

# Conference Program

Monday 8 August 2016

17:30 Conference registration opens

18:30–20:30 **STARS & WINE**. Wine tasting and live music, sponsored by *Imagen de Chile* – Free Admission

Tuesday 9 August 2016

## Cultural session

Chair: M. Hamuy

10:00–10:45 A new proposal for a division of Easter Island's history – Cristian Moreno Pakarati

10:45–12:00 Showing of documentary "Te Kuhane o te Tupuna" by Leo Pakarati

## 1. Introduction session

14:30–14:45 Conference introduction – Mario Hamuy

14:45–15:30 Archeoastronomy of Eastern Polynesia and Easter Island – Edmundo Edwards

15:30–16:00 Ruminations on a Life in Chile or: How I Learned to Stop Worrying and Love Exploding Stars – Mark Phillips

16:00–16:30 Anyone Can Do Photometry If It Is Clear – Nick Suntzeff

## 16:30–16:50 Coffee break

## 2. Session: Supernova surveys

Chair: F. Förster

16:50–17:20 The All-Sky Automated Survey for Supernovae (ASAS-SN) – B. Shappee (INVITED)

17:20–17:50 SNe Ia in the PTF and ZTF eras: lessons and prospects – A. Goobar (INVITED)

17:50–18:05 Core collapse supernovae: from the normal to the extreme – A. Howell

18:05–18:20 The SUNBIRD project: Uncovering supernovae in luminous infrared galaxies – E. Kool

18:20–18:35 Carnegie Supernova Project observations of stripped-envelope core-collapse supernovae – M. Stritzinger

## 19:30 Welcome cocktail

Wednesday 10 August 2016

## 2. Session: Supernova Surveys

Chair: N. Morrell

09:00–09:30 An Astronomical Time Machine: Light Echoes from Historic Supernovae and Eruptions – A. Rest (INVITED)

09:30–09:45 Supernova Science with a WFIRST Nearby Galaxy GO Program – S. van Dyk

09:45–10:00 Detections of Superluminous Supernovae at  $z \sim 2-5$  from SUDSS and u-SUDSS – C. Curtin

## 3. Session: Supernova science in era of big data

10:00–10:30 A Roadmap to the LSST transient sky – F. Bianco (INVITED)

10:30–10:45 An Open Catalog for Supernova Data – J. Guillochon

10:45–11:00 Detecting Supernovae by Using Deep Learning – P. Estevez

## 11:00–11:20 Coffee break

*Conference Program continued on inside*



**SUPERNOVAE**  
THROUGH THE AGES  
UNDERSTANDING THE PAST  
TO PREPARE FOR THE FUTURE

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Cover image: Orion and Aldébaran rise above the Tongariki ahu Moais  
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**EASTER ISLAND**  
8–13 AUG 2016

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*Conference Program continued from inside flap*

*Chair: J. Anderson*

11:20–11:50 Enhanced Transient Discovery via Machine Learning: Insight from the Palomar Transient Factory – A. Miller (INVITED)

11:50–12:05 Supernova photometric classification in SNLS with machine learning – A. Möller

12:05–12:20 SN II spectral template and variability – S. González-Gaitán

12:20–12:35 Dalek – Automatic supernova spectral fitting within a Bayesian framework – W. Kerzendorf

#### 4. Session: Fast supernova science and other fast transients

12:35–13:05 HiTS: The High cadence Transient Survey – F. Förster (INVITED)

13:05–13:20 Transient surveys with Subaru/Hyper Suprime-Cam – N. Tominaga

#### 13:20–14:50 Lunch break

*Chair: I. Domínguez*

14:50–15:20 Learning About the Progenitors of Supernovae Using Their Early Light Curves – T. Piro (INVITED)

15:20–15:35 KEGS – The Kepler Extra-Galactic Survey – B. Tucker

15:35–16:05 Extreme radio transients: fast radio bursts and beyond – E. Petroff (INVITED)

16:05–16:20 Kilonova Emission from Compact Binary Mergers – M. Tanaka

#### 16:20–16:40 Coffee break

*Chair: M. Bersten*

16:40–17:10 The detection of gravitational waves – L. Singer (INVITED)

#### 5. Session: Core-collapse supernova progenitors and explosions

17:10–17:40 SN progenitors and links to stellar evolution models – M. Fraser (INVITED)

17:40–17:55 Observational Signatures of the Rugged Landscape of the Core-Collapse Supernova Explosions – O. Pejcha

17:55–18:10 Spectral diversity of type II supernovae: characterization and correlations – C. Gutiérrez

18:10–18:25 Late-Time Spectral Observations of Type IIP Supernovae – J. Silverman

## Thursday 11 August 2016

#### 5. Session: Core-collapse supernova progenitors and explosions

*Chair: J. Prieto*

9:00–9:15 Toward multi-messenger observation of core-collapse supernovae from simulations of the central engine – T. Takiwaki

9:15–9:30 Supernova Structure and Nucleosynthesis from Collapse to Remnant – P. Young

9:30–9:45 Jet-powered Supernovae – B. Morsony

9:45–10:15 Study of Core-Collapse SN Progenitors from Light-Curves and Stellar-Evolution Models – M. Bersten (INVITED)

10:15–10:30 The nature of Type IIb supernova progenitors – S-C Yoon

10:30–10:45 Single versus binary star progenitors of Type IIb supernovae – N. Sravan

10:45–11:00 Identifying Progenitors of Stripped-Envelope Supernovae – G. Folatelli

#### 11:00–11:20 Coffee break

#### 6. Session: The first supernovae

*Chair: T. Davis*

11:20–11:50 The First Supernovae – A. Heger (INVITED)

11:50–12:05 Luminous transients by mass ejection from very massive stars through pulsational pair-instability – T. Yoshida

12:05–12:35 Finding the First Cosmic Explosions – D. Whalen (INVITED)

#### 12:35–13:15 Poster presentations

#### Lunch break

#### Free afternoon

#### 20:30 Conference dinner

## Friday 12 August 2016

#### 7. Session: Thermonuclear supernova progenitors and explosions

*Chair: M. Tanaka*

9:00–9:30 The case for multiple progenitor channels for Type Ia supernovae from radiative-transfer simulations – S. Blondin (INVITED)

9:30–9:45 Type Ia Supernovae in a New Light: Probing the Signatures of the Progenitors and Progenitor Systems – P. Hoefflich

9:45–10:00 Double detonation Type Ia supernovae in double white dwarf binaries – K. Shen

10:00–10:15 Symbiotic stars and Type Ia supernovae – X. Chen

10:15–10:30 WD accretion and SNe Ia – Z. Han

#### 10:30–10:50 Coffee break

*Chair: L. Galbany*

10:50–11:20 Type Ia Supernovae: Progenitor Scenarios and Observational Constraints – K. Maeda (INVITED)

11:20–11:35 The (time weighted) integrated luminosity provides strong constraints on type Ia, II, Ibc and super-luminous supernova models – B. Katz

11:35–11:50 Testing SNe Ia Explosion Models with a Complete ASAS-SN Sample – S. Dong

11:50–12:05 A reddening-free method to estimate the  $^{56}\text{Ni}$  mass of Type Ia supernovae – S. Dhawan

12:05–12:20 Detailed Modeling of Early and Late Spectra of SN 2011fe and SN 2014J – E. Baron

#### 12:20–13:00 Poster presentations

#### 13:00–14:30 Lunch break

#### 8. Session: Peculiar supernovae

*Chair: E. Levesque*

14:30–15:00 CSM Interaction in supernovae, pre-supernovae, and non-supernovae – N. Smith (INVITED)

15:00–15:15 SN 2015bh in NGC 2770: Defining a new class of stellar explosion – A. de Ugarte Postigo

15:15–15:30 Interacting supernovae in ASAS-SN – J. Prieto

15:30–15:45 Type IIn Supernovae Have Uniform Light Curves But Two Spectral Subclasses – G. Hosseinzadeh

15:45–16:00 Probing the Extremes of Pre-SN Mass-Loss with the PS1-MDS – M. Drout

16:00–16:15 SN 2015bn: a new benchmark dataset for understanding superluminous supernovae – M. Nichol

#### 16:15–16:35 Coffee break

*Chair: C. Thöne*

16:35–16:50 The Impossible Supernova – I. Arcavi

16:50–17:05 Light-curve and spectral properties of ultra-stripped core-collapse supernovae – T. Moriya

17:05–17:20 Type Iax Supernovae – S. Jha

17:20–17:35 The complex spectra of Type Iax SNe: spectral modelling and velocity measurements – T. Szalai

## Saturday 13 August 2016

#### 9. Session: Supernova cosmology

*Chair: G. Folatelli*

9:00–9:15 History of Supernovae as Distance Indicators – B. Leibundgut

9:15–9:45 Supernova Cosmology: prospects and pitfalls – T. Davis (INVITED)

9:45–10:15 What Will We Do With All The Supernovae? (Mark and Nick @ 75) – E. Linder (INVITED)

10:15–10:30 A 20 Year Stretch of 15 Days, Is it Time for a  $\Delta$  Change? – C. Burns

10:30–10:45 To What Extent Are Type Ia Supernovae Standard Candles in the Near-Infrared? – K. Krisciunas

10:45–11:00 Cosmology from Type II Supernovae – M. Hamuy

#### 11:00–11:20 Coffee break

*Chair: G. Pignata*

11:20–11:50 The Multiply Imaged Strongly Lensed Supernova Refsdal – P. Kelly (INVITED)

#### 10. Session: Supernova environments and rates

11:50–12:20 The hosts and galactic environments of CC SNe – C. Thöne (INVITED)

12:20–12:35 Supernova environmental studies through Integral Field Spectroscopy – L. Galbany

12:35–12:50 The evolution of superluminous supernova host galaxies out to  $z \sim 4$  – S. Schulze

12:50–13:05 Type II supernovae as environment metallicity indicators – J. Anderson

#### 13:05–14:40 Lunch break

*Chair: E. Hsiao*

14:40–15:10 Unraveling correlations between supernova rates and host-galaxy properties – O. Graur (INVITED)

15:10–15:25 The rate of Type Ia supernovae in the local universe from the Palomar Transient Factory – C. Frohmaier

15:25–15:40 SweetSpot: A Near Infrared Survey of Type Ia Supernovae in the Nearby Hubble Flow – K. Ponder

15:40–15:55 Continuum Foreground Polarization and Absorption of Na I in Type Ia Supernovae – A. Clocchiatti

15:55–16:10 Diversity and peculiarity of SN Ia reddening laws – R. Amanullah

#### 16:10–16:30 Coffee break

*Chair: M. Hamuy*

16:30–17:30 Conference summary – I. Domínguez & E. Levesque

#### Conference ends