- **Date sent:** 3 February 2020, 14:28
- **From:** Dmitry Bisikalo
- **To:** Division J Galaxies and Cosmology
- **Subject:** IAU Symposium 362 circular

Dear colleagues,

We are pleased to announce IAU Symposium 362, “The predictive power of computational astrophysics as a discovery tool”, which will be held in Chamonix, France, June 8-13 2020. Early registration will be closed on February 16th. Please register here,

Website: http://iaus362.astro.unistra.fr/IAUS362.html

Important Dates:
- Early registration deadline: February 16, 2020
- Abstract submission deadline: April 1, 2020
- Registration deadline: May 1, 2020

Scientific Rationale:
A new paradigm for scientific discovery through computational tools is rapidly pervading every aspect of research in astronomy. This Symposium aims to galvanize on-going developments in computational astrophysics by bringing together astronomers in different fields to share their knowledge and approaches to computational astrophysics.

Computational astrophysics combines modern computational methods, novel hardware designs, advanced algorithms, original software implementations and associated technologies to discover new phenomena, and to make predictions in astronomy. It is therefore important to trace out the contour of the meeting.

The Symposium will focus on computational methods applied to speed up and broaden the scope of scientific studies, such as finding trends from observational data, high performance computing, automated search algorithms, and model predictability. The meeting will bring together experts to discuss a palette of challenging informational and technical developments, including hardware and software but always focused on astronomical applications. Special attention will be given to numerical integration schemes and emergent behavior (e.g., Artificial Intelligence methods). These topics are rather novel for astronomy and will likely play a major role for handling large data sets and complex analysis pipelines.

Key topics and Invited speakers:
- Strong gravity: accretion disks, jets, BH- & NS-binaries, gravitational waves:
Rainer Weiss, Feng Yuan, Stephan Rosswog, Masaru Shibata

- Large-scale structure, galaxy formation & evolution:
Mark Vogelsberger, Annalisa Pillepich, Tom Abel, Kathryn Johnston

- Star formation and the interstellar medium:
Ralf Klessen, Volker Bromm, Patrick Hennebelle, Lisa Kewley

- Stellar evolution including supernova and common-envelope binaries:
Ana Ines Gomez de Castro, Thomas Janka, Corinne Charbonnel, Tomoya Takiwaki, Natasha Ivanova

- Solar and exoplanetary systems:
Alexander Kosovichev, Alessandro Morbidelli, Nick Pogorelov, Alain Lecavelier des Etang

- New computational tools and data mining:
Anthony Mezzacappa, Sergey Klimenko, Anthony Brown, Russ Taylor

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With best regards,
Dmitry Bisikalo
(on behalf of the SOC)