# Third Announcement of the International Conference

# Living Together: Planets, Host Stars and Binaries

Litomyšl, Czech Republic

September 8—12, 2014

(http://astro.physics.muni.cz/kopal2014)

## **CONFERENCE VENUE:**

The European Training Centre (ETC) was established in the newly-reconstructed part of the Castle brewery and offers a pleasant environment not only for work events and training, but also for more festive events and meetings. It is located just next to the Castle Litomyšl (bus stop Litomyšl – zámek).

# **CONTACT ADDRESS:**

# Phone, e-mail:

- Phone: +420 461 611 051 (ETC, Miss Žáčková accommodation),
  - +420 739 337 992 (ETC),
  - +420 739 456 356 (ETC, Miss Konečná taxi)
  - +420 721377398 (Zejda)
- E-mail: kopal2014@physics.muni.cz or directly to heads of
  - LOC Miloslav Zejda (zejda@physics.muni.cz, LOC Chair),
  - SOC Slavek Rucinski (<u>rucinski@astro.utoronto.ca</u>, SOC Chair), Guillermo Torres

(gtorres@cfa.harvard.edu, acting SOC Chair)

http://astro.physics.muni.cz/kopal2014

# **INVITED SPEAKERS:**

Michal Křížek: Zdeněk Kopal, the numerical analyst
 Edwin Budding: Zdeněk Kopal: Astronomer and Teacher

Matthew Bate: Origins of the statistical properties of binary systems
 Maciej Konacki: Planets in binary-star systems: the ground-based effort

Jeremy Leconte: Internal structure of extrasolar planets and the link to their host star
 Gregory Feiden: Eclipsing binaries as tests of low-mass stellar evolution theory

• Stephen J. Williams: What Massive Binaries Are Telling Us

William Welsh: Circumbinary planets observed by the Kepler satellite mission

• Tsevi Mazeh: Kepler binaries

• Pawel Artymowicz: Formation of binary stars and planets

• Nader Haghighipour: Formation and evolution of planets in and around binary stars systems

Andrej Prsa: Eclipsing binary light-curve modelling after the Kepler mission

Jerry Orosz: Triple stars observed by the Kepler satellite mission
 Kelly Hambleton: Heartbeat Stars and Tidally Induced Pulsations
 John Southworth: Observational studies of transiting planets

Laurent Eyer: Early results from the GAIA mission

# SCIENTIFIC ORGANIZING COMMITTEE (SOC):

Chair: Slavek Rucinski (University of Toronto, Canada)

- Maciej Konacki (<u>maciej@ncac.torun.pl</u>)
   Nicolaus Copernicus Astronomical Center, Torun, Poland
- Pavel Koubský (<u>koubsky@sunstel.asu.cas.cz</u>)
   Astronomical Institute, Academy of Sciences of the Czech Republic, Ondřejov, Czech Republic
- Mercedes Lopez-Morales (<u>mlopez@cfa.harvard.edu</u>)
   Harvard-Smithsonian Center for Astrophysics, Cambridge, USA
- Tsevi Mazeh (<u>mazeh@post.tau.ac.il</u>)
   Wise Observatory, Tel Aviv University, Israel
- Theodor Pribulla (<u>pribulla@ta3.sk</u>)

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- Andrej Prša (<u>andrej.prsa@villanova.edu</u>)
   Villanova University, USA
- Slavek Rucinski (Chair)(rucinski@astro.utoronto.ca)
   David Dunlap Observatory, University of Toronto, Canada
   Department of Astronomy & Astrophysics, University of Toronto, Canada
- John Southworth (<u>astro.js@keele.ac.uk</u>)
   Keele University, United Kingdom
- Guillermo Torres (<u>gtorres@cfa.harvard.edu</u>)
   Harvard-Smithsonian Center for Astrophysics, Cambridge, USA
- Miloslav Zejda (co-Chair)(<u>zejda@physics.muni.cz</u>)
   Department of Theoretical Physics and Astrophysics, Masaryk University, Brno, Czech Republic

# LOCAL ORGANIZING COMMITTEE (LOC):

Chair: Miloslav Zejda

- Jan Janík, Department of Theoretical Physics and Astrophysics, Masaryk University, Brno (honza@physics.muni.cz)
- Jana Macková, European Training Centre, Litomyšl (jana.mackova@esclitomysl.cz)
- Michaela Severová, Municipal Authorities of the City of Litomyšl, Litomyšl (michaela.severova@litomysl.cz)
- Pavel Suchan, Astronomical Institute of Academy of Science, Ondřejov, Prague (suchan@astro.cz)
- Marek Wolf, Astronomical Institute, Charles University, Prague (wolf@cesnet.cz)
- David Zandler, Litomyšl Castle Hill (david.zandler@zamecke-navrsi.cz)
- Miloslav Zejda, Department of Theoretical Physics and Astrophysics, Masaryk University, Brno (<u>zejda@physics.muni.cz</u>)

## TRAVEL INFORMATION:

#### In general:

For railway or bus connections the actual information may be found at <u>Bus and Train Timetables</u>. There is English and German version, however the switches is very small on the right in 2/3 of the page.

Litomyšl is located 150 km east of Prague, 85 km north of Brno, and 50 km south-east of Hradec Králové or Pardubice. There are two main possibilities of reaching the Czech Republic and Litomyšl by plane: Use either the airport in Vienna or in Prague and then continue from these two capitals.

# 1. Prague – Vaclav Havel airport

connection to the Prague centre - Airport Express bus by <u>Czech railways</u> or <u>Prague public</u> transport.

Then you can continue to Litomyšl

- by bus from the main bus station Florenc or from the bus station Praha, Černý Most see time table
- by train to Česká Třebová, which is 12 km far away from Litomyšl search a train.

From Česká Třebová to Litomyšl we can arrange transport by taxi. Please call at least 20 minutes before you arrive to Česká Třebová to the numbers bellow or to ETC to Miss Konečná (+420 739 456 356) to order the taxi. The price is fixed at 300 CZK.

TAXI Phone number Payment
TAXI Benátky +420 722 001 440, +420 722 001 5500 cash/card
TAXI Leva +420 602 178 401 cash
GRAND TAXI +420 733 264 264 cash
TAXI Peklo +420 775 770 200 cash

You can use also the bus transport from Česká Třebová – Litomyšl (approx. 15 km, 16 – 29 min). The bus station is located opposite the railway station building. The bus to Litomyšl is labelled LITOMYŠL on the front window. Get off at the bus stop LITOMYŠL – ZÁMEK (LITOMYŠL - CASTLE) which is about 20 metres from European Training

Centre (ETC) building. The fare is 28 CZK per one way journey. Regular departures are listed <u>here</u>.

#### 2. Vienna airport

You can use Vienna airport in Austria even if you need to obtain a visa for the Czech Republic. However, you should apply for a Schengen visa which enables you to travel through the Czech Republic and neighbouring countries.

There are two bus companies with a direct connection from the Vienna airport to Brno. <a href="http://www.studentagency.eu/">http://www.studentagency.eu/</a> and <a href="http://www.tourbus.cz/">http://www.studentagency.eu/</a> and <a href="http://www.tourbus.cz/">http://www.studentagency.eu/</a> and <a href="http://www.tourbus.cz/">http://www.studentagency.eu/</a> and <a href="http://www.tourbus.cz/">http://www.studentagency.eu/</a> and <a href="http://www.tourbus.cz/">http://www.tourbus.cz/</a> (the last webpage only in Czech; there is only one bus per day at 17:00 from the airport). From Brno you can continue to Litomyšl by bus or by train - <a href="mailto:search bus or train">search bus or train</a>.

You can also travel to the railway stations Wien Meidling or Wien Hbf (Main station) using the public transport (City Airport Train, S-bahn or buses) - see time tables. Then one can go to Česká Třebová by train. From Česká Třebová to Litomyšl you can continue as described above.

#### Note:

There are also small regional airports: <u>Pardubice</u>, <u>Ostrava</u>, <u>Brno</u>, which offer connections to some destinations by means of low-cost airlines.

#### By car:

Litomyšl is situated on the A-road No. 35 (E442), which is of a good quality, but usually with high traffic volumes. If you want to use a Czech highway you must buy a vignette (CZK 310 for 10 days, CZK 440 for 1 month) - see details. In Litomyšl you can use many parking spaces (see map here).

# **WEATHER CONDITIONS:**

The daily temperature of about +20°C (68°F) is typical for the late summer in September in the Czech Republic. During nights temperatures go down to +10°C (50°F). The short season of showers of rains can appear that time.

## ACCOMMODATION, MEALS:

If you have any question or problem with accommodation, please contact Miss Žáčková <a href="mailto:recepce@esclitomysl.cz">recepce@esclitomysl.cz</a> (phone +420 461 611 051). If you order accommodation via ETC, you should pay it there not in the hotel!!!

<u>Lunches</u> will be provided in the conference dining room which is next to the conference hall. The price of the main course will be 150 CZK. There are three options including vegetarian lunch. Vegetable buffet will be available during lunch time for participants with ordered lunch.

#### **REGISTRATION:**

Registration desk will be open on Sunday, 7th September 17:00-19:00 and since Monday 8<sup>th</sup> September 8:00 in the ETC.

If you will pay there rest of conference fee or accommodation, please take into account that you can pay only cash in CZK! However you can exchange your money in banks on the main square.

# TALKS, PAPERS:

The working language of the conference will be English.

The time allocated for an invited review talk is 50 min + 10 min for discussion, while the time allowed for a contributed talk is 10 min + 5 min for discussion. The speaker can use a local computer (Windows) or his/her laptop. We ask all speakers to make certain that their talks actually work (upload and check your presentation in advance). Our technicians will help you.

We invite participants to present their poster contributions during the 2 minutes oral presentations. <u>The</u> recommended poster size is **A1 or A0**.

Oral contributions and posters will be published as a special issue of the ASP Conference Series. Style and instruction will be available on conference webpage.

#### PRELIMINARY PROGRAM:

# Sunday, 7th September

19:00 The welcome reception

#### Monday, 8 September 2014

10:00 - 10:30 Opening

10:30 - 11:30 Budding: Zdeněk Kopal: Astronomer and Teacher [I60]

11:30 - 12:30 Křížek: Zdeněk Kopal: the numerical analyst [I60]

12:30 - 14:00 Lunch

14:00 - 15:00 Bate: Origins of the statistical properties of binary systems [I60]

15:00 Erdem et al.: Analysis of Exoplanet Light Curves [C15]

15:15 Mikulášek & Zejda: The concept of few-parameter modelling of eclipsing binary and exoplanet transit light curves [C15]

15:30 Martin & Triaud: Planets transiting non-eclipsing binaries [C15]

15:45 Basturk et al.: Defocused Observations of Selected Exoplanet Transits with T100 [C15]

16:00 - 16:30 Coffee break

16:30 Demircan & Bulut: Where are the circumbinary planets of contact binaries? [C15]

16:45 - 17:45 Poster session

#### Tuesday, 9 September 2014

09:00 - 10:00 Konacki: Planets in binary-star systems: the ground-based effort [I60]

10:00 Bergmann et al.: Obtaining precise radial velocities from composite spectra [C15]

10:15 Melendez, Tucci Maia & Ramirez: Fingerprinting the formation of giant planets using the binary system 16 Cyg [C15]

10:30 - 11:00 Coffee break

11:00 - 12:00 Eyer et al.: The GAIA mission [I60]

12:00 Bisikalo: Simulation of the interaction between the hot Jupiter exoplanet and its host star [C15]

12:15 Ionov, Shematovich & Bisikalo: Heating of the upper atmosphere of the hot Jupiter for various spectral energy distributions of the host star [C15]

- 12:30 14:00 Lunch
- 14:00 15:00 Feiden: Eclipsing Binaries as Tests of Low Mass Stellar Evolution Theory [I60]
- 15:00 Dunhill: Eccentric adventures in circumbinary discs [C15]
- 15:15 Plávalová & Solovaya: Analysis of the motion of an extrasolar planet HD120136 b in a binary system: calculating unknown angular orbital elements [C15]
- 15:30 Qian et al.: Planets and Brown Dwarfs Orbiting Evolved Binaries [C15]
- 15:45 Lodieu et al.: The frequency of wide companions to planet-host star: a new wide brown dwarf binary around a K7 host [C15]
- 16:00 16:30 Coffee break
- 16:30 17:30 Williams: What Massive Binaries Are Telling Us [I60]

#### Wednesday, 10 September 2014

- 09:00 10:00 Welsh: Kepler circumbinary planets the best of both worlds [160]
- 10:00 Mason et al.: Constraints on Circumbinary Life [C15]
- 10:15 Bloemen et al.: The BlackGEM Array: searching for gravitational wave source counterparts to study ultra-compact binaries [C15]
- 10:30 11:00 Coffee break
- 11:00 12:00 Mazeh: Photometric Amplitude Distribution of Stellar Rotation of Kepler KOIs Indication for Spin-Orbit Alignment of Cool Stars [160]
- 12:00 Torres et al.: The benchmark eclipsing binary V530 Ori: A critical test of magnetic evolution models for low-mass stars [C15]
- 12:15 Csépány: Examining young multiple stellar systems with lucky imaging and adaptive optics observations [C15]
- 12:30 14:00 Lunch
- 14:00 15:00 Artymowicz : Formation of binary stars and planets [I60]
- 15:00 16:00 Haghighipour: Formation and evolution of planets in and around binary stars systems [I60]
- 16:30 open Sightseeing of the castle

## Thursday, 11 September 2014

- 09:00 10:00 Prsa: Eclipsing binary light-curve modeling after the Kepler mission [I60]
- 10:00 Helminiak et al.: Multiples among detached eclipsing binaries from the ASAS catalogue [C15]
- 10:15 Andrade & Docobo: The dynamical evolution of the multiple stellar system alpha Gem [C15]
- 10:30 11:00 Coffee break
- 11:00 12:00 Orosz : Triple stars observed by the Kepler satellite mission [160]
- 12:00 Lohr: Exploring eclipsing binaries, triples and higher-order multiple star systems with the SuperWASP archive [C15]
- 12:15 Bakis et al.: Study of Eclipsing Binary and Multiple Systems in OB Associations III: A Review [C15]
- 12:30 14:00 Lunch
- 14:00 15:00 Hambleton et al.: Heartbeat Stars and the Ringing of Tidally Induced Pulsations [160]
- 15:00 Oláh & Rappaport : Detection of binary and multiple systems among rapidly rotating K and M dwarf stars from Kepler data [C15]
- 15:15 Papageorgiou & Christopoulou: Follow-up ground observations of interesting Kepler eclipsing binaries through Aristarchos eyes [C15]

- 15:30 Liakos & Niarchos: Binaries with a delta Sct component: Results from a long term observational survey, updated catalogue and future prospects [C15]
- 15:45 Ratajczak, Helminiak & Konacki: Studies of Long Period Eclipsing Binaries [C15]
- 16:00 16:30 Coffee break
- 16:30 17:30 Southworth: Observational studies of transiting planets [160]
- 18:00 Concert
- 20:00 Closing reception

#### Friday, 12 September 2014

- 09:00 10:00 Leconte: Internal structure of extrasolar planets and the link to their host star [160]
- 10:00 Zelinka: Investigation on Symbolic Regression in Be Stars Spectra Modeling [C15]
- 10:15 Skopal: On the diversity and similarity of outbursts of symbiotic binaries and cataclysmic variables [C15]
- 10:30 11:00 Coffee break
- 11:00 Gazeas: Contact Binaries Towards Merging [C15]
- 11:15 Zhu et al.: Extremely Short-Period Contact Binaries [C15]
- 11:30 Zola, Baran & Debski: Determination of limb darkening from a sample of contact binaries observed by the Kepler satellite the first results [C15]
- 11:45 Ogloza: An atlas of O-C diagrams [C15]
- 12:00 Christopoulou & Papageorgiou: A new look on the eclipse timing variation diagram analysis of selected 3-body W UMa systems [C15]
- 12:15 Golysheva et al.: Observation and light curve analysis of three eclipsing dwarf novae [C15]
- 12:30 13:30 Summary and the ending talks
- 13:30 14:45 Lunch

#### SOCIAL EVENTS

Sunday 7<sup>th</sup> – 19:00 The Welcome reception in the Museum of Litomyšl

Wednesday 10<sup>th</sup> – 16:30 Excursion: The Renaissance Castle

Thursday 11<sup>th</sup> – 18:00 Concert in the Church of the Finding of the Holy Cross

19:30 Closing reception

## OTHER EVENTS

From Friday September 12<sup>th</sup> to Sunday 14<sup>th</sup> there will be an annual national meeting organized by the Variable Star and Exoplanet Section of Czech Astronomical Society. Interested persons are welcome to participate in this meeting at the same place in Litomyšl. This small group of mainly amateur astronomers provide several services widely used by astronomers around the world like the Exoplanet Transit Database, O-C gateway, or the Open European Journal on Variable Stars.

Miloslav Zejda chairperson of LOC

Slavek Rucinski, Willie Torres chairpersons of SOC