



Binary Stars in a New Era

24 -30 August 2025

First announcement 18 November 2024

Webpage: binarystars2025.casconf.cn



Binary stars lie at the heart of many key astrophysical phenomena. Various explosive cosmic events result from binary stars, as do close double black holes/neutron stars/white dwarfs, type Ia supernovae, X-ray binaries, millisecond pulsars etc. Relying on existing large scientific facilities, classical optical, radio and X-ray observations are discovering increasingly large numbers of such binary stars. A decade ago, the ground-based LIGO/Virgo detected the merging of two stellar-mass binary black holes, opening a new window in gravitational wave astronomy. In the future, with the support of next-generation astronomical instruments, we shall discover many more binary-related celestial objects. Against this backdrop, we convene this conference, inviting all international observers and theoreticians in the field of stellar science to participate in and exchange recent progress related to binary stars and to look forward to future collaboration and development of new directions for research.

Topics:

1. **Binary star interactions:** from mass transfer to common envelope evolution.
2. **Supernovae:** from progenitor modelling to explosion simulation.
3. **Gravitational wave sources:** from double black holes to white dwarfs.
4. **Exotic stars:** X-ray binaries, binary pulsars, luminous red novae, hot subdwarfs, cataclysmic variables, symbiotic stars, etc.
5. **Binary population synthesis** studies on binary objects.
6. **Observations from large facilities:** LAMOST, FAST, Gaia, TESS, JWST, etc.

Key Dates:

18 November 2024	Registration & Abstract submission opens
15 April 2025	Deadline for submitting the abstracts
15 May 2025	Announcement of the invited/contributed talk speakers
24-30 August 2025	Binary Stars Conference

Place:

Lijiang, China

Host Institute:

Yunnan Observatories, Chinese Academy of Sciences

Scientific Organizing Committee:

Floor Broekgaarden	Xuefei Chen	Hongwei Ge (Chair)
Zhanwen Han	Natalia Ivanova	Christopher A. Tout

Local Organizing Committee:

Hailiang Chen	Hongwei Ge	YanJun Guo	Shi Jia	Wenyan Ji (Secretary)
Dengkai Jiang	Jiangdan Li	Jiao Li	Zhenwei Li	Zhengwei Liu (Chair)
Xiangcun Meng	Bo Wang	Jianping Xiong	Lifu Zhang	

Invited Review Speakers:

Nadejda Blagorodnova	University of Barcelona	LRNe Observation
Orsola De Marco	Macquarie University	Post CE Binaries and PNe Observations
Tassos Fragos	Université de Genève	Binary Population Synthesis using POSYDON
Natalia Ivanova	University of Alberta	Modelling Light Curves of CEE
Robert Izzard	University of Surrey	Binary Population Synthesis using Binary_C
Xiangdong Li	Nanjing University	X-ray binaries
Ilya Mandel	Monash University	Binary Population Synthesis using COMPAS
Michela Mapelli	University of Padova	Black Hole Binaries and Gravitational Waves
Philipp Podsiadlowski	University of Oxford	SNe Theory
Hugues Sana	KU Leuven	Observation of Massive binary stars
Veronika Schaffenroth	TLS - Thuringian State Observatory	Observation of Hot subdwarfs
Xiaofeng Wang	Tsinghua University	SNe Observation

Registration fee:

Regular registration fee:	3000 CNY (approximately 400 USD)
Students or accompanying person:	1600 CNY (approximately 220 USD)
Accompanying children:	800 CNY (approximately 110 USD)

Preliminary Program (may adjust according to the registration):

Date	Morning	Afternoon
24 Aug 2025 Sunday	Check-in & Reception dinner	
25 Aug 2025 Monday	1-1 Binary star interactions	1-2 Common envelope evolution
26 Aug 2025 Tuesday	2 Supernovae	3 Gravitational wave sources
27 Aug 2025 Wednesday	4-1 Exotic stars	Free Discussion
28 Aug 2025 Thursday	4-2 Exotic stars	5-1 Binary population synthesis
29 Aug 2025 Friday	5-2 Binary population synthesis	6 Observations
30 Aug 2025 Saturday	Checkout	

You are warmly welcome to register on the homepage of the link binarystars2025.casconf.cn

Looking forward to meeting you in Lijiang

SOC of Binary Stars in a New Era, 18 Nov 2024