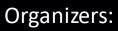
1st Astro-COLIBRI

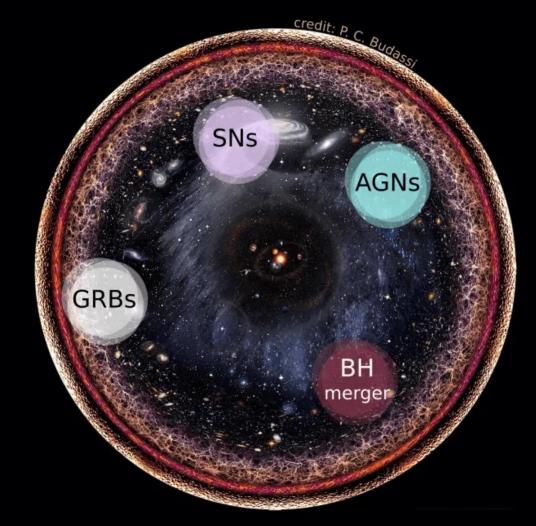
Multi-Messenger Astrophysics Workshop

This international workshop provides a forum for leading scientists and young researchers to foster communication within the rapidly evolving real-time multi-messenger astronomy.

see details



Patrick Reichherzer, Anna Franckowiak, Julia Tjus, Fabian Schüssler



Funding & Support





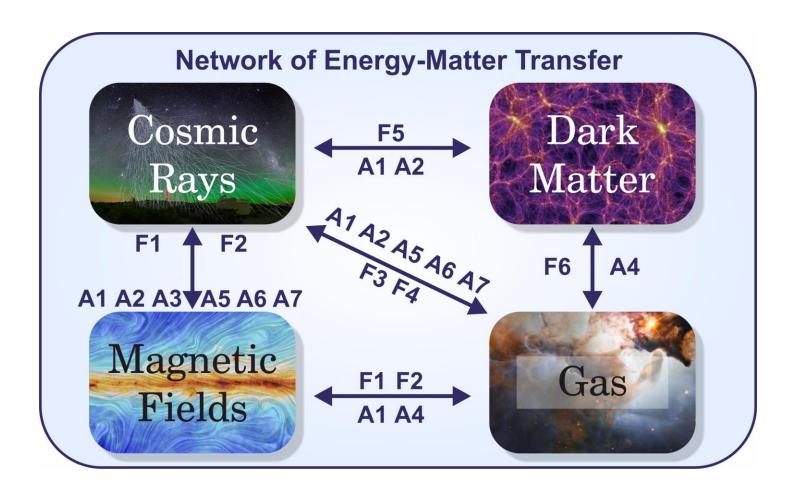






- ☐ Collaborative research center (CRC, SFB) 1491: Cosmic Interacting Matters (CIM)
 - ☐ Astrophysical signatures of cosmic-ray transport and interaction (A)
 - ☐ Fundamental properties of matter (F)
 - ☐ Finances our conference dinner













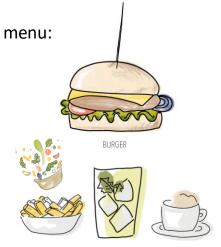
2/11 Idea of workshop monitoring observatories Schüssler, PR+ (2021, ICRC) events PR+ (2021, ADASS) LIGO T ((O)) **PR**+ (2021, *ApJS*) SVOM Ligo & Virgo GAIA BNS merger alert HAWC High Altitude Water Cherenkov TDE FNK AMON - creator four π sky INTEGRAL **HAWC** R follow-- streams TNS YAU **GCN** up-- broker **AMON** AMPEL 🎉 observ. detailed event/src. info UTMOST Pan-STARRS MWA FRB **IceCube** COLIBRI API در photons, GWs, (real-time) DBs ZIW379 NASA FAVA TOBY @esa Fermi Swift 🚳 MeerKAT GRB push alerts \ visibility event info cone search VLT 20:35 Fr., 29. Oktober AGN Astro-COLIBRI App / Website H.E.S.S.

3/11

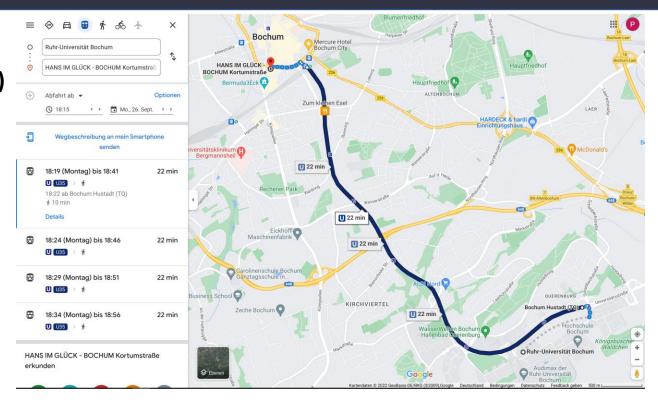
Mond	day (details)	
	Introduction: Multi-messenger source physics	
	J. Becker Tjus (RUB, GER)	Man
	F. Oikonomou (NTNU, NO)	Mon
	S. Markoff (API/GRAPPA, NL)	
#	Transients: Gamma-rays	
	H. Ashkar (LLR, FR)	Mon
	A. Berti (MPI, GER)	
*	Transients: Radio	
	R. Fender (Oxford, UK)	Mon
	B. Stappers (Manchester, UK)	
	Introduction: Astro-COLIBRI	
	P. Reichherzer (RUB, GER)	Mon
	F. Schüssler (IRFU/CEA-Saclay, FR)	
4 1	CRC 1491 conference dinner	
• •	dinner on Monday 19h PM takes place in Hans im Glück in the bustling city centre close to the main station	Mon

☐ 25 minutes from here

Leave 18:00 if you want to go to your hotel before the dinner (check-in etc.)



- 1. Choose your favourite burger...
- ... with a sourdough, multigrain or brioche bun, or without bread
- **2. Side:** GELEIT SALAD, KRAUTKNOLLE COLESLAW or FRIES*
- **3. Drink:** THIRST QUENCHERS, REFRESHER or BEER (small)
- 4. Hot drink of your choice or dessert

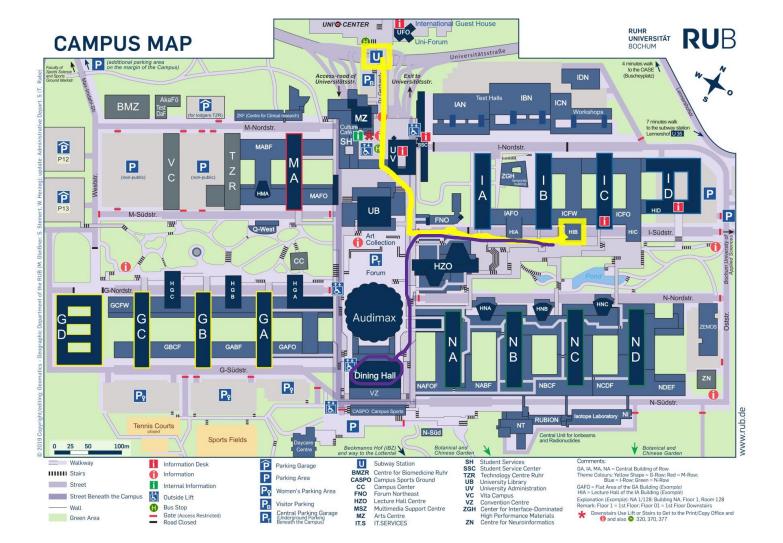






Sess	sion starts at 9:30	Day
Tues	day (details)	
#	Transients: X-rays	
	P. Evans (Leicester, UK)	Tue
	D. Turpin (CNES/CEA-Saclay, FR)	
	Transients: Optical	Tue
	K. Blundell (Oxford, UK) J. Sollerman (Stockholm University, SW)	rue
#	Transients: Gravitational waves	Tue
	M. Seglar-Arroyo (L.A.P.P., FR)	rue
T	Poster session	Tue
#	Transients: Neutrinos	
	E. Blaufuss (Maryland, USA)	T
	G. Illuminati (Bologna, IT)	Tue
	A. Franckowiak (RUB, GER)	
41	Wine & cheese	Tue
7	Speed-date a recently-tenured astrophysicist	Tue

- ☐ Group photo here (Tuesday 12:30); further photos throughout the event
 - ☐ Please contact us if you don't want to be on photos
- ☐ Free lunch with your vouchers in dining hall (meal, sides, salad, dessert, drink)



Main canteen (meat, veg., pasta)

Lower level of dining hall



Rote Bete canteen (100% vegan)
Top level of dining hall



Session starts at 9:00	Day
Wednesday (details)	
Transients: MWL/MM alert systems	
H.B. Eggenstein (MPI Hannover, GER)	
A. Nebot (Strasbourg, FR)	Wed
M. Mostafa (Penn State, USA)	
J. Nordin, Desy-Zeuthen, GER)	
Discussion: Astro-COLIBRI extensions and connections to other platforms	Wed
Sciathon introduction The first Sciathon in Astrophysics is an opportunity to develop ideas to answer important questions concerning the next steps in real-time multimessenger astrophysics.	Wed
Sciathon	
Young (and motivated senior) scientists will work together within a period of 48 hours during the last phase of	Wed-
the workshop implementing ideas developed during the workshop.	Fri
Sciathon discussion	
All project groups will pitch their projects for 10 minutes in a dedicated session on the last day with the chance of	- :
winning prizes. Hopefully, the intense and inspiring group work during the Sciathon will kick-start further	Fri
collaborations.	

8/11

Free

Lindau Online bel Laureate Sciathon Meetings 2020

Online Sciathon 2020

Date: 19 June 2020 17:00 - 21 June 2020 17:00 CEST

Online event 1

Add to calendar

The week before the Online Science Days 2020, we're inviting our Lindau Alumni and Young Scientist community to join our first ever 48-hour Online Sciathon. Work together on innovative solutions for current issues. More information on the topics and how to pitch your proposals is available on sciathon.org



LINDAU **NOBEL LAUREATE MEETINGS**

Share event











8/11 Sciathon

- The first Sciathon in Astrophysics is an opportunity to develop ideas to answer important questions concerning the next steps in real-time multimessenger astrophysics
- Young (and motivated senior) scientists will work together within a period of 48 hours during the last phase of the workshop implementing ideas developed during the workshop
- ☐ 3 categories
 - New functions for Astro-COLIBRI (e.g. prototyping a new functionality, outline of graphical interface, etc.)
 - ☐ New use-cases and science for Astro-COLIBRI (e.g. outline deployments, new science cases, etc.)
 - ☐ Explaining multi-messenger transients (e.g. graphics, posters, Gamma-Catcher extensions, YouTube, etc.)



We collect possible topics at the blackboard

9/11 Special issue in *galaxies*

- ☐ Workshop and Sciathon may serve as a starting point for a publication
- Special issue: "The New Era of Real-Time Multi-Messenger Astronomy"
 - a limited number of waivers of the publication fees are available: contact Fabian, Anna and Marcos
 - https://www.mdpi.com/journal/galaxies/special_issues/multimessenger_astronomy





an Open Access Journal by MDPI

The New Era of Real - Time Multi - Messenger Astronomy

Guest Editors

Dr. Fabian Schüssler, Prof. Dr. Anna Franckowiak, Dr. Marcos Santander

Deadline

10 March 2023



Contact me for participation certificate (if you need one)	
Contact me for participation certificate (if you need one)	

Contact me for reimbursement of travel expenses of invited speakers

10/11

General

- Contact me for participation certificate (if you need one)
- Contact me for reimbursement of travel expenses of invited speakers
- Botanic Garden of RUB (Admission free, 5-10 minutes walk)
 - ☐ Website: https://www.boga.ruhr-uni-bochum.de/index.html.en







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over 170 varieties from all over the World

opposite the Tropical Conservatory Admission free!

























