polarized spectral lines in atmospheres with horizontal inhomogeneities – Tichy

B24: High-velocity Wind from IRS 1 in the NGC 2071IR – Trinidad

B25: Long-Term Evolution of Filaments Associated with Emerging Magnetic Flux – Taliashvili