Etienne Bonnassieux

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ACTIVE INTERNATIONAL COLLABORATIONS

Feb 2022

DFG Research Unit: "Relativistic Jets in Active Galaxies"

Present

Specifically working on the project to study "Large-Scale Blazar Jets: Clues on High-Energy Emission from Low-Frequency Radio Observations"...

Oct 2018

LOFAR-IT

Present

Collaboration working to meet the requirements of the Italian LOw Frequency ARray (LOFAR) community. I was the scientific point of contact to elaborate its national computational infrastructure and LOFAR software deployment.

Oct 2017

NenuFAR

Present

French low- ν extension of LOFAR; I head its "Cluster Filaments & Cosmic Magnetism" early key science project ES09. I also participate in the commissioning of the instrument's standalone imaging mode.

Oct 2017

LOFAR-VLBI

Present

Working group tasked with developing the capabilities of the International LO-FAR Telescope with Very Long Baseline Interferometry. I bring my expertise in direction-dependent calibration and statistical methods.

Oct 2015

LOFAR Surveys KSP

Present

Working group tasked with creating large-scale surveys of the LOFAR radio sky. LOFAR is the Northern-sky precursor to the Square Kilometer Array, which will be located in the Southern sky: this group therefore aims to ultimately image the entire Northern sky to the instrument's best ability.

EDUCATION & QUALIFICATIONS

Jan 2020

Obtained CNU (Conseil National des Universités) Qualification

Obtained CNU Qualification under Section 34, which makes me eligible to hold lecturer positions in French universities.

2015-2018

PhD in Astrophysics - Observatoire de Paris & Rhodes University

Supervisors: Philippe Zarka, Oleg Smirnov, Cyril Tasse

"Statistical Analysis of the Radio-Interferometric Measurement Equation, a derived adaptive weighting scheme, and applications to LOFAR-VLBI observation of the Extended Groth Strip" The adaptive weighting scheme developed as part of this thesis is routinely deployed by the LOFAR Surveys KSP, and has made LOFAR-VLBI achievable in certain cases.

Partnership: LESIA at the Observatoire de Paris (ED127) & RATT-RU, SKA-SA

2013 - 2015

M1 & M2R Astronomie, Astrophysique et Ingénierie Spatiale

Equivalent to Masters of Science. I graduated in Astronomy & Astrophysics. Partnership : Observatoire de Paris, PSL, UPMC, Diderot, Orsay, ENS Ulm

2009-2013

Bsc (2:2, Hons) in Astrophysics - University of Edinburgh

Bachelors of Science, graduated with Honours.

2008-2009 | IB Diploma - Bahrain School

RESEARCH POSITIONS

RESEARCH POSITIONS	
FEB 2022 PRESENT	Post-doctoral Fellowship studying relativistic blazar jets at low frequencies at the Julius-Maximilians-Universität in Würzburg, Germany, under the supervision of Matthias Kadler as part of a joint DFG grant with the University of Hamburg.
ОСТ 2018 FEB 2022	Post-doctoral Fellowship studying galactic cluster science at low frequencies at the University of Bologna, Italy, under the supervision of Annalisa Bonafede as part of the DRANOEL ERC grant.
Teaching & Scientific Outreach	
Jun 2019	Lectured at the First Italian LOFAR School
	Taught a workshop on using modern direction-dependent calibration & imaging suites DDF and killMS to participants. Helped tutor in the courses of colleagues.
	Tutored in the Paris Observatory DU-LU course
SEP 2017 Jul 2018	Supervised four students as part of an online course, usually teachers or amateur scientists in the workforce.
SEP 2015 Jul 2016	Of my six students, four successfully carried on to other programs in the DU; two dropped during the year for personal reasons.
	Lectured for NASSP
SEP 2017	Interferometry course: two 1-hour lectures on visibilities, UV-plane, PSF, and ZVC theorem. Course was aimed at honours astrophysics students at UCT.
SEP 2016	As above, but aimed at masters astrophysics students at UCT: content was at a higher level. This also entailed writing and marking a homework question.
SEP 2017	Wrote and organised a pyrap tutorial during 3GC4 Wrote an ipython notebook tutorial on pyrap, a python library. Easily converted into scripts, it has been a very popular tutorial with colleagues over the years. It can be found at https://github.com/ebonnassieux/Scripts/blob/master/PyrapTutorial.ipynb
SEP 2017	Editing "Visibility Space" chapter of Fundamentals of Interferometry This is an online coursebook written in multiple ipython notebooks, fruit of years of labour from many contributors. It remains an exceptional educational resource for new scientists, and the one I use as a point of reference for students. I edited Julien Girard's work for clarity in the second year of my PhD, and taught the contents to others during my time in South Africa. Link here: https://github. com/ratt-ru/fundamentals_of_interferometry.
	Lectured Physics 101
JAN 2017	Introductory undergraduate course in basic mechanics, aimed non-physicist

APR 2017 undergraduates. Of 60-odd students, 15 were also in my tutorial group.

Paris Observatory's outreach program, organised by Alain Doressoundiram. I

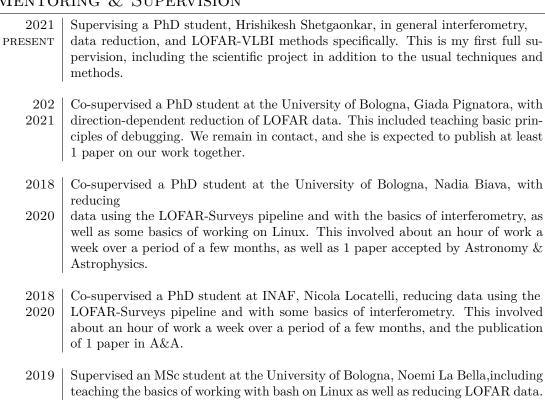
helped teachers (primary-school, middle-school) organise scientific demonstrations.

Paris Observatory "Parrainage"

Sep 2016

Jul 2015

MENTORING & SUPERVISION



This did not result in a publication, though one is in preparation.