




EDUCATION

SEP 2025	<b>PhD student in Astrophysics, University of Padua</b>	Expected defence: Dec 2025
OCT 2022	Thesis: <i>Binary compact object populations</i> Supervisor: Prof. Michela Mapelli; Co-Supervisor: Prof. Giuliano Iorio	
SEP 2022	<b>Master in Astrophysics and Cosmology, University of Padua</b>	110/110 cum laude
OCT 2020	Thesis: <i>Wolf-Rayet – black hole binaries as progenitors of binary black holes</i> Supervisor: Prof. Michela Mapelli; Co-Supervisor: Prof. Giuliano Iorio	
SEP 2020	<b>Bachelor in Astronomy, University of Padua</b>	110/110 cum laude
OCT 2017	Thesis: <i>Impact of mass transfer efficiency on the formation of binary compact objects</i> Supervisor: Prof. Michela Mapelli; Co-Supervisor: Prof. Giuliano Iorio	

VISITING RESEARCHER

ONGOING	<b>University of Heidelberg - Institute for Theoretical Astrophysics (ITA-ZAH)</b>	
MAR 2024	Host: Prof. Michela Mapelli	

PRIZES AND GRANTS

2024	<b>Fondazione Gini Scholarship by the Fondazione Aldo Gini</b> ‣ 4600 € scholarship to support a 6 months STEM research project in Heidelberg.	 <a href="#">Website</a>
2023	<b>Geppina Coppola Prize by the Geppina Coppola Association, INAF-OACN</b> ‣ 1500 € prize for best master thesis in astronomy in Italy (~ 2.5% success rate). 2 invited talks.	 <a href="#">Website</a>
2020	<b>Mille e una lode by the University of Padua</b> ‣ 1000 € scholarship awarded to the $\leq 3\%$ of students with the highest average grade in my bachelor.	 <a href="#">Website</a>

CONFERENCES & TALKS

PANELIST	<b>Gravitational Wave Snowballs (Workshop) - Sexten Center for Astrophysics, Sexten</b>	Jan 2025
INVITED	<b>IGR Student Seminar - Institute for Gravitational Research, Glasgow (online)</b>	Jun 2025
	<b>Heraeus Summer School - Friedrich Schiller Universität Jena, Jena</b>	Sep 2024
	<b>Astromeeeting INAF-OACN (“Geppina Coppola” prize) - INAF - OACN, Naples</b>	Nov 2023
	<b>Spring Workshop on Physics of Data - AI Society - University of Padua, Venice</b>	Apr 2023
CONTRIB.	<b>EAS 2025 (2 talks) - University College, Cork</b>	Jun 2025
	<b>Stars II: current challenges, upcoming solutions - CNR Research Area, Bologna</b>	Jun 2025
	<b>XV Einstein Telescope Symposium - CNR Research Area, Bologna (online)</b>	May 2025
	<b>Galaxy Coffee - Max Planck Institute for Astronomy, Heidelberg</b>	Mar 2025
	<b>National Congress on Compact Objects (CNOC XIII) - INAF-OAC, Alghero</b>	Sep 2024
	<b>1st TEONGRAV workshop - Sapienza University of Rome, Rome</b>	Sep 2024
	<b>41st LIAC: The eventful life of massive star multiples - Université De Liège, Liège</b>	Jul 2024
	<b>The Renaissance of Stellar Black-Hole Detections - Lorentz Center, Leiden</b>	Jun 2023

POSTERS	<b>59th Rencontres de Moriond - Gravitation</b> - <i>Rencontres de Moriond</i> , La Thuile <b>360° Approach to Common Envelope Evolution</b> - <i>ICCUB</i> , Barcelona (online) <b>Post-PAX meeting</b> - <i>Harvard-Smithsonian Center for Astrophysics</i> , Boston (online)	Apr 2025 Jun 2024 Aug 2022
ATTENDED	<b>First ACME workshop</b> - <i>ACME Center</i> , Toulouse (online) <b>EAS 2024</b> - <i>Padova Congress</i> , Padua <b>Machine Learning 4 Astrophysics (Workshop)</b> - <i>Studio Villa Bosch</i> , Heidelberg <b>Spring Workshop on Physics of Data</b> - <i>AI Society</i> - <i>University of Padua</i> , Venice	Apr 2025 Jul 2024 Jun 2024 Apr 2022

## PUBLICATIONS

FIRST-AUTH.	<b>Wolf-Rayet – compact object binaries as progenitors of binary compact objects</b> <b>E. Korb</b> , M. Mapelli, G. Iorio, G. Costa, M. Dall’Amico Mar 2025 - <i>A&amp;A</i> , 695, A199  <a href="https://doi.org/10.1051/0004-6361/202452585">doi.org/10.1051/0004-6361/202452585</a>
CO-AUTHOR	<b>Impact of accretion-induced chemically homogeneous evolution on stellar and compact binary populations</b> M. Dall’Amico et al. (incl. <b>E. Korb</b> ) Mar 2025 - <i>A&amp;A</i> , 695, A221  <a href="https://doi.org/10.1051/0004-6361/202453543">doi.org/10.1051/0004-6361/202453543</a>  <b>The boring history of Gaia BH3 from isolated binary evolution</b> G. Iorio et al. (incl. <b>E. Korb</b> ) Oct 2024 - <i>A&amp;A</i> 690, A144  <a href="https://doi.org/10.1051/0004-6361/202450531">doi.org/10.1051/0004-6361/202450531</a>  <b>Compact object mergers: exploring uncertainties from stellar and binary evolution with SEVN</b> G. Iorio et al. (incl. <b>E. Korb</b> ) Sep 2023 - <i>MNRAS</i> 524, 426  <a href="https://doi.org/10.1093/mnras/stad1630">doi.org/10.1093/mnras/stad1630</a>
PROCEEDING	<b>Compact objects with Wolf-Rayet companions: a key binary configuration to produce gravitational wave mergers</b> <b>E. Korb</b> Dec 2024 - <i>Bulletin de la Société Royale des Sciences</i> , 93, 3, 363-373  <a href="https://doi.org/10.25518/0037-9565.12414">doi.org/10.25518/0037-9565.12414</a>
ET COLLAB.	<b>The Science of the Einstein Telescope (ET blue book)</b> Einstein Telescope collaboration (incl. <b>E. Korb</b> ) Mar 2025 - <i>Non refereed</i>  <a href="https://arxiv.org/abs/503.12263">arxiv.org/abs/503.12263</a>
LISA UCB	<b>BinCodex. LISA BPS Common Output Format v. 1.1.0</b> R. Valli, L. Graziani, and the LISA Synthetic UCB Catalogue Group (incl. <b>E. Korb</b> ) Apr 2024 - <i>Non refereed</i>  <a href="https://arxiv.org/abs/2311.03431">arxiv.org/abs/2311.03431</a>

## SOFTWARE SKILLS

ADVANCED	Python ( <i>Numpy, Matplotlib, Seaborn, Plotly, Pandas, Dask, Polars, Scipy, Sklearn, Pytorch, Keras, TensorFlow, Emcee, RegEx, Streamlit, Altair</i> ; Jupyter, IDLE), $\LaTeX$ (TeXstudio, Overleaf), Slurm (Queue scheduler for HPC), Conda, Git, Linux, Windows, SEVN (Population-synthesis code), MESA (Stellar evolution)
INTERM.	C++, Fortran90, Markdown, Bash, Stellarium (scripting plugins for outreach), Inkscape/GIMP (Graphics)
BASIC	SIMBAD, NED, ALADIN, SAOImage DS9, TOPCAT, JAGS (Gibbs sampler), Olive (video editing)

## MENTORING EXPERIENCE

MASTER	<b>Juan Manuel Pacheco Arias</b> - <i>Hydrodynamical simulations of massive stars collisions</i>	2023
BACHELOR	<b>Alberto Casellato</b> - <i>Study on the effect of mass transfer stability on binary black hole properties</i>	2024

## TEACHING EXPERIENCE

TEACHING ASSISTANT	<b>Laboratory of Computational Physics (Mod B.)</b> <i>University of Padua, Master in Physics of Data</i> (Prof. Giuliano Iorio)	Apr - Jun 2024 Apr - Jun 2023
MAIN TEACHER	<b>The sky as a laboratory (astronomy course - outreach project)</b> <i>High School "Benedetti-Tommaseo", Venice</i>	Oct 2023 - Feb 2024

## OUTREACH

PHYSICS MUSEUM	<b>Museum guide</b> , Physics museum "Giovanni Poleni", Padua ‣ Guide at the physics museum of historical (18-19-20th century) scientific instruments. <b>Project "Science from the Islamic world to today's Europe"</b> ‣ Communicating scientific researches and teaching practices brought from the Islamic world.	Oct 2023 - Ongoing Nov 2022 - Jun 2023
FESTIVAL ACTIVITIES	<b>Activity designer and facilitator for multisensorial astronomical festivals</b> , Castellaro Lagusello ‣ Light pollution activity (ongoing) ‣ Astrolabe activity: <a href="https://play.inaf.it/caccia-al-ladro-fra-le-stelle/">https://play.inaf.it/caccia-al-ladro-fra-le-stelle/</a> <b>Facilitator at European Researcher's Night - Science4All</b> , Padua ‣ Facilitator in the hand-on activity "Cartoline Stellari", to introduce kids to constellations. <b>Activity designer and facilitator for the "Girl's Day"</b> , Heidelberg ‣ Gravitational wave-themed activity for the Girl's Day event in Heidelberg. <b>Facilitator with amateur astronomers</b> , Padua ‣ Telescope observations for a partial lunar eclipse event.	Jan - Jun 2025 Feb - Jun 2024 Sep 2024 2024, 2025 Jul 2019
LECTURE COURSES	<b>Main teacher of the course "The sky as a laboratory"</b> , Venice ‣ University-orientation course in scientific subjects to high school students, with final exam. <b>Lecture on "Science and mythology of constellations"</b> , Venice ‣ Linking constellation's mythology and astronomical phenomena with an ad-hoc scripted <i>Stellarium</i> plugin.	Oct 2023 - Feb 2024 Mar 2023
PUBLIC TALKS	<b>Research activity presentations to the general public</b> ‣ To the amateur astronomers of Treviso (Italy) ‣ For the "Geppina Coppola" prize at INAF-OACN, Naples ‣ For the European Researcher's Night - Science4All in Padua	Jan 2025 Nov 2023 Sep 2023

## SCHOOLS

OTT 2024	<b>MWGaiaDN School: Frontiers of Stellar Evolution, INAF-OAPD (online)</b> ‣ Gaia catalogue, galactic surveys, population synthesis tools for stars (e.g. Trilegal code)	<a href="#">Website</a>
JULY 2024	<b>Astrostatistics Summer School, University of Crete, Heraklion</b> ‣ Machine and Deep Learning, Simulation Based Inference, MCMC, Optimization (Python)	<a href="#">Website</a>
AUG 2023	<b>MESA Summer School 2023, Konkoly Observatory, Budapest</b> ‣ MESA stellar evolution software. Binary and asteroseismology tutorials.	<a href="#">Website</a>
OCT 2022	<b>3<sup>rd</sup> Astrostatistics School, INAF Brera, Milan</b> ‣ Bayesian statistics applied to the astrophysical context (JAGS software)	<a href="#">Website</a>

## MEMBERSHIPS & COLLABORATIONS

2024 - NOW	<b>University of Heidelberg</b> - Institute for Theoretical Astrophysics (ITA-ZAH)	<a href="#">Website</a>
2022 - NOW	<b>LISA Synthetic UCB Catalogue Group</b> - Contributor for SEVN catalogues	<a href="#">Website</a>
2022 - NOW	<b>LISA</b> - Associate member of the Laser Interferometer Space Antenna consortium	<a href="#">Website</a>
2022 - NOW	<b>ET</b> - Member of the Einstein Telescope collaboration	<a href="#">Website</a>
2022 - NOW	<b>TEONGRAV</b> - Member of the Theory of Gravitational Wave Sources collaboration	<a href="#">Website</a>
2022 - NOW	<b>INFN</b> - Affiliated to the Italian Institution for Nuclear Physics; Section of Padua	<a href="#">Website</a>
2020 - NOW	<b>DEMOBLACK</b> - Member of the ERC-funded research group led by Michela Mapelli	<a href="#">Website</a>