

Anna Niemiec

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Research Experience

- 2020 **Postdoctoral researcher**, *Durham University*, UK.
 - **Advisor:** Mathilde Jauzac
- 2018–2020 **Postdoctoral researcher**, *University of Michigan*, USA.
 - **Advisor:** Keren Sharon
- 2014–2017 **PhD**, *Laboratoire d'Astrophysique de Marseille*, France.
 - **Thesis:** Influence of the environment on galaxy evolution
 - **Advisors:** Eric Jullo and Marceau Limousin
- 2013–2014 **Research Internship**, *Centro Brasileiro de Pesquisas Fisicas*, Rio de Janeiro - Brasil.
 - **Thesis:** Strong lensing in the CS82 survey
 - **Advisor:** Martin Makler

Education

- 2014–2017 **PhD in "Astrophysics and Cosmology"**, awarded on 28/09/2017, *Laboratoire d'Astrophysique de Marseille/Aix Marseille Université*, France.
- 2012–2013 **Masters (2nd y.)**, *Université Paris VI (UPMC)*, France.
Noyaux, Particules, Astroparticules et Cosmologie (NPAC), cosmology specialty
- 2011–2012 **Masters (1st y.)**, *Ecole Normale Supérieure de Cachan*, France.
Theoretical and experimental physics
- 2010–2011 **Bachelor**, *Ecole Normale Supérieure de Cachan*, France.
Science and Technology, physics specialty

Teaching & Supervision

- 2019 Supervision of an undergraduate research project « Mass segregation of satellite galaxies in the TNG simulation »
- 2014–2017 As a teaching assistant: practicals in Wave optics, Electronics, Geometric optics and Mathematics

Service to the community

Referee for MNRAS, A&A

Institutional responsibilities

- 2019 Organizer of the "Galaxy cluster seminars" at University of Michigan
- 2015–2017 Organizer of the "Tea Time Chat" meetings at LAM

Organization of scientific meetings

- Feb 2019 BUFFALO meeting at University of Nevada Las Vegas (UNLV) - SOC (<https://conference.ipac.caltech.edu/buffalo2019unlv/>)
- Oct 2018 BUFFALO meeting at the Laboratoire d'Astrophysique de Marseille
- Jul 2017 Galaxy Clusters Across Cosmic Time Conference (Aix-en-Provence - France)

Collaboration memberships

BUFFALO : co-Lead Mass Modeling Working group

ISSI International Team "Cluster Physics from space to reveal Dark Matter: current and future challenges"

Outreach and Communication

- 2019 Organizer of "Astronomy on Tap" events, Ann Arbor, USA
- 11/2017 Public communication in "Lettre d'AMU", thesis works, France (https://www.univ-amu.fr/system/files/2019-02/DIRCOM-lettre_amu_n55_novembre2017_0.pdf p.26)
- 05/2017 Public lecture, "13 Minutes Jeunes Chercheurs", France (<https://vimeo.com/243808833>)
- 2014–2016 Facilitator at the "Fete de la science", LAM, France
- 2014–2015 Organizer of a series of astronomy workshops for inmates at Marseille's prison, France

Skills

- Programming Python, C, Bash, MCMC, Python/C binding, PyTorch, Machine Learning
- Software Lenstool, DS9, Topcat, SExtractor, git, pyRRG
- Languages French (native), Polish (native), English (advanced), Spanish (basic knowledge)

Oral Presentations

Invited talk.

- 2019 St Mary's University (Halifax - Canada) *Seminar*

Contributed talks.

- 2019 Matera Oscura (Matera - Italy) *Conference*
- 2019 Great Lakes Cosmology Workshop (Rochester, NY - USA) *Workshop*
- 2019 Société Française d'Astronomie (SF2A) days (Nice - France) *Workshop*
- 2019 Lenstool days (Lyon - France) *Workshop*
- 2019 Durham University (UK) *Talk*
- 2017 Large Scale Structures Workshop (Granada - Spain) *Workshop*
- 2017 Galaxy Clusters Across Cosmic Time (Aix-en-Provence - France) *Conference*
- 2017 Galaxy Clusters conference (Santander - Spain) *Conference*
- 2016 eBOSS-DESI France meeting (Paris - France) *Collaboration meeting*
- 2016 GravLens (Leiden, the Netherlands) *Conference*
- 2016 Astronomical Data Analysis Summer School (Chania - Grece) *Workshop*

2016	eBOSS meeting (EPFL - Switzerland)	Collaboration meeting
2015	MultiDarkLens meeting (Marseille - France)	Collaboration meeting
2015	SDSS meeting (Madrid - Spain)	Collaboration meeting

Publications

Published.

A. Niemiec, M. Jauzac, E. Jullo, M. Limousin, K. Sharon, J.-P. Kneib, P. Natarajan, J. Richard. *hybrid-Lenstool: A self-consistent algorithm to model galaxy clusters with strong- and weak-lensing simultaneously*. MNRAS, Volume 493, p. 3331-3340, April 2020.

E. J. Gonzalez, M. Chalela, M. Jauzac, D. Eckert, M. Schaller, D. Harvey, **A. Niemiec**, A. M. Koekemoer, D. Barnes, D. Clowe, T. Connor, J. M. Diego, J. D. Remolina Gonzalez, C. L. Steinhardt. *Setting the scene for BUFFALO: A study of the matter distribution in the HFF galaxy cluster MACS J0416.1-2403 and its parallel field*. MNRAS, Volume 494, p. 349-362, March 2020.

A. Niemiec, E. Jullo, C. Giocoli, M. Limousin and M. Jauzac. *Dark matter stripping in galaxy clusters: a look at the Stellar to Halo Mass relation in the Illustris simulation*. MNRAS, Volume 487, Issue 1, p.653-666. July 2019.

A. Niemiec, E. Jullo, A. Montero-Dorta, F. Prada, S. Rodriguez-Torres, E. Perez and A. Klypin. *Probing galaxy assembly bias with LRG weak lensing observations*. MNRAS: Letters, Volume 477, Issue 1, p.L1-L5, June 2018.

A. Montero-Dorta, E. Pérez, F. Prada, S. Rodríguez-Torres, G. Favole, A. Klypin, R. Cid Fernandes, R. M. González Delgado, A. Domínguez, A. S. Bolton, R. García-Benito, E. Jullo, **A. Niemiec**. *The Dependence of Galaxy Clustering on Stellar-mass Assembly History for LRGs*. The Astrophysical Journal Letters, Volume 848, Issue 1, article id. L2, October 2017.

A. Niemiec, E. Jullo, M. Limousin, C. Giocoli, T. Erben, H. Hildebrandt, J.-P. Kneib, A. Leauthaud, M. Makler, B. Moraes, M. E. S. Pereira, H. Shan, E. Rozo, E. Rykoff and L. Van Waerbeke. *Stellar-to-halo mass relation of cluster galaxies*. MNRAS, Volume 471, p.1153-1166, October 2017.

G. Favole, J. Comparat, F. Prada, G. Yepes, E. Jullo, **A. Niemiec**, J.-P. Kneib, S. A. Rodriguez-Torres, A. Klypin, R. A. Skibba, C. K. McBride, D. J. Eisenstein, D. J. Schlegel, S. E. Nuza, C. H. Chuang, T. Delubac, C. Yèche and D. P. Schneider. *Clustering properties of g-selected galaxies at $z \sim 0.8$* . MNRAS, Volume 461, Issue 4, p.3421-3431, October 2016.

F. Abe, C. Airey, E. Barnard, J. Baudrey, C. Botzler, D. Douchin, M. Freeman, P. Larsen, **A. Niemiec**, Y. Perrott, L. Philpott, N. Rattenbury and P. Yock. *Extending the Planetary Mass Function to Earth Mass by Microlensing at Moderately High Magnification*. MNRAS, Volume 431, p.2975-2985, June 2013.

Accepted for publication.

C. L. Steinhardt, M. Jauzac, A. Acebron, H. Atek, P. Capak, I. Davidzon, D. Eckert, D. Harvey, A. M. Koekemoer, C. D. P. Lagos, G. Mahler, M. Montes, **A. Niemiec**, M. Nonino, P. A. Oesch, J. Richard, S. A. Rodney, M. Schaller, K. Sharon, L.-G. Strolger, ... The BUFFALO HST Survey. Accepted ApJS.

In prep.

A. Niemiec, M. Jauzac, D. Lagattuta, G. Mahler, K. Sharon, D. Harvey. *Beyond the Ultra-deep Frontier Fields And Legacy Observations: a high-resolution strong+weak-lensing view of Abell 370*