

The 8th Pacific Rim Conference on Stellar Astrophysics  
Merlin Beach Resort, Phuket, Thailand  
5-9 May 2008

PRCSA 2008

## Scientific Programs

### Sunday 4 May, 2008

16:00-18:30 Registration

18:30-20:00 *Welcome Reception*

### Monday 5 May, 2008

08:30-09:30 Registration

**Chair: Boonrucksar Soonthornthum**

09:30-10:15 *Opening Ceremony*

10:15-10:45 *Conference Photo & Coffee Break*

10:45-11:00 Kam-Ching Leung, University of Nebraska, USA  
Recent Astronomical Development in Asia Pacific Rim

### Session One: Star Formation

**Chair: Kwong Sang Cheng**

11:00-11:20 Wen-Ping Chen, National Central University, Taiwan, China  
Triggered Star Formation by Massive Stars

11:20-11:40 Alisher Hojaev, University of Uzbekistan, Uzbekistan  
Star Formation Conditions in Taurus Dark Clouds Complex

11:40-12:00 David Barrado y Navascués, LAEFF-INTA, Spain  
A Multiwavelength Approach to the Star Formation in the Orion's Head Complex

12:00-13:30 *Lunch*

**Chair: Helmut A. Abt**

13:30-13:50 Valeri Makarov, California Institute of Technology, USA  
The Origins of Nearby Young Stars and Star Forming Regions

13:50-14:10 Simon Murphy, Australian National University, Australia  
Towards a Complete Census of Young, Low-mass Stars in the Solar Neighbourhood  
with SkyMapper

14:10-14:25 Ya-Ting Jhang, National Central University, Taiwan, China  
Young Stellar Population in the Lupus Molecular Clouds

14:25-14:40 Yi-Hsin H. Shih, National Central University, Taiwan, China  
Near-Infrared Polarimetric Imaging of the Giant HII Region RCW57

### Session Two: Novae and Supernovae

**Chair: Peter R. Wood**

14:40-15:00 Brian Warner, University of Cape Town, South Africa  
Dwarf Nova Oscillations in VW Hyi

15:00-15:15 Hanindy Kuncarayakti, Institut Teknologi Bandung, Indonesia  
Nova V1280 Scorpii 2007

15:15-15:30 *Coffee Break*

## Monday 5 May, 2008 (Continued)

15:30-15:45 Daisaku Nogami, Kyoto University, Japan  
Spectroscopic Observations of WZ Sge-type Dwarf Novae, GW Librae, and V455 Andromedae in Superoutburst

### Chair: Paula Szkody

15:45-16:05 Hiroyuki Maehara, Kyoto University, Japan  
Photometric Observations of a WZ Sge-type Dwarf Nova V455 Andromedae during the 2007 Superoutburst

16:05-16:25 Stefanie Wachter, Caltech, USA  
Magnetars and Their Environment Revealed with Spitzer Space Telescope

16:25-16:45 Makoto Uemura, Hiroshima University, Japan  
New Aspects of WZ Sge-Type Dwarf Nova through Simultaneous Optical-Infrared Observations during Superoutbursts

16:45-17:00 Irina Voloshina, Moscow State University, Russia  
The Long Period Recurrent Nova RS Ophiuchi

## Tuesday 6 May, 2008

### Chair: Brian Warner

09:00-09:20 Jan-Uwe Ness, Arizona State University, USA  
The X-ray Spectra of the Shock Systems in the RS Oph System

09:20-09:35 Hee-Won Lee, ARCSEC, Sejong University, Korea  
O VI Raman Scattering and the Accretion Disk Emission in the Symbiotic Novae V1016 Cygni and HM Sagittae

09:35-09:55 Herbert Ho Bun Lau, Peking University, China  
Evolution and Fate of Extremely Metal-Poor AGB Stars

## Session Three: Compact Objects

### Chair: Alvaro Giménez

09:55-10:15 Kwong Sang Cheng, The Hong Kong University, China  
High Energy Radiation from Pulsars

10:15-10:30 Chris Belczynski, LANL, USA  
Population Synthesis of Double Compact Objects: Short GRB Progenitors/GR Sources

10:30-10:45 *Coffee Break*

10:45-11:00 Ryan Campbell, New Mexico State University, USA  
Phase-resolved Cyclotron Spectroscopy of Polars

11:00-11:20 Michael Kramer, University of Manchester, UK  
Pulsars as Probes for Binary and Stellar Evolution

11:20-11:40 Xue-Bing Wu, Peking University, China  
Radio X-ray Luminosity Correlation in Accreting Stellar Black Hole Systems

11:40-12:00 Shuang-Nan Zhang, Physics Department Beijing, Tsinghua University, China  
Jets and Environments of Black Hole X-ray Binary Systems

12:00-13:30 *Lunch*

### Chair: Young-Woon Kang

13:30-13:50 Giorgi Melikidze, University of Zielona Góra, Poland  
Partially Screened Polar Gap in Pulsar

13:50-14:10 Tiberiu Harko, The Hong Kong University, China  
Astrophysical Implications of the Hadron-quarks Phase Transitions in Neutron Stars

14:10-14:30 Guojun Qiao, Peking University, China  
Possible Achievements in Future Pulsar Astrophysics

## **Tuesday 6 May, 2008 (Continued)**

- 14:30-14:45 Shuang-Nan Zhang, Physics Department Beijing, Tsinghua University, China  
Mapping the Distribution and Properties of Dusts Surrounding the Black Hole X-ray Binary Cyg X-1
- 14:45-15:00 Philippe Durouchoux, ESIEA, France  
Low Frequency GMRT Radio Observations of Integral Sources
- 15:00-15:15 Chung Yue Hui, Max Planck fuer Extraterrestrische Physik, Germany  
X-ray Millisecond Pulsar Populations in Globular Clusters
- 15:15-15:30 *Coffee Break*

**Chair: Jean-Pierre De Greve**

- 15:30-15:50 Yuuki Moritani, Kyoto University, Japan  
High-Dispersion Spectroscopy of a Be/X-Ray Binary A0535+262/V725 Tau

## **Session Four: Binary Stars**

- 15:50-16:10 Lev Yungelson, Institute of Astronomy, Russia  
Formation, Evolution and Parameters of Short-period Low-mass X-ray Binaries with Black Hole Companions
- 16:10-16:30 Farung Surina, ARCSEC, Sejong University, Korea  
Revised Absolute Dimensions of Thirty Main Sequence Eclipsing Binaries
- 16:30-16:50 Young-Woon Kang, ARCSEC, Sejong University, Korea  
Absolute Dimensions of Semi-detached Binary System in the SMC

## **Wednesday 7 May, 2008**

**Chair: Shuang Nan Zhang**

- 09:00-09:20 Walter Van Rensbergen, Vrije Universiteit Brussel, Belgium  
Spin Up and Hot Spots Can Drive Mass Out of a Binary
- 09:20-09:35 Liying Zhu, Yunnan Observatory, China  
Photometric Study of Near Contact Binaries
- 09:35-09:50 Jiajia He, Yunnan Observatory, China  
The Observation and Study of Shallow-contact Binary Systems
- 09:50-10:05 Wen-Ping Chen, National Central University, Taiwan, China  
Census of the Kuiper-belt Population Estimate by Stellar Occultation
- 10:05-10:20 Hana Schumacher, University of Canterbury, New Zealand  
Analysis of the W UMA Type Eclipsing Binary V752 Cen
- 10:20-11:00 *Coffee Break + Poster Session*

**Chair: Wen-Ping Chen**

- 11:00-11:15 Omur Cakirli, Ege University Observatory, Turkey  
Fundamental Parameters of Late-type Components of Algol Binaries
- 11:15-11:35 Jean-Pierre De Greve, Vrije Universiteit Brussel, Belgium  
On the Origin and Evolutionary State of RZ Cas, KO Aql and S Equ
- 11:35-11:50 Helmut A. Abt, Kitt Peak National Observatory, USA  
The Difference between Metal-poor and Metal-rich Binaries
- 11:50-12:05 Christine Allen, Universidad Nacional Autónoma de México, México  
Runaway Stars as Tracers of Star Formation and Early Dynamical Evolution
- 12:05-13:30 *Lunch*
- 13:30-17:00 *Open for Excursions & Relaxation*
- 17:00-22:00 ***Transfer to Phuket FantaSea, Conference Dinner & Cultural Shows***

## Thursday 8 May, 2008

### Chair: Edward F. Guinan

- 09:00-09:20 Hakim L. Malasan, Institut Teknologi Bandung, Indonesia  
High-resolution Spectroscopy of Double-lined Detached Eclipsing Binaries Using the  
Gunma Astronomical Observatory Echelle Spectrometer
- 09:20-09:40 Jeong-Ju Lee, Dept. Astronomy & Space Science Sejong University, Korea  
Chemical Abundances of Eclipsing Binaries: Software and Methodic
- 09:40-10:00 Herbert Ho Bun Lau, Peking University, China  
Carbon-enhanced Metal-poor Stars and Low-metallicity AGB Binary Systems

## Session Five: Cataclysmic Variables and Variable Stars

### Chair: Michael Kramer

- 10:00-10:20 Paula Szkody, University of Washington, USA  
The Accreting, Pulsating White Dwarfs in Cataclysmic Variables
- 10:20-11:00 *Coffee Break + Poster Session*
- 11:00-11:20 D. W. Hoard, California Institute of Technology, USA  
What's Cool about Hot Stars? Cataclysmic Variables in the Mid-infrared
- 11:20-11:40 Ronald Taam, Northwestern University, USA  
The Evolution of Mass Losing Donors in AM CVn Binary Systems
- 11:40-12:00 Shengbang Qian, Yunnan Observatory, China  
Orbital Period Investigation of Some Eclipsing CVs and pre-CVs
- 12:00-13:30 *Lunch*

### Chair: Gao Jun Qiao

- 13:30-13:50 Peter Wood, Australian National University, Australia  
Mass Loss from Low and Intermediate-mass Stars
- 13:50-14:10 Chow Choong Ngeow, University of Illinois, USA  
Cepheid Period-Luminosity Relation and the Interaction of Stellar Photosphere with  
Hydrogen Ionization Front
- 14:10-14:30 Zi Zhu, Nanjing University, China  
Cepheid PL Relation and Kinematics from the New Hipparcos Data
- 14:30-14:45 Robyn Woollands, University of Canterbury, New Zealand  
R Coronae Borealis Stars in the Magellanic Clouds

## Session Six: Stars, Brown Dwarfs and Planetary Companions

### Chair: Hakim L. Malasan

- 14:45-15:05 Nuria Huelamo, LAEFF-INTA, Spain  
Search for Substellar Companion Candidates to New Members of Young, Nearby  
Associations: The SACY Sample
- 15:05-15:20 Indra Bains, CAS, Swinburne University of Technology, Australia  
MERLIN Polarimetry of OH Masers in Post-AGB Stars
- 15:20-15:35 *Coffee Break*
- 15:35-15:55 Ray Jayawardhana, University of Toronto, Canada  
Multiplicity among Young Stars and Brown Dwarfs
- 15:55-16:15 Alvaro Giménez, Centro de Astrobiología, Spain  
Analysis of the Light Curves of Transiting Planets with Eccentric Orbits
- 16:15-16:35 Edward F. Guinan, Villanova University, USA  
Living with a Red Dwarf: Are Red Dwarf Stars Suitable Hosts for Habitable Planets?

## Thursday 8 May, 2008 (Continued)

- 16:35-16:50 Nazhatulshima Ahmad, University of Malaya, Malaysia  
Spectral Line Profiles of Be Stars
- 16:50-17:05 Chien De Lee, National Central University, Taiwan, China  
Near-Infrared Excess of Classical Be Stars

## Friday 9 May, 2008

### Chair: Ronald Taam

- 09:00-09:20 Anita M.S. Richards, University of Manchester, UK  
More than Just an Onion: Extending the Simple Shell Model for Supergiant Circumstellar Envelopes
- 09:20-09:35 Thomas Kallinger, University of Vienna, Austria  
Modeling Solar-type Oscillations in the Red Giant Epsilon Ophiuchi
- 09:35-09:55 Philip Diamond, University of Manchester, UK  
The Influence of Magnetic Fields on the Late Stages of Stellar Evolution
- 09:55-10:10 Sandra Etoka, University of Manchester, UK  
The Geometrical & Magnetic Structure of the Proto-Planetary Nebula OH 231.8+4.2 Traced by OH Maser Emission
- 10:10-10:50 *Coffee Break + Poster Session*

### Chair: Shengbang Qian

- 10:50-11:05 Siti-Jamiah Mohamad-Yob, Universiti Teknologi MARA, Malaysia  
Optical Spectroscopy of the Post-AGB Star HD 89353
- 11:05-11:20 Bruce McCollum, California Institute of Technology, USA  
Discovery of a Disrupted IR Ring Nebula around IRAS 19193+1443

## Session Seven: Star Clusters and Large Scale Survey

- 11:20-11:40 Li Chen, Shanghai Astronomical Observatory, China  
Open Clusters - Their Kinematics and Metallicities
- 11:40-12:00 Myung Gyoon Lee, Seoul National University, Korea  
Star Clusters in Interacting Galaxies
- 12:00-13:30 *Lunch*

### Chair: Lev Yungelson

- 13:30-13:45 Kuan-Ju Fu, National Central University, Taiwan, China  
Searching for Open Clusters in the Milky Way Disk
- 13:45-14:05 Jonathan A. Tedds, University of Leicester, UK  
Visualising Data Discovery with AstroGrid and the Virtual Observatory
- 14:05-14:20 Anita M.S. Richards, University of Manchester, UK  
Virtual Observatories in the Study of the Sun, Stars, Stellar Populations and Starbursts
- 14:20-14:35 Alexander Kaiser, University of Vienna, Austria  
BRITe-Constellation / Detector & Orbit Selection Simulations
- 14:35-14:50 Simon Murphy, Australian National University, Australia  
SkyMapper and Southern Sky survey: A Multi-color, Multi-epoch Digital Survey of Southern Sky
- 14:50-15:05 Edward F. Guinan, Villanova University, USA  
The EBAI Project: Neural Network / Artificial Intelligence Approaches to Solve Automatically Large Numbers of Light Curves of Eclipsing Binaries
- 15:05-15:30 **Conference Summary & Closing Remarks**
- 15:30-15:45 *Coffee Break*