Ryosuke Hirai

Curriculum Vitae

Personal Information

Name	Ryosuke Hirai (平井 遼介)
Nationality	Japanese
Gender	Male
Date of Birth	12th August, 1989

Research Interests

2012– Binary stars and supernovae

2014– Common envelope evolution

2015– Efficient numerical schemes for difference equations

Education

2014–2017 **PhD in Astrophysics**, *Waseda University*, Advanced Research Institute of Science and Engineering.

2012–2014 **Master of Science**, *Waseda University*, Advanced Research Institute of Science and Engineering.

2008–2012 **Bachelor of Engineering**, *Waseda University*, School of Advanced Science and Engineering.

Positions

2017 **JSPS Research Fellow (PD)**, *at Advanced Research Institute of Science and Engineering*, Waseda University.

2016–2017 **JSPS Research Fellow (DC2)**, *at Advanced Research Institute of Science and Engineering*, Waseda University.

Grants

2016–2017 JSPS Research Fellow (DC2), Fellowship + Grant

2015 Research Grant for Young Scientists, Early Bird Program from Waseda Research Institute for Science and Engineering

Languages

Japanese **Mothertongue**

English **Intermediate** *Spent 8 years of childhood in England*

Publications

First Author

[5] **The Origin of the Possible Massive Black Hole in the Progenitor System of iPTF13bvn**
Ryosuke Hirai
Monthly Notices of the Royal Astronomical Society: Letters, Volume 469, Issue 1, p.L94-L98 (2017)

[4] **Formation Scenario of the Progenitor of iPTF13bvn Revisited**
Ryosuke Hirai
Monthly Notices of the Royal Astronomical Society, Volume 466, Issue 4, p.3775-3783 (2017)

[3] **Hyperbolic Self-Gravity Solver for Large Scale Hydrodynamical Simulations**
Ryosuke Hirai, Hiroki Nagakura, Hirotada Okawa, Kotaro Fujisawa
Physical Review D, Volume 93, Issue 8, article id.083006 (2016)

[2] **Possible Signatures of Ejecta-Companion Interaction in iPTF 13bvn**
Ryosuke Hirai, Shoichi Yamada
The Astrophysical Journal, Volume 805, Issue 2, article id. 170, 7 pp. (2015)

[1] **The Outcome of Supernovae in Massive Binaries; Removed Mass, and its Separation Dependence**
Ryosuke Hirai, Hidetomo Sawai, Shoichi Yamada
The Astrophysical Journal, Volume 792, Issue 1, article id. 66, 15 pp. (2014)

Co-Author

[1] **Formation pathway of Population III coalescing binary black holes through stable mass transfer**
Kohei Inayoshi, Ryosuke Hirai, Tomoya Kinugawa, Kenta Hotokezaka
Monthly Notices of the Royal Astronomical Society, Volume 468, Issue 4, p.5020-5032 (2017)