

Graduate School of SFB 1491

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Goal



Develop common language

- *communicate easily across the borders of the four sub-disciplines (astro-, plasma-, particle-, and astroparticle physics)*
- *Fundamental understanding across the sub-disciplines*

Who's included: Students and postdocs funded through SFB or affiliated to SFB

Program



- **Super-disciplinarity:**
 - common language
 - broaden horizon
 - foster collaboration
- **Independence:**
 - in scientific domain and beyond
- **Internationalization:**
 - international meetings
 - Networks
 - stay abroad
 - interact with international CIM fellows and guests
- **Career development:**
 - training of generally applicable, transferable skills

Program - Details



Supervision

- Two advisers (CIM PIs) with different scientific backgrounds
- Scientific mentoring

Internationalization

- Outgoing doctoral researchers / incoming scientists
- Arranging international conferences and workshops

Networking and Scientific Training

- Presentation of results at annual CIM meeting
- Bi-yearly Plasma Astroparticle School in Bad Honnef
- Group seminars and lectures

Career development

- Soft- and hard-skill courses (Research School at RUB, Graduate Center (GC) at TUDO, and Center for Graduate Studies (CGS) at BUW)
- Scientific writing and visualization

Supervision Concept

- [Guidelines](#)
- Supervision agreement (including schedule), get ORCID
- Double supervision + international scientific mentor
- Formal meetings → review big picture and status of PhD
 - [Kick-off meeting](#)
 - [Annual meetings](#)

SMART (Specific, Measurable, Agreed/Achievable, Relevant/Realistic, Time-bound) objectives. To be proposed by the Reviewee and discussed and finalised during the Annual Review meeting.

SMART objectives	Timescale
1.	
2.	
3.	
4.	
5.	

Kick-off and Annual Review

Please fill kick-off and annual forms and send a copy to Johannes and Anna!!!

→ Documentation will be important for DFG review



**I WANT YOU
TO FILL YOUR FORMS**

Opportunities



- Longer stay (2-3 months) abroad (encouraged, but not compulsory)
- Invitation of international guests
- Organization of workshops
- Co-supervision of Bachelor and Master students
- Attend lectures at all 3 universities
- In case of problems: Ombudsperson of RUB research school

We have money
to support this!
Talk to Johannes
and Anna!

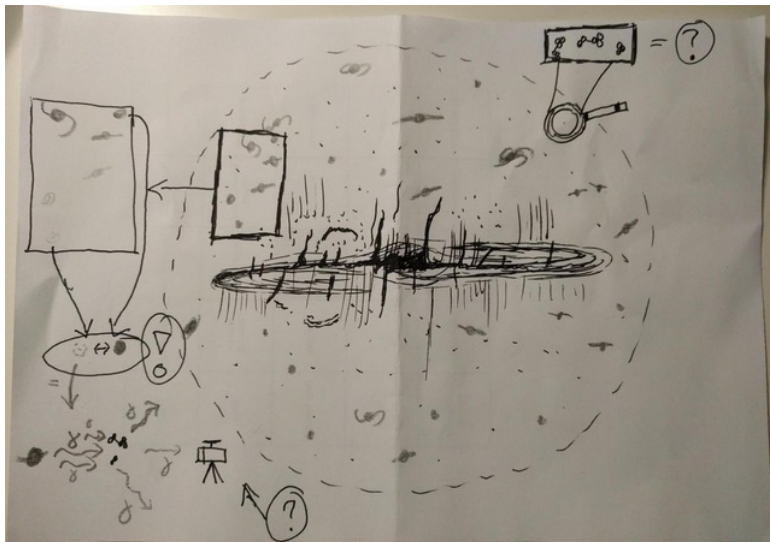
ECR Event in Meinerzhagen 12-14. Oct. 2022



- Organized by ECRs
- Talks about Graduate School (Hendrik) and Equal Opportunity (Eva)
- Plenty of time for exchange
 - Gong Talks
 - Speed dating
 - SMART goal discussion
 - Graphical abstracts
- Plenty of time for networking
 - Hiking
 - Board games
 - ...



ECR Event in Meinerzhagen 12-14. Oct. 2022



4th Graduate School on Plasma-Astroparticle Physics



January 29th - February 3rd 2023: <https://indico.e5.physik.tu-dortmund.de/event/2098/>

Scientific Lectures

- (Astro-)particle Physics (Dennis Soldin)
- Galactic Magnetic Fields (Katia Ferrière)
- Astrophysical Plasmas and CR Propagation (Giovanni Morlino)
- Astrostatistics (Angus Wright)
- Radio Observations (Volker Heesen)
- Event Horizon Telescope (Silke Britzen)

Soft skills

- Scientific Writing (Peter Schneider)

Posters of ECRs



Journal Club, started Oct. 16, 2023



- **Organizer:** Michael Stein
- **Schedule:** Bi-weekly (~1 hour per session, discussing 2 papers)
- **Time: Monday 14:00-15:00, GAFO 03/926**
- **Format:** The JC will be hosted at RUB, but SFB members from all SFB institutions (RUB, TU Dortmund, and Bergische Universität Wuppertal) are invited. Therefore, there will be the option to join the JC online, but we strongly encourage in-person attendance. If there is the option to host the JC in Dortmund or Wuppertal, we can also consider “field trips” once or twice per semester.
- **Selection of Papers:** We will select papers to discuss based on *Bentley fields* through a voting system.
- **Paper Presenters:** Presenters will give a short overview of the field and summarize the paper's key results. Presenting a paper is strongly encouraged but not mandatory to join the JC.

Journal Club, started Oct. 16, 2023



SFB1491 - Journal Club

Next meeting: Monday, November 13, 02:00 PM

Options ▾

Location: RUB GAFO 03/926 - GCCL Common Room

Organizer(s): [Michael Stein](#)

Most active member: No votes since the last journal club

Votes for the next meeting

Total votes: 3 (last vote was 1 day ago)

+ Vote

Title: [Shedding Light on Low Surface Brightness Galaxies in Dark Energy Survey with Transformers \(View PDF\)](#)

Author: H. Thuruthipilly, Junais, A. Pollo, U. Sureshkumar, M. Grespan, P. Sawant, K. Malek, A. Zadrozny

Discussion leader: [Michael Stein](#)

Total votes: 3 (last vote was 1 day ago)

+ Vote

Title: [A planetary collision afterglow and transit of the resultant debris cloud \(View PDF\)](#)

Author: Matthew Kenworthy, Simon Lock, Grant Kennedy, Richelle van Capelleveen, Eric Mamajek, Ludmila Carone, Franz-Josef Hamsch, Joseph Masiero *et al.*

Discussion leader: [Adam Enders](#)

Paper of the year selection



Criteria:

- Only accepted papers will be considered.
- There should be a leading contribution from an early career researcher (ECR), who is employed by or associated with the SFB.
- The content of the paper should be related and relevant to the SFB.

Nomination process:

- Every member of the SFB can submit a nomination.
- Self nominations are encouraged.

Documents required for nomination:

- Summary (max 1 page) of the paper content, including an explanation of the contribution of SFB members (especially the ERC(s)) and importance for SFB.
- Paper DOI or proof of acceptance, full paper in pdf format.

Paper of the year selection



Selection process:

- Selection committee consisting of ECR members representing different fields of the SFB:
 - Julian Boelhauve
 - Janning Meinert
 - Lukas Mertens
 - Kevin Schoeffler
 - Giacomo Sommani
 - Sam Taziaux
- Committee developed detailed selection criteria before looking at nominations

Detailed Criteria Catalog



■ **Contribution**

- Was there a clearly visible contribution by an ECR associated with CIM (and no group effort with only minor contribution by the ECR)?
- Was it an independent contribution by the ECR (and not a contribution requiring a lot of help)?
- Is a creative solution from the ECR visible?

■ **Impact**

- Is the result important and will lead to a large impact in the community?
- Is it revolutionary to the field?
- Is it also relevant for a larger community?
- Does the paper promote CIM to a larger community by, e.g., newly formed collaborations?

■ **Challenge**

- Was the problem difficult to solve?
- Did the path to the result require thinking out of the box (and was not directly clear)?
- Were new techniques developed?

Detailed Criteria Catalog



■ Presentation

- Do title and abstract of the paper convey its main message?
- Are introduction and conclusion also understandable for non-experts?
- Is the paper clearly written including a red line leading through the work?
- Are figures and tables easily understandable and well designed (self-explanatory captions, clear labels and legends, color blindness, legible size)?

■ Relevance

- Is the result directly related to CIM?
- Will the corresponding project and CIM benefit from it?
- Is the result something we promised in the CIM proposal?

Criteria	Weighting
Contribution	25
Impact	25
Challenge	20
Presentation	20
Relevance	10

Paper of the year award ceremony this afternoon

Many Thanks to ECR Representatives



Sophie Aerdker



Massimiliano Lincetto

Important Links



- **ECR Guidelines:** https://sfb1491.tp4.ruhr-uni-bochum.de/graduate_school/phd_guidelines/
- **Kick-off form:** https://sfb1491.tp4.ruhr-uni-bochum.de/graduate_school/phd_guidelines/kickoff_view/
- **Annual Meeting form:** https://sfb1491.tp4.ruhr-uni-bochum.de/graduate_school/phd_guidelines/annual_view/