

Taeho Ryu

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CONTACT INFORMATION	Astrophysical & Planetary Sciences and JILA 391 UCB, Boulder, CO 80309, USA	<i>E-mail:</i> taeho.ryu@colorado.edu <i>Phone:</i> +1 3034920620 <i>Citizenship :</i> Korean citizen U.S. legal permanent resident
RESEARCH AREAS AND METHODS	Primary interests: time domain astronomy, multi-messenger transients, tidal disruption events, gravitational waves, formation of runaway/hypervelocity stars, supermassive black hole binaries, extreme/intermediate mass-ratio inspirals (EMRIs/IMRIs), formation and interaction of black holes in the early universe, active galactic nuclei, X-ray binaries, stellar cluster dynamics, gravitational lensing, exoplanets, binary mass transfer Methods: relativistic and Newtonian magnetohydrodynamics simulation, N -body simulations, stellar evolution simulation	
ACADEMIC APPOINTMENTS	The University of Colorado, Boulder, USA Assistant Professor	2025– present
	JILA, the University of Colorado, Boulder, USA Associate JILA fellow	2025– present
	The Max-Planck Institute for Astrophysics - MPA, Germany MPA prize fellow	2021– present
	Johns Hopkins University - JHU, USA Postdoctoral research fellow	2018 – 2021
	Korea Institute for Advanced Study - KIAS, South Korea Research assistant	2011 – 2012
EDUCATION	Stony Brook University - SBU, USA Ph.D., Physics, 2018 (Advisor: Prof. Rosalba Perna) M.A., Physics, 2014	2012 – 2018
	Seoul National University - SNU, South Korea B.S. in Chemistry & Physics (Double-major/Cum Laude) Teaching practicum in Chemistry ★2 years of mandatory military service	2005 – 2011
HONORS, AWARDS AND AFFILIATION	Junior Member of the International Astronomical Union	06/2022 - present
	Member of LISA consortium	11/2022 - 5/2025
	Member of the Korean Science-Engineering Association	09/2014 - present
	Dresden Prize (for outstanding theoretical thesis), SBU	05/2018
	Peter B. Kahn Fellowship , SBU	05/2016
	SNUANY Scholarship Award , SNU Alumni Association of Greater New York	11/2014
	SNUANY Scholarship Award , SNU Alumni Association of Greater New York	12/2013
	Benjamin Lee Award , SBU	05/2013

	SNU Outstanding Student award (Twice winner), SNU	2009 - 2010
	National Scholarship for Science & Engineering (Thrice winner)	2009 - 2010
	Scholarship for Superior Academic Performance (Five-time winner),SNU	2005 - 2007
GRANTS	German-Israel Foundation: (CoI) Mass transfer hydrodynamics in binary stars. Dates: Award Amount: €279,600	
SUPERCOMPUTING ALLOCATIONS	Principal Investigator: <i>HLRS</i> (Stuttgart tier 1), project name : <i>Global Relativistic Magneto-hydrodynamics Simulations of the Long-term Evolution of Tidal Debris in Tidal Disruption Events of Stars</i>, amount : 55M cpu hours on Hawk ★ annual report selected for presentation with publication in the proceedings of 2023 HLRS Review workshop. Principal Investigator (Co-PI: Volker Springel): <i>NHR@FAU</i> (tier 2), project name : <i>Transient formation in three-body encounters between stars and black holes</i>, amount : 3.6M cpu hours on Fritz Project Manager (PI: Selma de Mink): <i>NHR@FAU</i> (tier 2), project name : <i>3D hydrodynamics simulations of mass transfer in interacting binaries</i>, amount : 3.4M cpu hours on Fritz	
INVITED TALKS	IAU Symposium 398 & MODEST-25 , SNU, South Korea	6/2025
	X-ray Quasi-Periodic Eruptions & Repeating Nuclear Transients , ESA, Spain	6/2025
	Stable Mass Transfer workshop , Flatiron institute, USA	5/2025
	MIAPbP workshop - AGN , MIAPbP, Germany	3/2025
	CIERA colloquium , CIERA, USA	3/2025
	Astronomy seminar , Stony Brook University, USA	3/2025
	SCEECS Collaboration Meeting , Flatiron Institute, USA	3/2025
	GSSI Special Seminar , the Gran Sasso Science Institute, Italy	11/2024
	IMPRS Symposium , Germany	11/2024
	SCEECS Seminar , USA	11/2024
	GW/BH Seminar , University of Zurich, Switzerland	10/2024
	HEACOSS 2024 , Armenia	10/2024
	Tea Seminar , University of Heidelberg, Germany	7/2024
	Institute Seminar , MPA, Germany	7/2024
	Seventeenth Marcel Grossmann meeting , Italy	7/2024
	Department Colloquium , the University of Oklahoma, USA	3/2024
	Department Colloquium , the University of Colorado, Boulder, USA	2/2024
	Department Colloquium , the University of California, San Diego, USA	2/2024
	Department Colloquium , the Institute for Astronomy at the University at Hawaii, USA	2/2024
	Department Seminar , the Univeristy of the Balearic Islands, Spain	12/2023

Astronomy Seminar , the Univeristy of Nova Gorica, Slovenia	11/2023
Department Colloquium , Kyung Hee University, Korea	11/2023
Plasma Physics Seminar , Max Planck Institute for Plasma Physics, Germany	11/2023
Department Colloquium , SNU, Korea	10/2023
Colloquium , Korea Astronomy & Space Science Institute, Korea	10/2023
Lagrange Seminar , Lagrange Laboratoire, France	09/2023
Astronomy Seminar , Max-Planck Institute for Gravitational Physics(AEI), Germany	09/2023
Special Seminar , New York University, USA	09/2023
Astronomy Seminar , Columbia University, USA	09/2023
Astronomy Seminar , Stony Brook University, USA	09/2023
Special Seminar , Northwestern University(CIERA), USA	08/2023
MPA/Kavli Summer Program Seminar , MPA, Germany	06/2023
HUJI Astrophysics Seminar , HUJI, Isreal	03/2023
2022 MIAPP Conference “The Fundamental Role of Stellar Multiplicity in Stellar Dynamics and Evolution” , MIAPP, Germany	11/2022
Department Colloquium , University of Tübingen, Germany	07/2022
Black Hole Workshop , Niels Bohr Institute, Denmark	06/2022
MPA Seminar , MPA, Germany	10/2021
Astro UdeC Seminar , the Universidad de Concepción, Chile	04/2021
CTC Seminar , University of Maryland, USA	06/2019
Wine& Cheese Seminar , JHU, USA	04/2019
Department Seminar , SBU, USA	04/2018
Numerical Scattering Workshop , Flatiron Institute, USA	12/2017
Black Hole Network Workshop , Flatiron Institute, USA	12/2016
MODEST-16 NYC Gas and Gravitational Dynamics , USA	09/2016
Frontier Research in Astrophysics – II , Italy	05/2016
Astronomy Seminar , Columbia University, USA	05/2016

CONTRIBUTED
TALKS

MODEST24 , Nicolaus Copernicus Astronomical Center, Poland	08/2024
Korean Astronomical Society Fall Meeting , KAS, Korea	10/2023
Two in a Million , ESO, Germany	09/2023
MODEST23 , Northwestern University, USA	08/2023
European Astronomical Society Annual Meeting , Krakow, Poland	07/2023
The Black Holes and Gravitational Waves Munich Day , Germany	05/2023
Aspen Workshop “Extreme Black Holes” , USA	03/2023
WE Heraeus-EAS Early Career Researchers in Astr. Workshop , Germany	03/2023

	XMM-Newton Workshop 2022 , Spain	06/2022
	Growing Black Holes: Accretion and Mergers , Nepal	05/2022
	SESTAS Meeting , MPA	10/2021
	HotSci@JHU/STScI , STScI	08/2021
	European Astronomical Society Annual Meeting , Leiden	07/2021
	Tidal Disruptions in Kyoto: Confronting Theory with Observations , Kyoto University, Japan	01/2020
POSTERS	MODEST24 , Nicolaus Copernicus Astronomical Center, Poland	08/2024
	Distorted Astrophysical disks , University of Cambridge	05/2021
	The 7th Annual Johns Hopkins Postdoctoral Conference , JHU	04/2021
STUDENT SUPERVISION	Sophie McAllen (Undergraduate student)	2025-present
	Institute: University of Colorado, Boulder	
	Project: Simulating repeating tidal disruption events of giants as a possible mechanism for repeating nuclear transients	
	Method: Hydrodynamics modeling with Arepo	
	Valeria Saldana (Undergraduate student)	2025-present
	Institute: University of Colorado, Boulder	
	Project: Understanding the difference in the bound stellar mass around supermassive black holes, kicked due to gravitational wave emission or three-body interactions	
	Method: Analytic calculations and N -body simulations	
	Melissa Dow (Undergraduate student)	2025-present
	Institute: University of Colorado, Boulder	
	Project: Estimating the tidal disruption radius depending on the eccentricity of the initial stellar orbit	
	Method: Hydrodynamics modeling with Arepo	
	Christopher Krueger (Undergraduate student)	2025-present
	Institute: University of Colorado, Boulder	
	Project: Hydrodynamics simulations of tidal disruption encores, focusing on the dependence on the eccentricity of the stellar-mass black hole's orbit	
	Method: Hydrodynamics modeling with Arepo	
	Hayden Peter (Undergraduate student)	2025-present
	Institute: University of Colorado, Boulder	
	Project: Hydrodynamics simulations of high-velocity stellar collisions with different stellar evolutionary stages	
	Method: Hydrodynamics modeling with Arepo	
	Ian Johnson (Master's student, co-supervision with Prof. Rosalba Perna)	2024-present
	Institute: Stony Brook University, USA	

Project: Hydrodynamics simulations of tidal disruption encores
Method: Hydrodynamics modeling with Arepo

Elias Mamuzic (PhD student, co-supervision with Prof. Sherry Suyu) 2023-present

Institute: Technical University of Munich, Germany
Project: Gravitational Lensing of Tidal Disruption Events
Method: Monte-Carlo simulations for gravitational lensing with temperature- dependent luminosity models

Alonso Herrera (Master's student, co-supervision with Prof. Nathan Leigh) 2022-2024

Institute: Universidad de Concepción, Chile
Project: Identification of runaway stars using Gaia data
Method: Analytic estimates for ejection velocity, analysis of Gaia data

Magdalena Andrea Vilaxa Campos
(Master's student, co-supervision with Prof. Nathan Leigh) 2022-2023

Institute: Universidad de Concepción, Chile
Project: Stream penetration into mass accretor in Roche-lobe overflow in interacting binaries
Method: Analytic estimates and hydrodynamics simulations

Kaitlyn Szekerczes (a fulbright fellow → PhD student at Pennsylvania State University, co-supervision with Prof. Sherry Suyu) 2022-2023

Institute: Max-Planck Institute for Astrophysics, Germany
Project: Estimate of strongly-lensed tidal disruption event detection rate by LSST
Method: Monte-Carlo simulations for gravitational lensing

Pavan Vynatheya (PhD student → CITA Fellow, co-supervision with Dr. Rüdiger Pakmor, Prof. Selma de Mink) 2022-2024

Institute: Max-Planck Institute for Astrophysics, Germany
Project: Remnant properties of partially disrupted stars by stellar-mass black holes
Method: Stellar evolution and hydrodynamics simulations

CERTIFICATION Korean National Teacher Certification 2011

TEACHING **Lecturer**, MPA, Germany 08/2017
EXPERIENCE Delievered a lecture for hydrodynamics at the MPA/Kavli Summer Program

Lecturer, MPA, Germany 06/2017
Delievered lectures for hydrodynamics and led tutorial sessions at a one-day workshop for hydrodynamics simulations at MPA

Guest lecturer, AST200 Course by Prof. Jin Koda, SBU, USA 02/2017
Delivered a lecture for black holes to undergraduate students

Teaching Assistant, Department of Physics and Astronomy, SBU, USA 2012-2014
Prepared physics lab experiments and assisted students in conducting experiments

Teacher, Seoul National University Girls' Middle School, South Korea Spring 2011
Taught middle-school students chemistry as part of the teaching practicum course

	Teaching Assistant , Language Education Institute, SNU, South Korea Volunteer work to assist students who are hearing impaired in their coursework.	Spring 2011
	Lecturer , Central Library, SNU, South Korea Volunteer work to enhance librarians' grasp of basic scientific concepts in chemistry and physics	Spring 2009
	Lecturer , Hansung high school, South Korea Volunteer work to teach mathematics for high-school students	Spring 2009
PROFESSIONAL SERVICE	Referee for <i>Monthly Notices of the Royal Astronomical Society</i> , <i>The Astrophysical Journal</i> , <i>Publications of the Astronomical Society of the Pacific</i> NASA (2023), member of review panel IMPRS (2023), member of PhD application review panel NSF (2024), member of review panel NASA (2025), member of review panel	
PRESS RELEASE	Close Encounters of stars with the black hole binaries kind - Astrobites: Link	2/2023
	Supercomputer Simulations Test Star-destroying Black Holes - Making a movie in collaboration with NASA for the annual event "Black Hole Friday" - Official webpage: Link, Youtube: Link - ~0.3M views on YouTube in less than a week - Articles in public science media: Phys.org, Sciencealert.com, the Jerusalem Post, SciTechDaily and so on.	11/2021
	The NEW PHYSICS of Black Hole Star Capture — Extreme Tidal Disruption Events - PBS Space - ~0.35M views on YouTube (Link) in two weeks	11/2021
SCIENTIFIC OUTREACH EXPERIENCE	Open Day , MPA Preparation and execution of a session rocket launching and public lecture about black holes.	10/2024
	Girls' day , MPA Preparation and execution of one of the five sessions where a group of high-school female students complete a given scientific task.	04/2023 & 2024
	SEDS Celestia , BITS Pilani Invited public lecture about black holes and tidal disruption events	01/2023
	Member of the MPA Planetarium Team Present a planetarium show, public science lecture or talk to students visiting MPA	04/2022 - present
	The Johns Hopkins Korean Graduate Student Association , JHU Invited public talk for Networking night (annual event)	09/2019
LEADERSHIP EXPERIENCE	Organizer, weekly Multi-messengers/Transients meetings , CU Boulder	2025 – present

Weekly meetings on arXiv and discussions of projects on multi-messenger astronomy and transients, including LISA science, within the Astrophysical and Planetary Sciences Department at CU Boulder

Role: Scheduling meeting topics and speakers

Science Organizing Committee member of IAU Symposium 402 Ensenada, Mexico 9/2025

- IAUS Symposium titled “Massive stars across redshifts in the era of JWST and large surveys” on massive star evolution and compact object binary formation

- Role: Coordinating scientific agendas and reviewing talk abstracts

Local Organizer of LISA AstroWG meeting, MPA

11/2024

more than 100 participants

Role: Local organizer and social media coordinator

Organizer of AREPO tutorial workshop, MPA

06/2023

Role: Organize and conduct 1-day AREPO tutorial workshop (20 participants) for stellar astrophysics application of AREPO, consisting of lectures for the introduction to hydrodynamics simulations and exercise

Seminar organizer, the Stellar Department at MPA

09/2021 - 09/2022

Role: invite speakers (typically two speakers for each week), schedule seminars and chair the sessions for talks and discussions (along with two other organizers)

Department of Chemistry, SNU, South Korea

2005 - 2006

Department Activities Representative and Organizer

(Student competitions, membership training, freshmen welcoming, etcetera)

SNU Campus Life and Culture Center, SNU, South Korea

2010 - 2011

Mentor-team Manager in SNU Compliance/Mentoring Program

Elected Leader (20 members, My team chosen Best Team of the Year)

COMPUTATIONAL EXPERIENCE

Computing Skills: Fortran, C/C++, Python

Code: code-testing of multi-domain infrastructure PATCHWORKMHD, usage of GRMHD code HARM3D, Moving-mesh magnetohydrodynamics code AREPO (<https://arepo-code.org/>), Newtonian AMR hydrodynamics code CASTRO (<https://amrex-astro.github.io/Castro/>)

Analysis: Python, Matplotlib, Paraview, Mathematica

High Performance computing: USA (Frontera, Stampede, Rockfish, Seawulf), Germany (Hawk hls, SuperMUC Leibniz, Cobra, Raven, Freya)

NON-SCIENTIFIC OUTREACH EXPERIENCE

SNU Obstacle Person Support Center, SNU

Spring 2009

Assistant to a hearing-impaired student, and provider of study aid

Kyujanggak Institute for Korean Studies, SNU

Spring 2011

Docent

Program: Improving public understanding of Documentary Heritage of Chosun Dynasty

Museum of Art, SNU

Spring 2011

Docent

Program: Improving public understanding of interactive media art in the Garden of Forking Paths

MILITARY SERVICE **Military Required Service**, South Korea

2007 – 2009

Honorably Discharged as a Sergeant

Served inter alia in Food/Water Inspectorate (Laboratory) plus assist. mgmt.

References

Professor Rosalba Perna (Associate Department Chair)
Department of Physics and Astronomy, Stony Brook University
Stony Brook, NY 11794-3800, USA
Telephone: +1 (631) 632 1550
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Professor Selma de Mink (Scientific Director)
The Max Planck Institute for Astrophysics
Karl-Schwarzschild-Str. 1, 85748, Garching, Germany
Telephone: +49 89 30000 - 2201
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TUM School of Natural Sciences, Department of Physics
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548 West 120th Street, Pupin Hall, Room 3128, New York, NY 10027
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Professor Tsvi Piran (Schwartzman Chair for Theoretical Physics)
Racah Institute for Physics, The Hebrew University of Jerusalem
Edmond J. Safra Campus, Jerusalem 9190401, Israel
Telephone: +972 26584233
Email: tsvi.piran@mail.huji.ac.il

Publications

ads link: <https://ui.adsabs.harvard.edu/user/libraries/mbdD-GljSZ-nQ6a7LbzzQw>

Books

57. **Ryu, T.**, Wever, T., *Tidal Disruption Events*, To appear in Chapter 5 in the review book *Black Holes in the Era of Gravitational Wave Astronomy*, ed. Arca Sedda, Bortolas, Spera, pub. Elsevier, arXiv: 2310.16879
56. Wang, C., **Ryu, T.**, *Blue Straggler Stars*, To appear in a chapter for *the Encyclopedia of Astrophysics*, ed. I. Mandel, F.R.N. Schneider, pub. Elsevier (2024), arXiv: 2410.10314

Submitted and Published Articles

55. Olejak, A., Klencki, J., Vigna-Gomez, A., de Mink, S. E., van Son, L., Stegmann, J. **Ryu, T.**, Hendriks, D. D., *Widening of Binaries via Non-conservative Mass Transfer as a Formation Channel for Gaia Black Hole System*, submitted to ApJ (2025), arXiv:2511.10728
54. Johnson, I. P.A, **Ryu, T.**, Perna, R., Hydrodynamic Simulations of Tidal Disruption Encores, submitted to Physics Review D (2025), arXiv:2510.23729
53. Hassan, J., Perna, R., Cantiello, M., Armitage, P., Begelman, M., **Ryu, T.**, *The Growth of the Central Black Holes in Quasi-stars*, submitted to ApJ (2025), arXiv:2510.18301
52. Ma, J. -Z., Justham, S., Pakmor, R., Chiavassa, A., **Ryu, T.**, de Mink, S., *AREPO-RSG: Aspherical Circumstellar Material and Winds from Pulsating Dusty Red Supergiants in Global 3D Radiation Hydrodynamics Simulations*, submitted to ApJ (2025), arXiv:2510.14875
51. Vynatheya, P., **Ryu, T.**, Wang, C., Sills, A., Pakmor, R., *The Collision and Merger Products of Stars do not Look Alike: A Magnetohydrodynamics Comparison*, submitted to ApJ (2025), arXiv:2510.13736
50. **Ryu, T.**, Sari, R., de Mink, S. E., David, O., Valli, R., Ma, J. -Z., Justham, S., Pakmor, R., Ritter, H., *Binary Mass Transfer in 3D – Mass Transfer Rate and Morphology* A&A 702, 61 (2025), arXiv:2505.18255
49. Baldini, P., Rau, A., Arcodia, R., **Ryu, T.**, Liu, Z., Sánchez-Sáez, P., Grotova, I., Merloni, A., Ciroi, S., Goodwin, A. J., Gromadzki, M., Kawka, A., Masterson, M., Tubín-Arenas, D., Buckley, D. A. H., Di Mille, F., Anderson, G. E., Bahic, S., Homan, D., Krumpe, M., Miller-Jones, J. C. A., Nandra, K., *A new Bowen fluorescence flare and extreme coronal line emitter discovered by SRG/eROSITA*, A&A 701, 24 (2025), arXiv:2507.05342
48. Mamuzic, E. **Ryu, T.**, Suyu, S. H., Szekerczes, K., Huber, S., Dai, L., Oguri, M., *Rates of Strongly Lensed Tidal Disruption Events*, submitted to A&A (2025), arXiv:2502.19495
47. Olejak, A., Stegmann, J., de Mink, S. E., Valli, R., Sari, R., Justham, S., **Ryu, T.**, *Super-massive Black Holes Stripping a Subgiant Star Down to Its Helium Core: A New Type of Multimessenger Source for LISA* ApJL, 987, 10 (2025) arXiv:2503.21995

46. **Ryu, T.**, Dessart, L. *Light curves and spectra for stellar collisions between main-sequence stars in galactic nuclei*, accepted for publication in A&A (2025) arXiv:2502.05265
45. Krolik, J., Piran, T., **Ryu, T.**, *Follow the Mass - A Concordance Picture of Tidal Disruption Events*, accepted for publication in ApJ (2025), arXiv: 2409.02894
44. Herrera-Urquieta, A., Leigh, N., Pinto, J., Díaz-Cerda, G., Grondin, S. Webb, J., Mathieu, R., **Ryu, T.**, Geller, A., Kounkel, M., Toonen, S., Vilaxa-Campos, M., *Systematic method to identify runaways from star clusters produced from single-binary interactions: A case study of M67*, A&A 697, 14 (2025), arXiv:2504.06252
43. **Ryu, T.**, Sills, A., Pakmor, R., de Mink, S., Mathieu, R., *Magnetic Field Amplification during Stellar Collisions between Low-Mass Stars*, ApJL, 980,38 (2025), arXiv:2410.00148
★ Selected as the research highlight of the month in April 2025 by the Max Planck Insitute for Astrophysics (link)
42. Wang, Y., Graham, M.J., McKernan, B., Ford, K.E.S., **Ryu, T.**, Stern, D., *Conditions for Changing-Look AGNs from Accretion Disk-Induced Tidal Disruption Events*, submitted to ApJ (2024), arXiv: 2406.12096
41. Giustini, M. Miniutti, G., Arcodia, R., Goodwin, A., Alexander, K., Chakraborty, J., Buchner, J., Kosec, P., Saxton, R., Bonetti, M., Franchini, A., **Ryu, R.**, Shu, W., Kara, E., Ponti, G., Quintin, E., Vincentelli, F., Webb, N., Kajava, J., von Fellenberg, S., *Fragments of harmony amid apparent chaos: A closer look at the X-ray quasi-periodic eruptions of the galaxy RX J1301.9+2747*, A&A 692, 15 (2024), arXiv:2409.01938
40. Broggi, L., Stone, N., **Ryu, T.**, Bortolas, E., Dotti, M., Bonetti, M., Sesana, A., *Repeating partial disruptions and two-body relaxation*, OJAp 7, 48 (2024), arXiv: 2404.05786
39. Vynatheya, P., **Ryu, T.**, Pakmor, R., de Mink, S., Perets, H., *Simulating the Tidal Disruption of Stars by Stellar-mass Black Holes Using Moving-mesh Hydrodynamics*, A&A 685, 45 (2024), arXiv: 2310.14852
38. **Ryu, T.**, Perna, R., Cantiello, M., *Tidal Disruption Encores*, ApJ 965, 25 (2024), arXiv: 2402.15990
37. Lazzati, D., Perna, R., **Ryu, T.**, *Ephemeral Flaring Transients Following Supernova Explosions in Black-Hole Binary Systems*, ApJL, 972, 17 (2024), arXiv:2403.18911
36. **Ryu, T.**, Amaro Seoane, P., Taylor, A., Ohlmann, S., *Collisions of Red Giants in Galactic Nuclei*, MNRAS 528, 6193 (2024), arXiv: 2307.07338
★ Selected as the research highlight of the month in November 2023 by the Max Planck Insitute for Astrophysics (link)
35. Liu, Z., **Ryu, T.**, Goodwin, A., Rau, A., Homan, D., Krumpe, M., Merloni, A., Grotova, I., Anderson, G., Malyali, A., Miller-Jones, J., *Rapid evolution of the recurrence time in the repeating partial tidal disruption event eRASSt J045650.3-203750*, A&A 683, 13 (2024), arXiv:2401.14091

34. Szekerczes, K., **Ryu, T.**, Suyu, S. H., Huber, S., Oguri, M., Dai, L. *Strong lensing of tidal disruption events: Detection rates in imaging surveys*, accepted for publication in A&A (2024), arXiv:2402.03443
33. Xin, C., H. Haiman, Z., Perna, R., Wang, Y., **Ryu, T.** *Tidal Peeling Events: Low-eccentricity Tidal Disruption of a Star by a Stellar-mass Black Hole*, ApJ 961, 149 (2024), arXiv: 2303.12846
32. Dessart, L., **Ryu, T.**, Amaro Seoane, P., Taylor, A., *Light curves and spectra for theoretical models of high-velocity red-giant star collisions*, A&A 682, 58 (2024), arXiv: 2310.07036
31. Avara, M., Krolik, J., Campanelli, M., Noble, S., Bowen, D., **Ryu, T.**, *Accretion onto a Supermassive Black Hole Binary Before Merger*, ApJ 974, 242 (2024), arXiv:2305.18538
30. **Ryu, T.**, McKernan, B., Ford, K.E.S., Cantiello, M., Graham, M.J., Stern, D, Leigh, N.W.C. *In-plane Tidal Disruption of Stars in Disks of Active Galactic Nuclei*, MNRAS 527, 8103 (2024), arXiv: 2310.00610
29. **Ryu, T.**, de Mink, S., Farmer, R., Pakmor, R., Perna, R., Springel, V., *Close Encounters of Star-black Hole Binaries with Single Stars*, MNRAS 527, 2734 (2024), arXiv:2307.03097
28. Bellinger, E., Caplan, M., **Ryu, T.**, Bollimpalli, D., Ball, W., Kühnel, F., Farmer, R., de Mink, S., Christensen-Dalsgaard, J, *Solar evolution models with a central black hole*, ApJ 959, 113 (2023), arXiv:2312.06782
27. **Ryu, T.**, Krolik, J., Piran, T., Noble, S., Avara, M., *Shocks Power Tidal Disruption Events*, 957, 12 ApJ (2023), arXiv:2305.05333
26. **Ryu, T.**, Valli, R., Pakmor, R., Perna, R., de Mink, S., Springel, V., *Close Encounters of Black Hole-star Binaries with Stellar-mass Black Holes*, MNRAS 525, 5752 (2023), arXiv:2304.01792
25. Franchini, A., Bonetti, M., Lupi A., Miniutti, G., Bortolas, E., Giustini, M. , Dotti., M., Sesana, A., Arcodia, R., **Ryu, T.** *QPEs from Impacts between the Secondary and a Rigidly Precessing Accretion Disc in an EMRI System*, A&A 675, 100 (2023), arXiv: 2304.00775
24. Bortolas, E. , **Ryu, T.**, Broggi, L., Sesana, A. *Partial Stellar Tidal Disruption Events and Their Rates*, MNRAS 524, 3026 (2023), arXiv: 2211.02734
23. **Ryu, T.**, Perna, R., Parkmor, R., Ma, J., Farmer, R., de Mink, S. *Close Encounters of Tight Binary Stars with Stellar-mass Black Holes*, MNRAS 519, 5787 (2023), arXiv: 2211.02734
22. **Ryu, T.**, Krolik, J., Piran, T. *Extremely Relativistic Tidal Disruption Events*, ApJL 946, 33 (2023), arXiv: 2211.00059
21. **Ryu, T.**, Perna, R., Wang, Y. *Close Encounters of Stars with Stellar-mass Black Hole Binaries*, MNRAS 516, 2204 (2022), arXiv: 2206.00603
20. **Ryu, T.**, Trani, A. A. , Leigh, N.W.C. *Tidal Disruption Events by Compact Supermassive Black Hole Binaries*, MNRAS 515, 2430 (2022), arXiv: 2202.07668

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18. **Ryu, T.**, Krolik, J., Piran, T. *The Impact of Shocks on the Vertical Structure of Eccentric Disks*, ApJ 920.2, 130 (2021), arXiv: 2105.09434
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