

Wrocław HELAS Workshop

23–27 June 2008

Interpretation of asteroseismic data

Program

Program

June 22, Sunday

18:00 – 20:00 Registration

June 23, Monday

Session 0: Introduction

Chair: J. Daszyńska-Daszkiewicz

- 8:00 – 9:00 Registration and setting up posters
9:00 – 9:15 Welcome and opening the workshop by vice-rector of Wrocław University, prof. Krzysztof Nawotka
9:15 – 9:35 **Oskar von der Lühe** — *Introduction of the HELAS project (invited)*
9:35 – 10:15 **Marc-Antoine Dupret** — *Introductory talk: Problems and prospects in stellar physics (invited)*
10:15 – 11:00 — coffee break

Session 1A: DATA: ground-based observations

Chair: J. Daszyńska-Daszkiewicz

- 11:00 – 11:30 **S. Oliveira Kepler** — *Photometric observations of pulsating stars (invited)*
11:30 – 12:00 **Conny Aerts** — *Spectroscopic observations of pulsating stars (invited)*
12:00 – 12:15 **Sonja Schuh** — *Multi-wavelength photometric variation of PG 1605+072*
12:15 – 12:30 **Wojciech Dimitrov** — *Radial-velocity observations of pulsating stars with a new Poznań Spectroscopic Telescope*
12:30 – 14:00 — lunch

Session 1A: DATA: ground-based observations – cont'd

Chair: W. Dziembowski

- 14:00 – 14:30 **Igor Soszyński** — *Detecting pulsating variables from massive surveys (invited)*
14:30 – 14:45 **Torsten Böhm** — *Discovery of non-radial pulsations in the spectroscopic binary Herbig Ae star RS Cha*
14:45 – 15:00 **Katrien Kolenberg** — *A different approach to analyzing the Blazhko effect: the VSAA applied to RR Lyr*
15:00 – 15:15 **Mike Breger** — *Towards mode selection in δ Scuti stars: regularities in the observed frequency spacing*
15:15 – 16:00 — coffee break, poster session

Session 1B: DATA: space missions

Chair: W. Dziembowski

- 16:00 – 16:30 **David Guenther** — *MOST and the search for p-modes in Sun-like stars (invited)*
16:30 – 17:00 **Eric Michel** — *Asteroseismic results from CoRoT (invited)*
17:00 – 17:15 **Jaymie Matthews** — *MOST asteroseismology across the HR Diagram*
17:15 – 17:30 **Juan Gutiérrez-Soto** — *First results on the Be stars observed with the COROT satellite*
20:00 – 23:00 — Welcome reception on the boat cruising the Odra River

June 24, Tuesday

Session 2A: MODES: extracting eigenmode frequencies

Chair: M. Breger

- 9:00 – 9:30 **Mikołaj Jerzykiewicz** — *Extracting oscillation frequencies from sparse spectra: Fourier analysis (invited)*
- 9:30 – 9:45 **Geza Kovács** — *Application of the Trend Filtering Algorithm in searching for multiperiodic signals*
- 9:45 – 10:00 **Sotirios Tsantilas** — *VSAA: A method of tracing variable frequencies in time series analysis*
- 10:00 – 10:30 **Brendon Brewer** — *Extracting oscillation frequencies from dense spectra: A Bayesian approach (invited)*
- 10:30 – 10:45 **Othman Benomar** — *An application of the Bayesian inference in a solar-like pulsator: HD 49933*
- 10:45 – 11:00 **Neil Tarrant** — *Analysis of sun-like oscillations in Red Giant stars*
- 11:00 – 11:30 — coffee break, poster session

Session 2B: MODES: mode identification

Chair: M. Breger

- 11:30 – 12:00 **Gerald Handler** — *Pulsational mode identification from multi-colour photometry (invited)*
- 12:00 – 12:30 **John Telting** — *Constraints on angular numbers of pulsation modes from spectroscopy (invited)*
- 12:30 – 12:45 **Karen Pollard** — *Spectroscopic observations and mode-identification of a sample of non-radially pulsating stars*
- 12:45 – 13:00 **Barbara Castanheira** — *Spectroscopic mode identification of the δ Scuti stars δ CVn and EE Cam*
- 13:00 – 14:30 — lunch

Session 3A: STARS: convection

Chair: A. Noels

- 14:30 – 15:00 **Reza Samadi** — *Stochastic excitation of oscillation modes in the HR diagram (invited)*
- 15:00 – 15:30 **Guenter Houdek** — *Pulsation-convection interaction: the effect of convection on mode stability (invited)*
- 15:30 – 15:45 **Stéphane Mathis** — *Stochastic waves excitation in rotating stars*
- 15:45 – 16:00 **Radosław Smolec** — *Double-mode Cepheid models – revisited*
- 16:00 – 17:00 — coffee break, poster session

Session 3B: STARS: opacity driving, levitation, opacity data

Chair: A. Noels

- 17:00 – 17:30 **Nicolas Grevesse** — *Photospheric solar chemical composition (invited)*
- 17:30 – 18:00 **Josefina Montalbán** — *Input from opacity data in computation of pulsation instability (invited)*

June 25, Wednesday

Session 3B: **STARS: opacity driving, levitation, opacity data** – cont'd

Chair: M.-J. Goupil

- 9:00 – 9:30 **Stéphane Charpinet** — *The potential of hot B subdwarf pulsators for testing diffusion and other competing process in stars (invited)*
- 9:30 – 10:00 **Gilles Fontaine** — *Degenerate pulsators (invited)*
- 10:00 – 10:15 **Ronny Lutz** — *Long-term photometric monitoring of the hybrid subdwarf B pulsator HS 0702+6043*
- 10:15 – 10:30 **Suzanna Randall** — *Mode identification in rapidly pulsating subdwarf B stars from monochromatic amplitude and phase variations*
- 10:30 – 11:00 — conference photo in the Szczytnicki Park
- 11:00 – 12:00 — poster session, coffee break
- 12:00 – 13:30 — lunch
- 13:30 – 14:00 — transport to the Wrocław Market Square
- 14:00 – 17:00 — city tour
- 20:00 – 23:00 — conference dinner

June 26, Thursday

Session 3C: STARS: effects of rotation on the stellar structure and pulsation

Chair: R. Garrido

- 9:00 – 9:30 **Jean-Paul Zahn** — *Effects of rotation on stellar structure: rotation induced mixing (invited)*
9:30 – 10:00 **Umin Lee** — *Pulsation in rapidly rotating stars (invited)*
10:00 – 10:15 **Stéphane Mathis** — *Waves transport in differentially rotating stellar radiation zones*
10:15 – 10:30 **Francois Lignières** — *The asymptotic structure of the p-modes frequency spectrum in rapidly rotating stars*
10:30 – 11:00 — coffee break, poster session

Session 3D: STARS: effects of magnetic field on stellar pulsation

Chair: R. Garrido

- 11:00 - 11:30 **Hiroto Shibahashi** — *Theory of roAp stars (invited)*
11:30 – 12:00 **Oleg Kochukhov** — *Pulsation in the atmosphere of roAp stars (invited)*
12:00 – 12:15 **Isa Brandão** — *Interferometric and seismic constraints on the roAp star α Cir*
12:15 – 12:30 **Joana Sousa** — *On the understanding of pulsations in the atmosphere of magnetic stars*
12:30 – 14:00 — lunch

Session 3E: STARS: oscillations and stellar models

Chair: M.-J. Goupil

- 14:00 – 14:30 **Simon Jeffery** — *The impact of asteroseismology on the theory of stellar evolution (invited)*
14:30 – 15:00 **Alosha Pamyatnykh** — *Examples of seismic modelling (invited)*
15:00 – 16:15 — coffee break, poster session
16:15 – 16:30 **Konstanze Zwintz** — *Asteroseismology of pre-main sequence stars*
16:30 – 16:45 **Marcella Di Criscienzo** — *The use of the rotating evolutionary models for the seismic interpretation of two pulsating PMS stars in NGC 6530*
16:45 – 17:00 **Valérie Van Grootel** — *Internal rotation profile from asteroseismology for two sdB pulsators residing in close binary systems*

June 27, Friday

Session 4: **FUTURE ASTEROSEISMIC PROJECTS** Chair: W. Dziembowski

- 9:00 – 9:25 **Jørgen Christensen-Dalsgaard** — *Kepler (invited)*
9:25 – 9:50 **Werner W. Weiss** — *BRITE-Constellation (invited)*
9:50 – 10:15 **Conny Aerts** — *PLATO: PLANetary Transits and Oscillations of stars (invited)*
10:15 – 11:00 — coffee break, poster session
11:00 – 11:25 **Eric Fossat** — *Asteroseismic possibilities at Concordia, Antarctica (invited)*
11:25 – 11:50 **Frank Grundahl** — *SONG – writing the verses (invited)*
11:50 – 12:20 **Joyce Guzik** — CLOSING TALK
12:20 – 14:00 — lunch