Tristan Bruel

tristan.bruel@oca.eu

Observatoire de la CÔTE d'AZUR

Membre de UNIVERSITÉ CÔTE D'AZUR

- Intern with Marie-Anne Bizouard (Observatoire de la Côte d'Azur, Nice, France)

  GW signals from core-collapse supernovae

- Next year PhD with Astrid Lamberts (Observatoire de la Côte d'Azur, Nice, France)

  Black hole mergers: connecting stellar physics and global star formation

- *Research interests* : Compact objects, binary systems, GW signals

- *Skills* : Numerical simulations and data analysis (Python, R)

- *Hobbies* : competitive sport, classical music, gardening

Margaux ABELLO

Paris Observatory – PSL (France) – margaux.abello@obspm.fr

Collaborators: M. Barsuglia, S. Babak, S. Mastrogiovanni

Spoken languages:


© LIGO

"I was in love at first sight with GWs since the announcement of their first detection in 2015. I can't wait to learn more with the lectures and discussions about our experience during this summer school"

• • •

Research interests: Black hole formation/populations, compact objects properties, stellar and galaxy evolution, cosmology with gravitational waves and radio interferometry (LOFAR and EHT).

Skills: Standard sirens based on the techniques of Bayesian analysis and Monte Carlo Markov chains, image processing on radio surveys, component separation methods (ILC, MILCA), coding (Python, Fortran 90), popular science articles/talks, teaching.


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Carlton-James (CJ) Umunna Osakwe

Supervisor: Dr. Rachid Ouyed

Email: cuosakwe@ucalgary.ca

Other collaborators: Jan Staff, Prashanth Jaikumar, Nico Koning

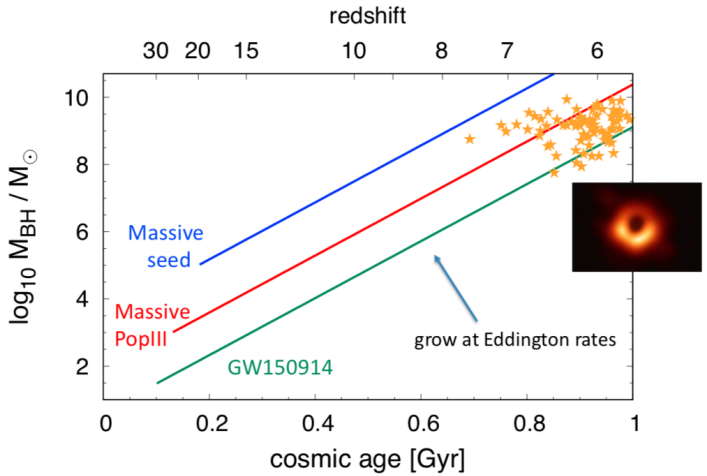
Research interests: cosmology, gravitational wave signatures, compact objects, nuclear astrophysics (e.g., r-process nucleosynthesis)

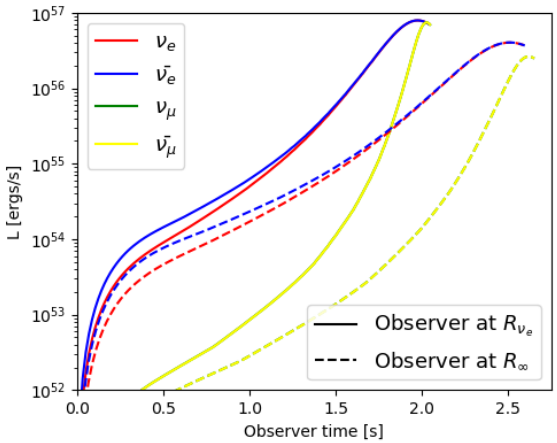
Skills: Python, some Java and HTML, Veusz graphing software

- Stefan Strub, ETH Zurich
- Would love to stay in contact: stefan.strub@ethz.ch
- Research Interest: Gravitational Wave Data Analysis, LISA, Machine Learning, Bayesian Theory
- Skills: Artificial Intelligence, Data Science, Pytorch, Sklearn, Chinese
- Studied Physics, Lived in Taiwan

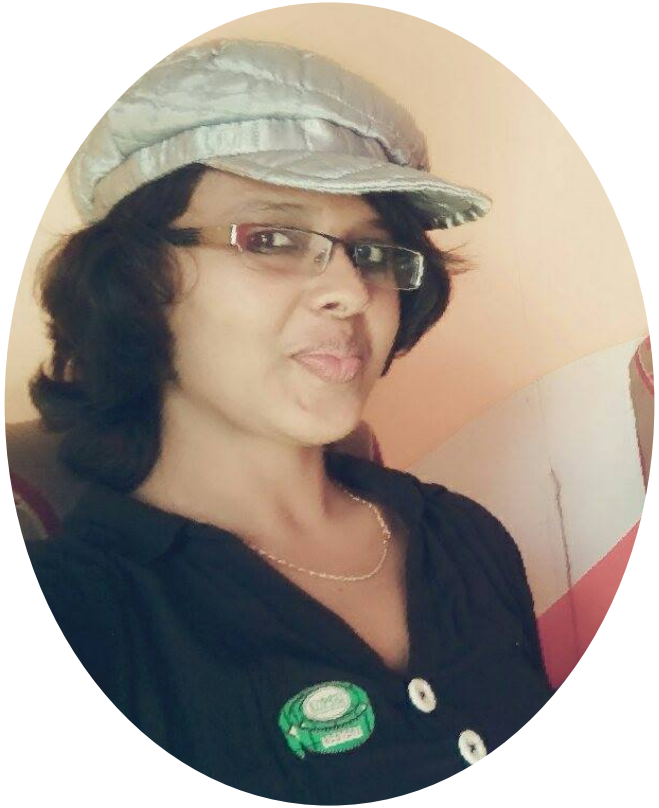
Chris Nagele

- Contact: chrisnagele.astro@gmail.com, nagele@g.ecc.u-tokyo.ac.jp
- Collaborators: Hideyuki Umeda, Tilman Hartwig (UTokyo), Takashi Yoshida (Kyoto), Kohsuke Sumiyosh (Numazu), Koh Takahash (Max Planck)
- Research interests: First stars, Supermassive black hole formation, Massive binary black hole formation
- Skills: Pop III stellar evolution, General relativistic hydrodynamics, Relativistic neutrino transfer





Abinaya Swaruba Rajamuthukumar



Affiliation: PhD student, Max Planck institute for Astrophysics, Germany

Advisor : Dr. Adrian Hamers

Research Interests :

- Evolution and dymanics of progenitors of gravitational wave events
- Progenitors of elctromagnetic transient events like Type Ia Supernovae
- Binary white dwarfs, binary neutron stars and binary blackholes

NADIIA DIACHENKO

Taras Shevchenko National University of Kyiv, Ukraine

Master Student at Astronomy and Space Physics Department

e-mail: nadya.dyachenko@gmail.com

Research interests:

- Cosmology
- Gravitational waves
- High energy Astrophysics
- String theory

Skills:

Technical Proficiencies

- Python, C++, IDL, Qt
- Machine Learning

Languages

- English, German

Other

- Playing the piano

Collaborators:

B.Hnatyk, Kyiv Astronomical Observatory

A.Elyiv, I.Vavilova, Main Astronomical Observatory of NAS of Ukraine

Rohit Subbarayan Chandramouli

Email: rsc4@illinois.edu
Ph No: +14065398606

Collaborator/Advisor: Nicolas Yunes
Collaborator's Email: nyunes@illinois.edu

Research Interests:

I am broadly interested in the field of Gravitational Wave Physics and Relativistic Astrophysics. I am focused on modeling gravitational waves from compact binaries with effects of the astrophysical environment (such as a third body) included. I am also interested in doing gravitational wave data analysis from such models.

Programming/Software Skills:

- Proficiency in Mathematica, Python
- Familiarity with C,C++
- Comfortable with Linux, MacOS, Windows

Other Information:

Personal Website: https://www.rohitsc.com/
Social Media: Twitter, LinkedIn, ResearchGate

Yi Shuen (Christine) Lee

1st Year PhD candidate
School of Physics, The University of Melbourne

ylee9@student.unimelb.edu.au

PhD Advisors:
Prof. Andrew Melatos, Dr. Margaret Millhouse
(UniMelb, OzGrav)

Research Interests/Skills:
Gravitational Wave data analysis (BayesWave)
Unmodelled Burst Searches (Supernova)
Opinion Dynamics (Complex Systems, Graph Theory)
Pulsar Timing

Recent Publication (February 2021):

PHYSICAL REVIEW D **103,** 062002 (2021)

Enhancing the gravitational-wave burst detection confidence in expanded detector networks with the BayesWave pipeline

Yi Shuen C. Lee,* Margaret Millhouse,† and Andrew Melatos‡
School of Physics, The University of Melbourne, Victoria 3010, Australia

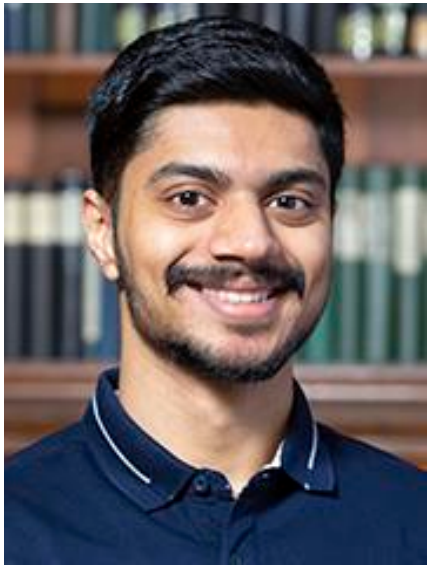
(Received 23 October 2020; accepted 17 February 2021; published 16 March 2021)

The global gravitational-wave detector network achieves higher detection rates, better parameter estimates, and more accurate sky localization as the number of detectors $\mathcal{I}$ increases. This paper quantifies network performance as a function of $\mathcal{I}$ for *BayesWave*, a source-agnostic, wavelet-based, Bayesian algorithm which distinguishes between true astrophysical signals and instrumental glitches. Detection confidence is quantified using the signal-to-glitch Bayes factor $\mathcal{B}_{\mathcal{S},\mathcal{G}}$. An analytic scaling is derived for $\mathcal{B}_{\mathcal{S},\mathcal{G}}$ versus $\mathcal{I}$, the number of wavelets, and the network signal-to-noise ratio $\mathrm{SNR}_{\mathrm{net}}$, which is confirmed empirically via injections into detector noise of the Hanford-Livingston (HL), Hanford-Livingston-Virgo (HLV), and Hanford-Livingston-KAGRA-Virgo (HLKV) networks at projected sensitivities for the fourth observing run (O4). The empirical and analytic scalings are consistent; $\mathcal{B}_{\mathcal{S},\mathcal{G}}$ increases with $\mathcal{I}$. The accuracy of waveform reconstruction is quantified using the overlap between injected and recovered waveform, $\mathcal{O}_{\mathrm{net}}$. The HLV and HLKV network recovers 87% and 86% of the injected waveforms with $\mathcal{O}_{\mathrm{net}} > 0.8$, respectively, compared to 81% with the HL network. The accuracy of BayesWave sky localization is $\approx$10 times better for the HLV network than the HL network, as measured by the search area $\mathcal{A}$, and the sky areas contained within 50% and 90% confidence intervals. Marginal improvement in sky localization is also observed with the addition of the Kamioka Gravitational Wave Detector.

DOI: 10.1103/PhysRevD.103.062002

Phys. Rev. D **103**, 062002

SUVRAT RAO

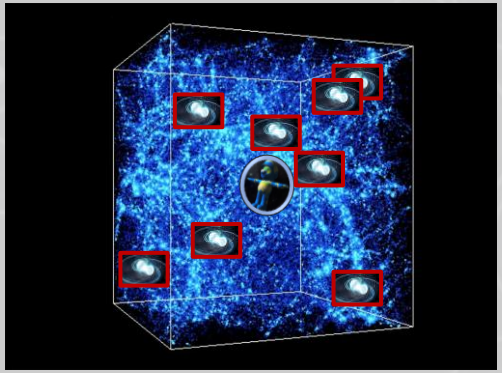


- PhD advisors: Prof. Dr. Jochen Liske, Prof. Dr. Marcus Brueggen (Hamburg Observatory, Hamburg, Germany)
- Hometown: Mumbai, India
- Research interests: GW detection techniques, electromagnetic follow-up studies, GWs to constrain the Hubble constant. https://acceleratingnews.web.cern.ch/news/issue-36/aries-ari/accelerators-probing-gravitational-waves
- Skills: Python coding, machine learning
- Hobbies: trekking/traveling, reading, music, yoga & spirituality

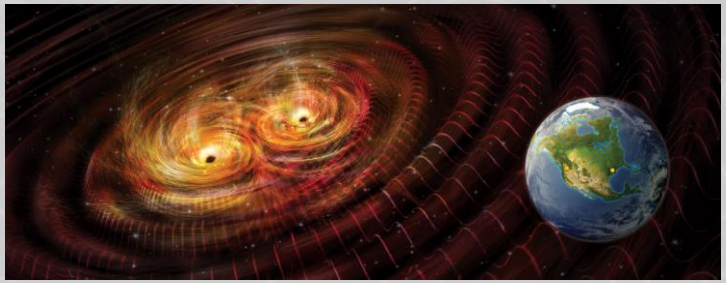
HELLO!!!

Marios Kalomenopoulos, 3rd Year PhD student, University of Edinburgh

Research Interests: GWs and Cosmology (everything in that theme)



H_0 from Dark Sirens



GW propagation

Collaborators: S. Khochfar (UoE), S. Arai (Kyoto University), J. Gair (Max Planck Potsdam), R. Barbieri (Max Planck Potsdam)

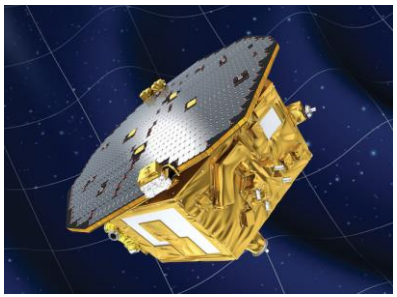
Other Interests: Trekking, History, Public Outreach

Skills: Cosmological numerical simulations

VITTORIO CHIAVEGATO

vittorio.chiavegato@gmail.com

I am an experimentalist from Trento, Italy.
I am especially interested in cutting-edge experiments and technologies, in particular regarding astronomical observation and metrology.



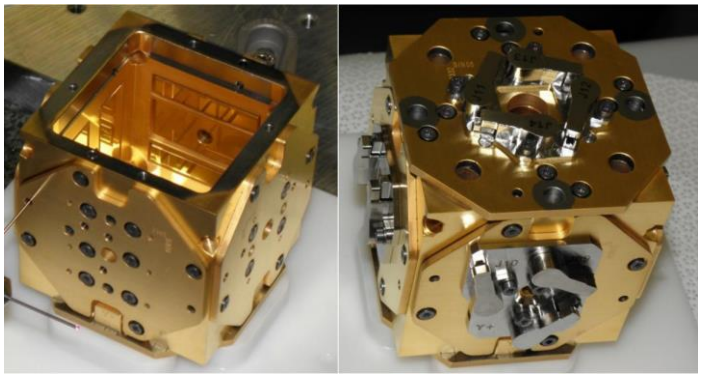
GW observatory in space: LISA and LISA Pathfinder

EXPERIMENTAL GRAVITATION GROUP - University of Trento
https://lisa.physics.unitn.it

Advisor: William Joseph Weber

Group members: Lorenzo Sala, Davide Dal Bosco, Eleonora Castelli, Antonella Cavalleri, Francisco Rivas Garcia, Giuliana Russano, Valerio Ferroni, Daniele Vetrugno, Martina Muratore, Rita Dolesi, Stefano Vitale.

What I am working on:
Force noise on free-falling Test Masses from electrostatic force actuation. → GRS



Agenzia Spaziale Italiana · INFN · UNIVERSITÀ DI TRENTO

Koby Buchanan

kbuchanan@umass.edu
(828) 897-1488

Interest

- Gravity and Gravitational Waves
- Theoretical Cosmology

Skills

- Problem Solving and Critical thinking
- Basic understanding of Python
- Fast learner
- Languages
- Muscian

Daniel J. Oliver

Contact Information:
Fayetteville, AR, USA
djo001@uark.edu

Skills:
Programming Languages – Fortran, Python, Mathematica, MATLAB

Experienced with high performance cloud computing

Research Interests:
LISA Signal Confusion Noise
EMRI Waveform Modelling
Highly Eccentric EMRIs
Pulsar Timing

Collaborators:
Daniel Kennefick (Advisor) – University of Arkansas
Kostas Glampedakis – University of Murcia in Spain
Joel Berrier – University of Nebraska in Kearney
Aaron Johnson – University of Wisconsin in Milwaukee

aromagnolo@camk.edu.pl

Amedeo Romagnolo

Nicolaus Copernicus Astronomical Center, Polish Academy of Science

- Collaborators: K. Belczynski, A. Olejak, A. Hypki, J. Klencki

- Research Interests: Stellar and binary evolution, Physics of GW sources, Population synthesis

- Skills: C/Python coding, modelling, Monte Carlo simulations, interferometry

- Friendly? Yes, most of the times!

William Glenn Lamb

Graduate student – PhD Astrophysics
Vanderbilt University, Nashville, TN, USA
Email: william.g.lamb@vanderbilt.edu

Research Interests: gravitational wave astrophysics, pulsar timing arrays, multi-messenger astronomy, data analysis

Collaborators: Dr. Stephen Taylor, NANOGrav, IPTA

Skills: knowledge of general relativity, data analysis and statistics with Python, high performance computing

Originally from: Eryri, Wales, UK

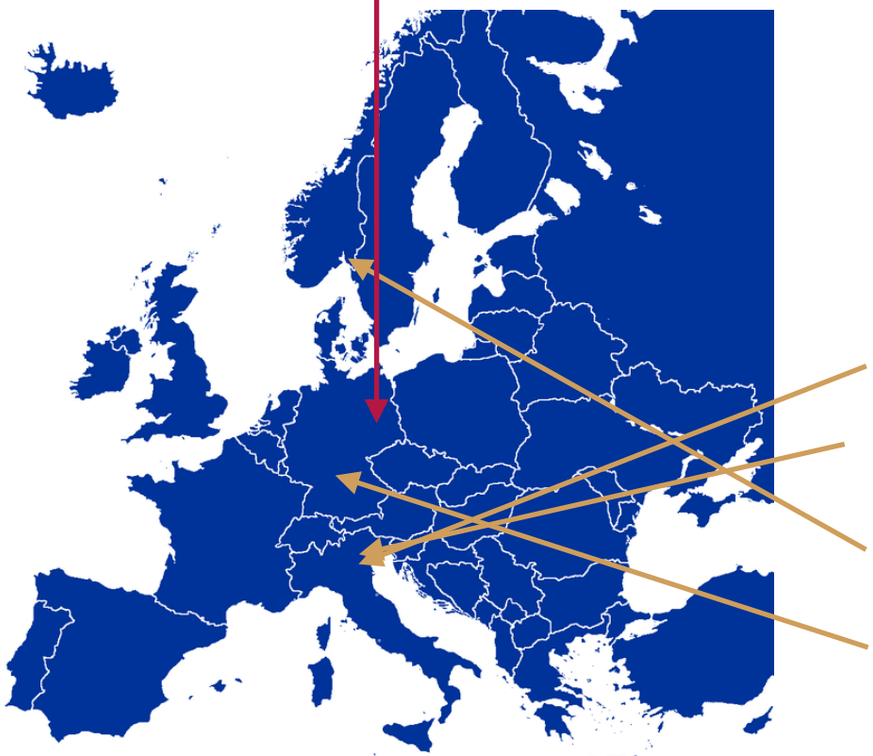
Languages: Cymraeg (Welsh), English, Gàidhlig (Scottish Gaelic – learning), Français (learning)

Extra-curricular: Swing dancer, loves country music and jazz, hiker, swimmer, motorsport enthusiast, Jane Austen fan

Lorenzo Speri
PhD student

supervisor: Jonathan Gair

Max-Planck-Institut
für Gravitationsphysik
ALBERT-EINSTEIN-INSTITUT



email:

lorenzo.speri@aei.mpg.de

Born in Verona

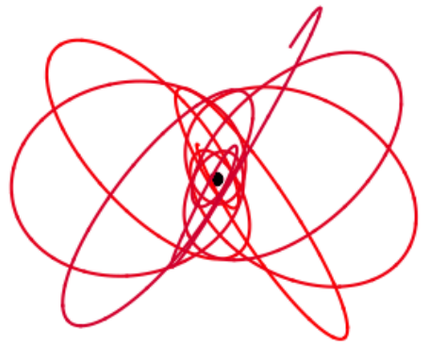
BSc Trento

Erasmus Oslo

MSc Heidelberg

Research Interests: GW data analysis

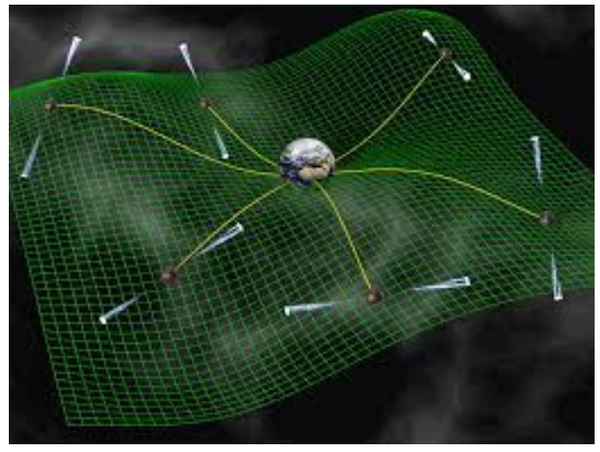
- Extreme Mass Ratio Inspirals



collaborators:

M. L. Katz, A. J. K. Chua,
N. Warburton, S. A. Hughes, O. Burke

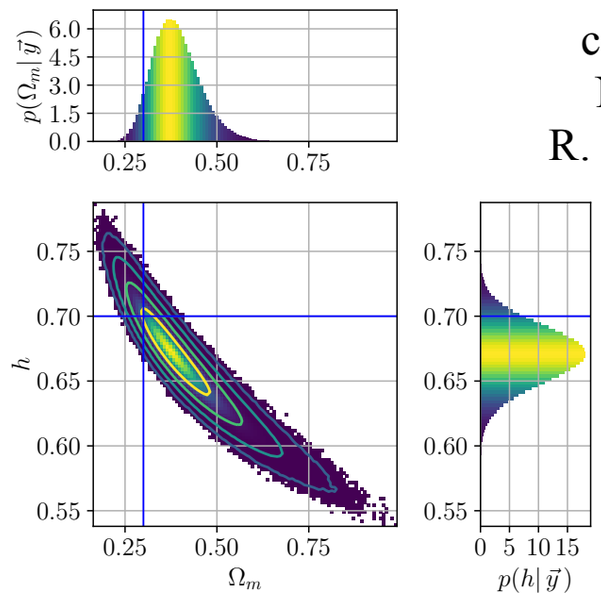
- Pulsar Timing Array



collaborators:

N. K. Porayko, A. Sesana,
S. R. Taylor, C. Tiburzi

- Cosmology with LISA Standard Sirens



collaborators:
N. Tamanini,
R. R. Caldwell,
B. Wang

JAKOB STEGMANN, PHD STUDENT

PERSONAL INFORMATION

Adress:	Gravity Exploration Institute,
	School of Physics and Astronomy,
	Cardiff University,
	Cardiff, CF24 3AA, UK
E-Mail:	StegmannJ@cardiff.ac.uk
ORCID iD:	https://orcid.org/
	0000-0003-2340-8140

COLLABORATORS

Fabio Antonini (Cardiff), Lucio Mayer (Zurich), Maxwell Moe (Arizona), Pedro R. Capelo (Zurich), Elisa Bortolas (Milan), Matteo Bonetti (Milan), Vivien Raymond (Cardiff)

RESEARCH INTERESTS

Broadly, I am interested in all sorts of astrophysical sources of gravitational waves and gravitational multi-body dynamics.

Specifically, I investigate what we can learn about the formation channels of the LIGO black holes from their parameter distributions. In my PhD project, I study mergers that could result from massive stellar triples. Moreover, I work on supermassive black hole triples in galactic nuclei. In the past I have been working on constraints on Primordial Black Holes as a candidate for dark matter by modelling the dynamics of ultra-faint dwarf galaxies.

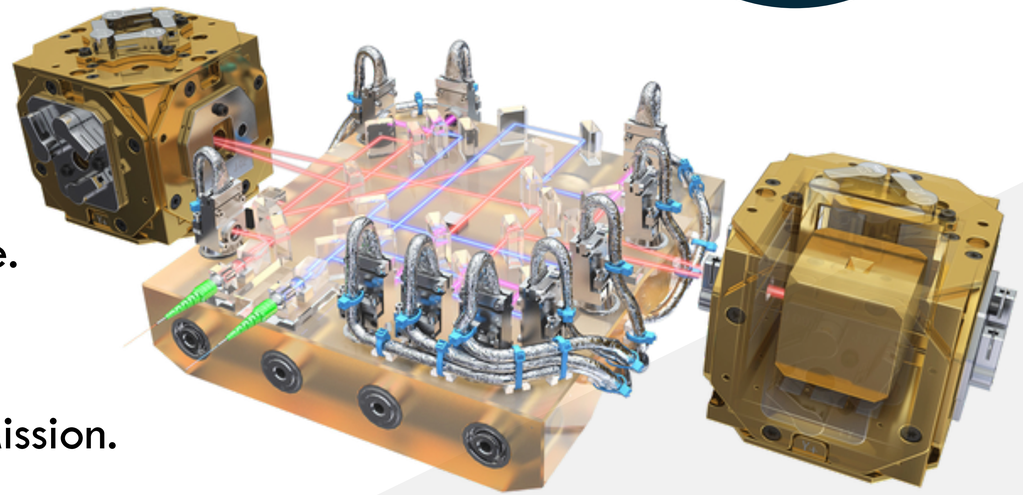
SKILLS

Extensive coding experience with a fondness for classic pen & paper calculations.

Lorenzo Sala

Ph.D. Student @ University of Trento
Member of the LISA Consortium / Data Processing WG

lorenzo.sala@unitn.it / lisa.physics.unitn.it



I am a Ph.D. student working in Trento, in the UTN LISA group.
My research focuses on the experimental side of GW detection from space.

My business is the noise estimation and characterization
of the LISA Pathfinder (LPF) Mission, precursor of the LISA Mission.
LISA will inherit many of the technologies onboard LPF.

I am currently working on the breakdown of effects contributing
to the sub-pN force noise of LISA Pathfinder, down to 20μHz.

Keywords

sub-pN Forces
Bayesian estimation
LISA Pathfinder
Noise statistics
LISA Mission
LPF glitches
Experimental Gravitation
Power Spectral Density
MCMC methods
Noise characterization
Gravitational Reference
Space-Based GW observation

UNIVERSITÀ DI TRENTO
Agenzia Spaziale Italiana
INFN
LISA CONSORTIUM

James Leung

Hi everyone,
I'm a 2nd year graduate student at the University of Sydney / CSIRO Astronomy and Space Science!

I work closely with Tara Murphy (USyd), David Kaplan (UWM) and Giancarlo Ghirlanda (INAF/Brera).

I've primarily been involved with studying transients with radio telescopes (ASKAP and ATCA are my go-to instruments!), with particular interest in gamma-ray burst science and multi-messenger astronomy.

I'm sure I'll have a lot I can learn from other students as well as the lecturers at the School - looking forward to meeting everyone :)

Find me here:
jleu9465@uni.sydney.edu.au
https://jameskleung.github.io

Andris Dorozsmai

Who am I ?
I am a 2nd year PhD student at University of Birmingham

What do I research ?
How can we use gravitational wave detections to learn about the very uncertain evolution of binaries?

In particular, I'm interested in:

- formation of LIGO/VIRGO sources
- evolution of massive binaries
- isolated binary formation channel
- gravitational wave progenitors from triples

How do I do that?
I use a rapid population synthesis code called 'SeBa'.

email: andris@star.sr.bham.ac.uk
collaborators:
Silvia Toonen (supervisor, University of Amsterdam)

About Me - Yael Alush

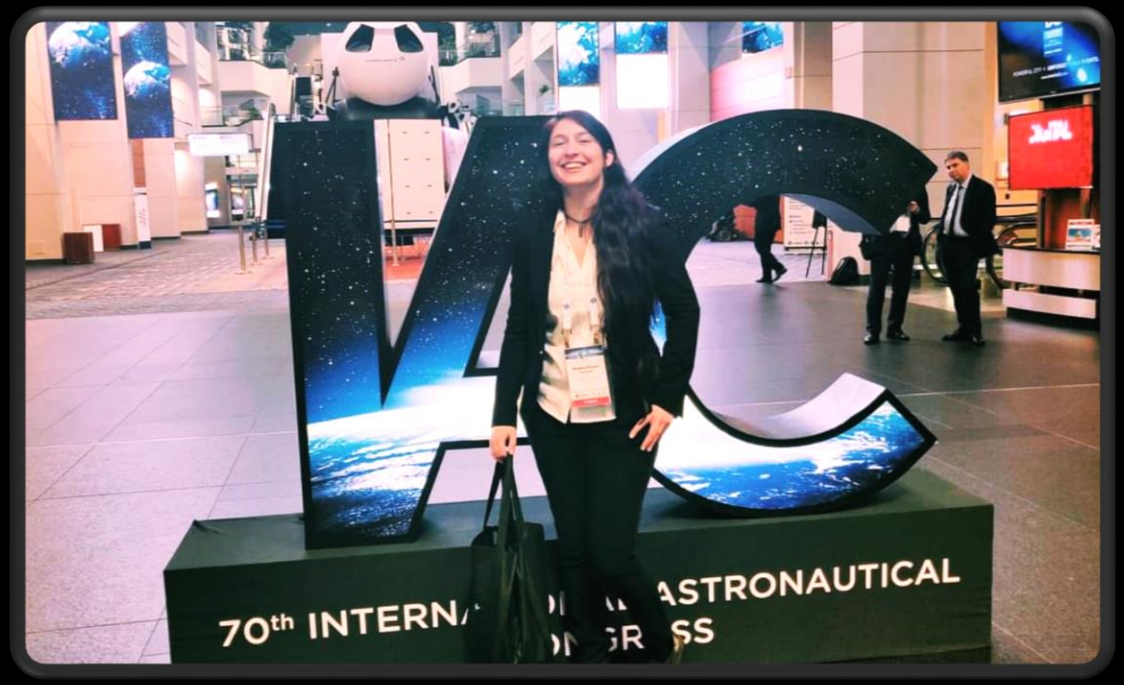
Israel

yael.alush@mail.huji.ac.il

14 April 1995

- **Master Student in Physics, The Hebrew University of Jerusalem:**
  - Supervisor: Dr. Nicholas C. Stone.
  - Research project: Research the effect of stellar rotation on Sgr A* quadrupole moment measurements using the S-stars orbits in the galactic center.
- **Full Stack Web Developer, The Intelligent Force, IDF:**
  - 5 years experience in design and develop of microservices and web applications.
- **Hobbies:**
  - Hiking, singing and Salsa dancing.

BIANCA DIANA TURNEANU



Research interests

Robotics, spacecraft guidance, navigation, attitude and orbit control systems

Skills

Sensor fusion, state estimation, control systems, automation, machine learning, data analysis, computer vision

Other info

M.Sc.Eng. in Autonomous Systems – DTU

Working on rocket GNC in Copenhagen Suborbitals

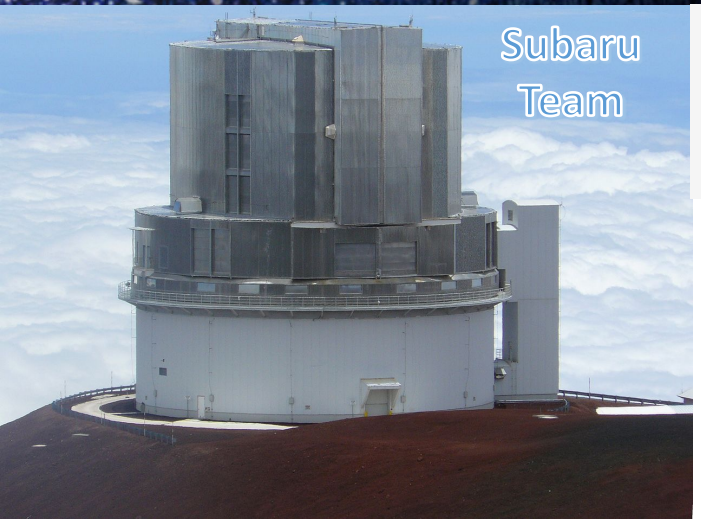
NBIA Summer School 2019 <3

Email: bianca.dianat@gmail.com

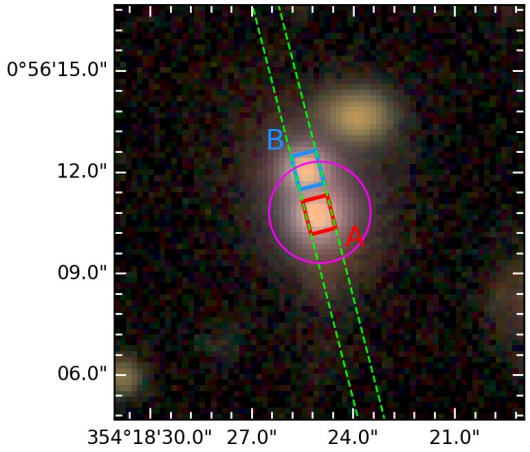
LinkedIn: https://www.linkedin.com/in/biancaturneanu/

...and expanding interest to all things space!

Shenli Tang
Ph.D student at
KAVLI IPMU
東京大学 国際高等研究所 カブリ数物連携宇宙研究機構
KAVLI INSTITUTE FOR THE PHYSICS AND MATHEMATICS OF THE UNIVERSE
東京大学
THE UNIVERSITY OF TOKYO



An observor, quasar hunter



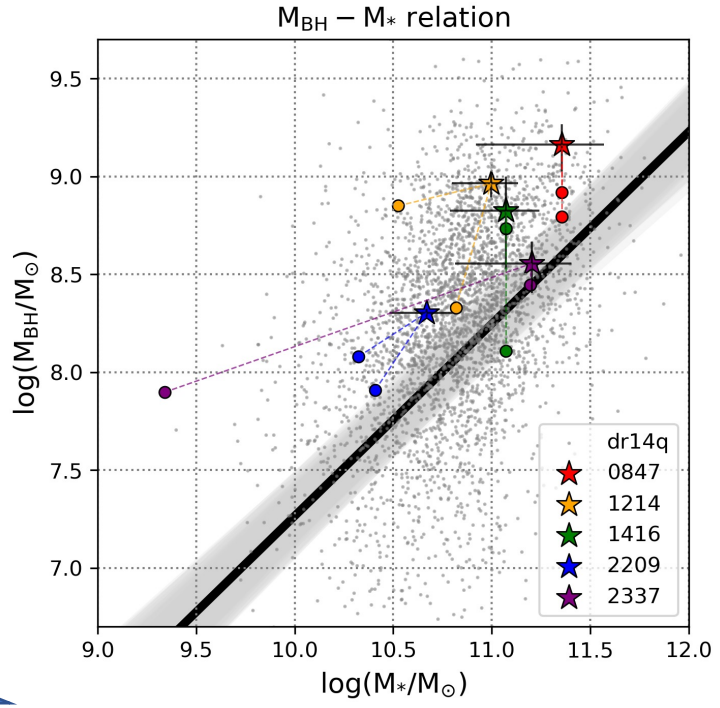
Kashiwa, Chiba, Japan
tang-shenli897@g.ecc.u-tokyo.ac.jp
github.com/Tang-SL

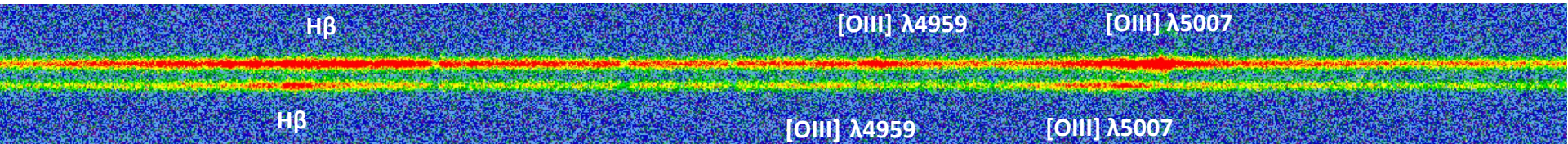
Contact me

Research Interest

Quasar Pairs

BH-host Coevolution





Davide Dal Bosco

About me

- *Contact:* davide.dalbosco-1@unitn.it
- **PhD candidate** at the University of Trento, bachelor and master degree in Physics.
- *Research:* LISA, small force detection experiments, data analysis.
- *Collaborators:* **Experimental gravitation laboratory** at UNITN (key people: Prof. Dolesi, Prof. Vitale, Prof. Weber)
- *Skills:* design of experiments, digital signal processing, Python, data analysis
- *Hobbies:* mountains, skiing, teaching physics

Shmuel Gilbaum

Email – shmuel.gilbaum@mail.huji.ac.il

Advisor – Nicholas C. Stone

THE HEBREW UNIVERSITY OF JERUSALEM

Research interests -

- Active galactic nuclei
- Accretion disks
- Black hole mergers
- Exoplanetary dynamics

Skills -

- Scientific programing
- Mathematical analytical analysis

Hobbies -

- Rock Climbing
- Cooking
- Hiking

Vito Tuhtan
vito.tuhtan@nbi.ku.dk
(+45) 52 82 60 49

Address
Fyrbødervej 10, block 1,
6.,1607
2400 Copenhagen NV
Denmark

Vito Tuhtan

Physics Msc student

About Me I am a dedicated MSc student of physics with a passion for classical guitar. My bachelor thesis (Correlation of gamma-ray flux and spectra of a blasar) is in the field of computational astrophysics. My main professional interests are astro-particle physics and problem solving in general. Music is a big part of my life. I am a classically trained guitarist and I produce music as a hobby. I have experience in tourism industry, teaching and conveying scientific ideas.

Education

2020 - present, Københavns Universitet / University of Copenhagen
MSc in Physics

2017 – 2020, Sveučilište u Rijeci / University of Rijeka
Bachelor's degree in Physics

Current Advisor

Troels Haugbølle ***Associate Professor***
haugboel@nbi.ku.dk

Work Experience

January 2021 - present, ***Student Assistant*****, Center for Quantum Devices - Microsoft Quantum, Copenhagen (Denmark)**

Volunteer Experience

Sep 2019 – Aug 2020, ***Student Body Vice President*****, University of Rijeka Department of Physics, Rijeka (Croatia)**

Mar 2019 – Jun 2019, ***Real Analysis T.A.*****, University of Rijeka Department of Mathematics, Rijeka (Croatia)**

2017 - present, ***Private physics and mathematics tutor***

Awards

2010, ***STEM scholarship*****, Republic of Croatia**
Awarded to the top students in STEM field in Croatia.

Languages

Croatian, English

Andrew G. Sullivan

- Email: ags2198@columbia.edu
- Institution: Columbia University
- Collaborators: Szabolcs Márka, Zsuzsa Márka, Doğa Veske, Johan Samsing

- Research Interests: Gravitational Wave Detectors, Black Hole Dynamics, Neutron Stars
- Skills: Python, BAYESTAR

Intro Slide - NBIA summer school

August 2021

Ryan Yde

Phone: +45 26704709

Email: ryan.yde@nbi.ku.dk
and/or; knb392@alumni.ku.dk

PhD student at QUANTOP, NBI

Supervisor: Prof. Eugene Polzik

Bachelor project at QUANTOP - Optical magnetometry.

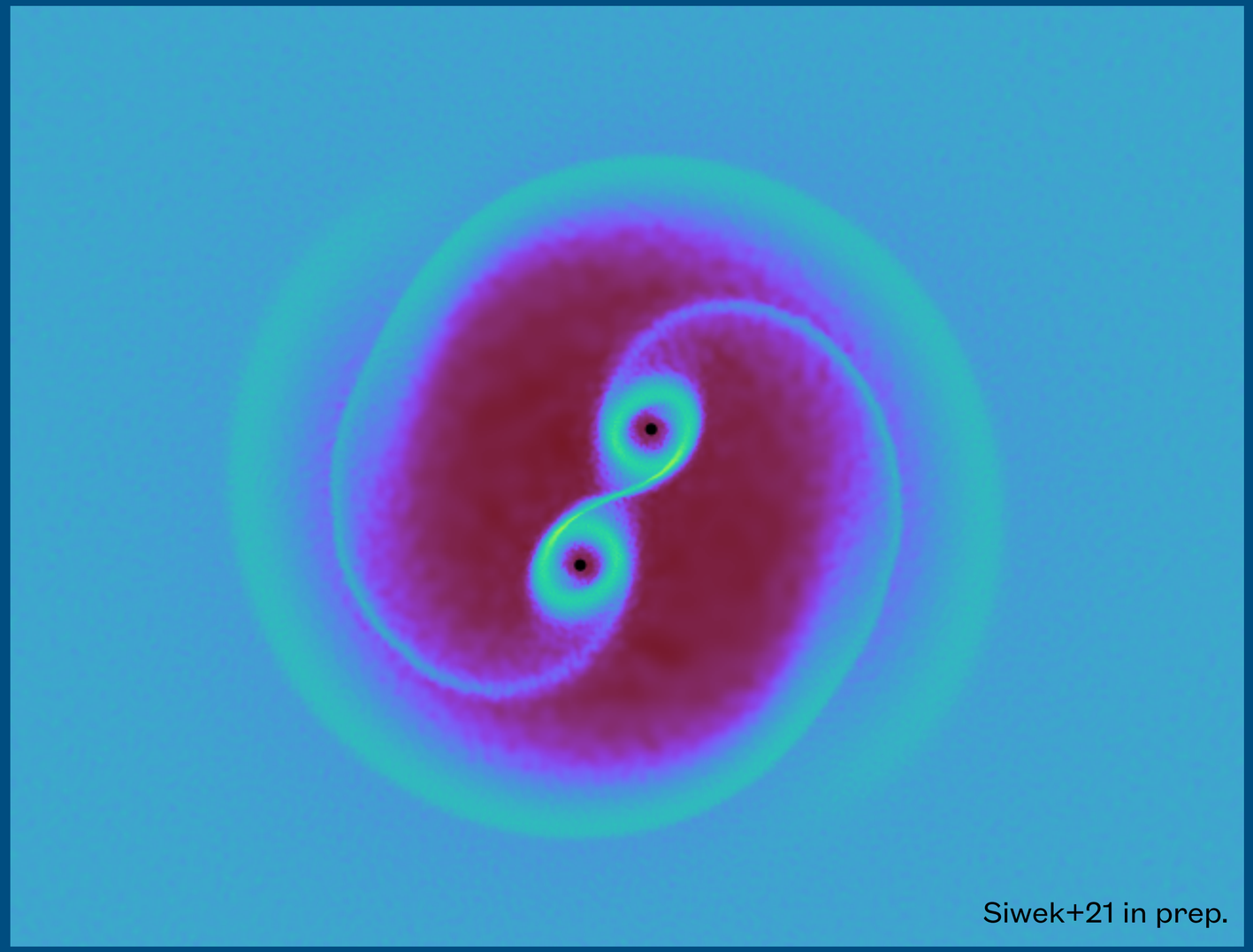
Master project at QUANTOP - Design/development of coil systems intended to produce sufficiently homogeneous magnetic fields for optical magnetometry.

PhD project at QUANTOP (in progress) - Experimental realization of using an atomic spin ensemble with an effective negative mass, intended to improve the sensitivity of interferometric gravitational wave detectors such as LIGO.

Accretion onto supermassive black hole binaries (MBHBs)

Magdalena Siwek, Harvard University. Email: magdalena.siwek@cfa.harvard.edu
Advisor: Lars Hernquist. Collaborators: Rainer Weinberger, Luke Zoltan Kelley

- **Research interests:** growth and properties of MBHBs, numerical **simulations**, **accretion** physics, constraints on the **gravitational wave background (GWB)**.
- **Skills:** Python, C, Bash, parallel computation (MPI). Developed modules for hydrodynamics code Arepo.
- **Misc:** Interested in connecting with AGN/high energy observers



Siwek+21 in prep.

Max Trevor

University of Maryland
LIGO
mtrevor@umd.edu
Advisor: Peter Shawhan

I am a member of LIGO's Detector Characterization and CBC working groups. I use machine learning to study transient noise in LIGO's interferometers and and improve the search sensitivity of the PyCBC pipeline.

Rahul Srinivasan

PhD candidate - **Observatoire de la Côte d'Azur**, France

Email: rahul.srinivasan@oca.eu

LinkedIn: www.linkedin.com/in/rahul-srinivasan

As a member of the LIGO-Virgo Collaboration, I perform parameter estimation of Gravitational Waves (GWs) from binary black holes. In addition, I am investigating the effect that stellar properties such as metallicity have on the production of black holes. A question I try to probe is the black hole stellar-mass-gap between Electromagnetic wave and GW observations.

Collaborators	· Astrid Lamberts · Marie-Anne Bizouard · LIGO-Virgo Collaboration · Archana Pai · Varun Bhalerao
Research Interest	· Stellar Progenitors of GW Binary Black Holes · GW Parameter Estimation · Testing General Relativity from GWs · Black Hole Spacetimes
Skills	· Programming (Python, MATLAB, C, C++) · Signal Processing

Lorenz Zwick

zwicklo@ics.uzh.ch
University of Zürich
Institute of Computational Science

Research Interests:
Approximations to GR
Environmental Effects on GW
Alternative GW detectors
High z Quasars
Supermassive Stars
Intensity Interferometry

Skills:
Solid understanding of GR
Analytical approximations
Using/abusing Mathematica
Solid coding in Python
Creative solutions to problems
Science communication

Collaborators:
L. Mayer, P.R. Capelo, P. Amaro-Seoane, P. Saha, D. Soyuer, D. D'Orazio, E. Bortolas, V. Vasquez-Acevez, R. Klessen, L. Haemmerle, the ICS side project collaboration

Personal Info:
Birth date: 06/03/1996
Occupation: PHD Student at ICS, UZH
Advisor: Prof. Lucio Mayer

Other Interests:
Mountaineering & Rock Climbing, Reading, Funky Discussion Topics

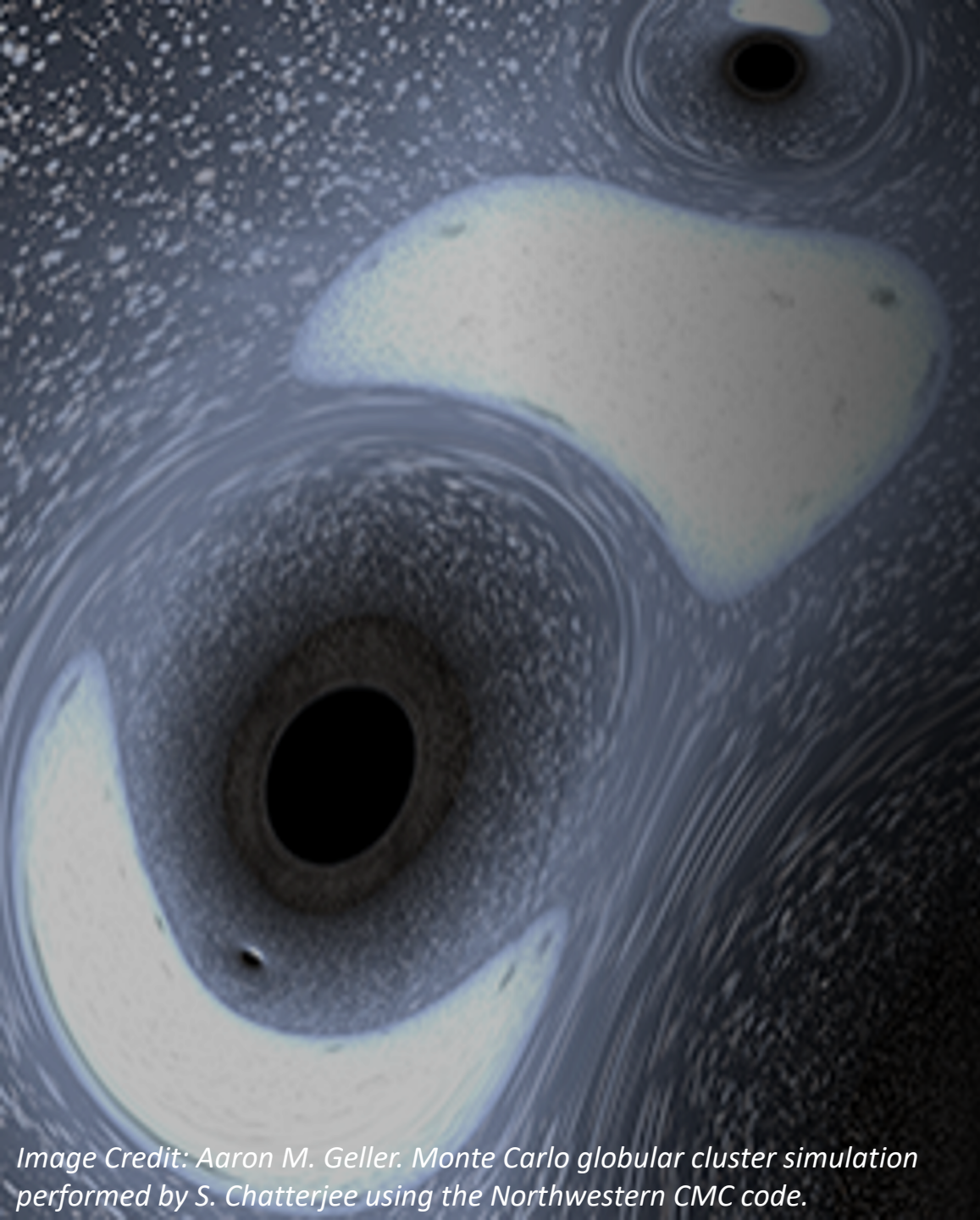


Image Credit: Aaron M. Geller. Monte Carlo globular cluster simulation performed by S. Chatterjee using the Northwestern CMC code.

Elena González

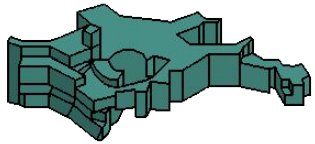
Contact Information:
elenagonzalez870@gmail.com

Collaborators:
My main collaborator has been Prof. Fred Rasio and his research team at Northwestern University. I also collaborated with Prof. David Chernoff at Cornell University and Prof. Paul Torrey at University of Florida on short summer projects.

Research Interests:
Compact objects, stellar dynamics, black hole formation and gravitational waves.

Skills:
Python, Matlab (Beginner)

Other Info:
I am originally from Spain!
I just graduated from the University of Florida and will start graduate school at Northwestern in the Fall!



Pavan Vynatheya

Affiliation : Max Planck Institute for Astrophysics, Garching, Germany

Supervisor : Dr. Adrian Hamers

Email id : pavanvyn@mpa-garching.mpg.de

Research interests :
→ Computational Astrophysics
→ Stellar evolution and dynamics
→ Gravitational wave sources
→ Multiple stars and binary evolution

Programming languages :
→ Proficient in Python, MATLAB
→ Familiar with C, C++, IDL

Daniel Marín Pina

PhD student

About me

I am a first-year PhD student at the Universitat de Barcelona working on Fundamental Physics and Astrophysics from Gravitational Waves

0000-0001-6482-1842

danielmarin@icc.ub.edu

Barcelona (Spain)

+34 628615731

Science

2020 — **Published paper on NSBH mergers**

"Precursory collapse in Neutron Star - Black Hole mergers", published in Phys. Review. Letters D

2019 2021 — **Analysis work in Gaia**

Worked in high-performance computational analysing of spurious Gaia detection

Collaborations

2019 2021 — **Gaia collaboration**

ESA mission dedicated to 3D mapping the Galaxy

2021 — **Virgo collaboration**

Italy-based experimental setup to detect Gravitational Waves

Other individual collaborations

Collaborations with Prof. Roberto Emparan and Prof. Mark Gieles

Skills

High-performance computing

English/Spanish/Catalan/Chinese

Research interests

Gravitational Waves

Black Hole Dynamics

Numerical Relativity

Alexandra Hanselman

aghanselman@uchicago.edu

Experience and Collaborators

- Massachusetts Institute of Technology – Bachelors in Physics with minor in Astronomy completed 2020
  - "Investigating the influence of spin-curvature coupling on extreme mass-ratio inspirals" under Dr. Scott Hughes
- University of Chicago – first-year Physics PhD
  - working under Dr. Daniel Holz

Research Interests

Gravitational wave modeling, GR theory, and applications

Skills

Python, MATLAB, Mathematica

About Me

I like to read, watch movies like Star Wars and any Marvel movie, and have an unusual love for index notation

Matthias Fabry

matthias.fabry@kuleuven.be

- PhD student at Institute of Astronomy, Leuven, Belgium
- Working with prof. Hugues Sana and dr. Pablo Marchant
- Main research interests:
  - Massive binary evolution and channels to GW sources
- Skills:
  - Binary stellar evolution with MESA
  - (Fourier) spectral disentangling of binary star spectra
  - Developing SPINOS: Orbital fitting from spectroscopic RVs and astrometry
- Other/Side interests: Cosmology, stellar dynamics

SKILLS

Python, C/C++, Slurm

COLLABORATORS

Claudia Lagos (ICRAR, UWA)

LIANA RAUF
1st Year PhD Candidate
l.rauf@uq.net.au
https://astrolaureate.github.io/people/LianaRauf

RESEARCH INTERESTS

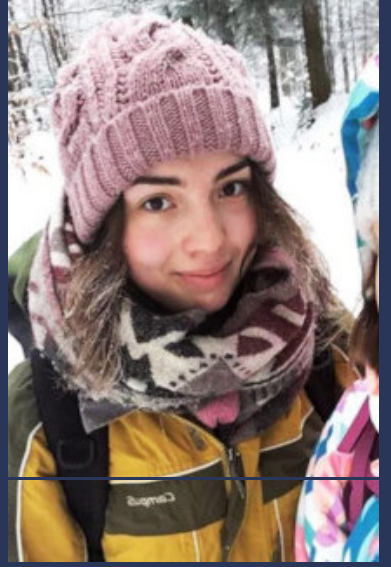
- Stellar population synthesis
- Semi-analytic modelling of galaxy formation and evolution
- Binary black holes
- GW cosmology

CURRENT PROJECTS

- Investigating the relationship between binary black hole merger rates and galaxy properties and photometry.
- Predicting the total GW events and host galaxies in current and future redshift surveys.

Aleksandra Olejak

aolejak@camk.edu.pl



Scientific group: **Krzysztof Belczynski** (supervisor), Arkadiusz Hypki, Grzegorz Wiktorowicz, Amedeo Romagnolo, Pawel Drozda

Affiliation: Nicolaus Copernicus Astronomical Center Warsaw

Our website: https://startrackworks.camk.edu.pl

My scientific interests:

-population synthesis predictions for BH-BH, BH-NS, NS-NS mergers

-evolution of massive stars in isolated binary systems

-the origin of LIGO/Virgo detected gravitational-wave signals

SCUOLA NORMALE SUPERIORE

The Niels Bohr International Academy

NBIA SUMMER SCHOOL ON GRAVITATIONAL WAVES ASTROPHYSICS

Srija Chakraborty

(srija.chakraborty@sns.it)

Supervisor: Dr. Simona Gallerani

Home institution: Scuola Normale Superiore, Pisa

Research interests: Massive black hole binaries, high redshift AGN astrophysics, LISA.

Social media officer- LISA Early Career Scientists Group

Self-Introduction

James Marsden (james.marsden.17@ucl.ac.uk)

- UCL postgraduate, beginning DPhil in Theoretical Cosmology in Oct 2021 at the University of Oxford
- Supervisor: Professor Pedro Ferreira

Research Interests:

- Black Hole Physics, Gravitational Wave Astrophysics

Skills:

- Python, C#, C

Name : Siddharth Mohite

Affiliation : University of Wisconsin-Milwaukee (UWM)
Center for Computational Astrophysics (CCA), Flatiron Institute
LSSTC Data Science Fellow

Collaboration Membership : LIGO Scientific Collaboration, GROWTH, NANOGrav

Contact (email) : srmohite@uwm.edu

Collaborators/Advisors : Dr. Chiara Mingarelli (University of Connecticut / CCA, Flatiron Institute), Prof. Jolien Creighton (UWM)

Research Interests : Compact Objects, Gravitational-wave (GW) Source Populations, Electromagnetic Follow-up of GW sources, Supermassive Black Hole Binaries, Accretion Disks

Skills : GW Data Analysis, Bayesian Inference/Statistics, Machine Learning, Python programming, Git workflows, Python packaging

Mudit Garg

PhD, Institute of Computational Science, University of Zürich

Contact: mudit.garg@ics.uzh.ch

Collaborators: Prof. Lucio Mayer, Prof. Lavinia Heisenberg, Dr. Pedro Capelo, Dr. Andrea Derdzinski, Lorenz Zwick

Research interests: GWs semi-anlytical research, Black holes, Gas disk models, Alternative gravity theories

Skills: Mathematica, Python, LALSuite, LaTeX, PyTorch

Hobbies: Volunteering, Board games, Cooking, Trekking

FRANZISKA RIEGGER

franziska.riegger@erdw.ethz.ch

+41 77 954 58 21

Collaborators

ETH Zurich EEG (Prof. Dr. Johan Robertsson)
LISA Consortium (Data Analysis Working Group)

Research Interests

Data analysis (statistical as well as deterministic methods)
High-Performance Computing

Skills

Numerical Modelling
Statistical Data Analysis
Programming (MatLab, C, CUDA, Python)

What else to know about me?

”Newcomer” to the field of Astrophysics
(Background in Aerospace Engineering and Applied Mathematics)

Always up for a beer ;)

Andrei-Ieronim Constantinescu

aiconstantinescu@spacescience.ro

UNIVERSITY OF BUCHAREST
VIRTUTE ET SAPIENTIA

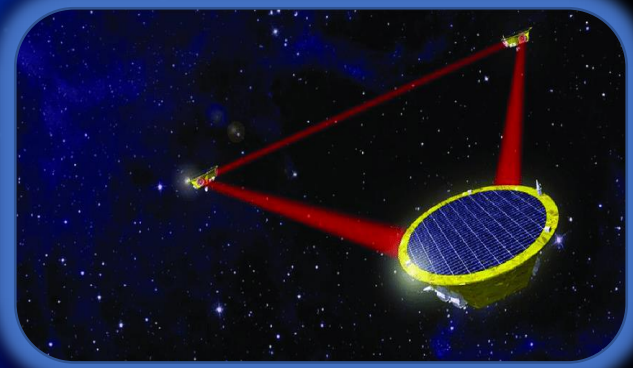
Phd student at University of Bucharest, Faculty of Physics
Theoretic and Computational Physics

Research Interests:
Gravitational Waves,
Neural Network

ISS

Working at Institute of Space Science Romania since 2018

Code developer
Soft Skills
Great team worker



Full LISA member since 2020
LECS member since 2020
LDC member since 2020

MARCELA GRCIĆ

CONTACT INFORMATION

- marcelagrcic@gmail.com
- xtn548@alumni.ku.dk
- +385 976909796
- +46 769304197

INTERESTS

- astrophysics, general relativity, gravity

BASIC INFO

- Croat, bachelor of geophysics, physics masters student

SOME OF MY SKILLS

- English and Balkan languages, Python, MS Office, Adobe Illustrator

INTRODUCTION

- **Full name :** Sree Kanth Hari Kumar
- **Affiliation :** Doctoral student at NCBJ, Poland
- Email: sreekanth.harikumar@ncbj.gov.pl, linkedin profile: www.linkedin.com/in/sreekanthharikumar

- **Research Interests:** Gravitational wave theory, lensing of gravitational waves, alternate theories of gravity (Scalar Tensor Vector Gravity), emergent gravity
- **Collaborators:** Marek Biesiada (NCBJ), Sukanta Bose(IUCAA), Orest Dorosh (NCBJ)
- **Skills:** Experience in Python and Mathematica,

Miguel A. S. Martinez

miguelmartinez2025@u.northwestern.edu

Northwestern U./CIERA First Year PhD Student

Advisors: Fred Rasio, Giacomo Fragione

Research Interests: Dense Stellar Clusters, Triple Systems, Gravitational Waves

Skills: Python

Misc: I practice kendo and iaido, Japanese sword-based martial arts

Introduction

Maynooth University
National University of Ireland Maynooth

- **Full name:** Hannah O'Brennan
- **E-mail:** hannah.obrennan.2021@mumail.ie
- **Collaborators:** Stefan Arridge
- **PhD aims:** To model gravitational wave forms from mergers of intermediate-mass black holes from the early Universe and thus making detection predictions for LISA
- **Research interests:** Intermediate-mass black holes, supermassive black holes, first stars, epoch of reionization, gravitational waves, LISA
- **Programming skills:** C/C++, Python, Matlab, Mathematica
- **Analytical skills:** tensor calculus, general relativity, cosmology, thermodynamics, ordinary differential equations, black hole formation

Name: Chengcheng Xin
Institute/Department: Columbia University/Astronomy
Collaborators (not full list): Zoltan Haiman, Maria Charisi, David Schiminovich, Chiara Mingeralli, Brian Metzger, Mathieu Renzo

About me

I'm from Qingdao, China. I'm currently a graduate student in the Department of Astronomy at Columbia University in 2020, living in New York City, USA. I have been doing research in astrophysics since the summer of 2018. I have been involved in gravitational wave related projects since the fall of 2019, and have never stopped since then. The main programming tool I use is Python, while I'm familiar with using various open source simulation programs, such as *Hasasia* and MESA, and operating HPC (Habanero).

Research topics

High energy astrophysics, gravitational waves and computational stellar physics

My work

I'm broadly interested in both observational and theoretical astrophysics. My research has been focusing on the observation of supermassive black hole binary candidates as quasars with multi-wavelength surveys, such as *Swift*, *CRTS*, *GALEX* and LSST. I'm also interested in their gravitational wave detection aspects in *PTA* and *LISA*. Recently, I have shifted my focus to theoretical stellar physics on massive stars. For this I'm using a computational stellar modeling tool, MESA.

05/15/2021 (draft)

Darsan Swaroop Bellie

Undergraduate @ Northwestern University

Email: darsanswaroopbellie2022@u.northwestern.edu

Primary Advisor: Dr. Vicky Kalogera (Northwestern)

Mentors: Eve Chase (PhD candidate, Northwestern), Dr. Maya Fishbach (postdoc, Northwestern)

Relevant Skills:

Graduate-level coursework in GR

Working knowledge in Python

Research Experience:

Forecasting constraints on 3G GW detectors

J. Andrew Casey-Clyde

andrew.casey-clyde@uconn.edu

- Collaborators: Chiara Mingarelli, Kris Pardo, Jenny Greene, Andy Goulding, Morgan Nañez
- Research Interests: SMBHs, SMBH-galaxy co-evolution, multi-messenger astronomy
- Skills: python, machine learning, statistical modeling, data analysis
- Projects: Gravitational wave background constraints on SMBH binary pops
- Hobbies: D&D, hiking, camping, pets

CHARLES UNIVERSITY
Faculty of mathematics
and physics

Institute of Theoretical Physics
Charles University
V Holešovičkách 2
180 00 Praha 8
Czech Republic
milan.pesta@utf.mff.cuni.cz

Name	Milan Pešta
Research interests	contact binaries, general relativity, data science
Skills	Python (pandas, numpy, sklearn, PHOEBE), SQL, LaTex
About me	I am a first-year PhD student in astrophysics with a master's degree in theoretical physics. I am mainly interested in binary stars, and currently I am working on estimating the critical mass ratio of contact binaries. Other than that, I enjoy listening to metal, watching sci-fi movies and reading books.