Francesco M. C. Belfiore

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EDUCATION

2013-present	**University of Cambridge (St John's College), UK**. PhD candidate in Cavendish Astrophysics and Kavli Institute for Cosmology. Thesis project on 'Mechanisms regulating evolution in galaxies: Insights from statistical studies of nearby galaxies'. Advisor: Prof. R. Maiolino.
2012-2013	University of Cambridge (St John's College), UK. *First Class* MSci in Experimental and Theoretical Physics (Natural Sciences Tripos). Masters Project on 'Modelling the 21cm signal from reionisation'. Advisor: Prof. P. Alexander.
2009-2012	University of Cambridge (St John's College), UK. *First Class* BA in Natural Sciences (Physics).
2007-09	United World College of the Adriatic, Duino (Trieste), Italy. International Baccalaureate (IB) Diploma achieved with full points (45/45).

ACADEMIC HONOURS AND PRIZES

2013-present	STFC Studentship Award
2013	BP-Neville Mott Prize for outstanding achievements in the Natural Sciences Tripos, Cavendish Laboratory.
2009-present	St John's College Scholarships and prizes for academic excellence: 2014-15 (College Scholarship Prize), 2012 (United Steel, Hughes and Hockin Prizes), 2011 (United Steel, Earle, Hockin and Quass Prizes), 2010 (United Steel and Wrigth Prizes).
2007-09	Italian National Committee full scholarship towards attendance to the United World College of the Adriatic.

OBSERVING PROGRAMS

Observing experience

2014	IRAM-30m Observing Run (5 days)
2015-16	ARO-12m antenna, remote observing.

Approved competitive programs

2015	**PI: Belfiore**, ESO VLT-MUSE Program (096.B-0223, 2hr). 'The Forgotten Metals: the behaviour of the gas phase metallicity gradients at extreme radii in disc galaxies'.
	PI: Masters, `HI-MaNGA: HI Followup for MaNGA Galaxies', GBT L-band, (198.25 hrs, ongoing).

LIST OF PUBLICATIONS

First author publications

P-MaNGA Galaxies: emission-lines properties - gas ionization and chemical abundances from prototype observations, **F. Belfiore**, R. Maiolino, K. Bundy et al., 2015, MNRAS, 449, 867.

Galaxy gas flows inferred from a detailed, spatially resolved metal budget, **F. Belfiore**, R. Maiolino and M. Bothwell, 2016, MNRAS, 455, 1218.

Co-authored publications

Modern yields per stellar generation: the effect of the IMF, F. Vincenzo, F. Matteucci, **F. Belfiore**, R. Maiolino, MNRAS accepted, arXiv:1503.08300.

Overview of the SDSS-IV MaNGA Survey: Mapping nearby Galaxies at Apache Point Observatory, K. Bundy, [...], **F. Belfiore** et al., 2015, ApJ, 798, 24.

P-MaNGA: full spectral fitting and stellar population maps from prototype observations, D. Wilkinson, [...], **F. Belfiore** et al., 2015, MNRAS, 449, 328.

TALKS AND SEMINARS

Contributed talks at conferences

2016

AAS 2016, Kissimmee (FL), 'SDSS IV MaNGA – The smooth transition between star formation and quiescence and the role of the LI(N)ER emission in the z=0 Universe.' Associated to a press release.

2015

Cefalù, Science with MOS: Towards the E-ELT era, Talk title: 'The spatially resolved transition between star formation and quiescence with MaNGA.'

Heidelberg, A 3D view on galaxy evolution, from Statistics to Physics, Talk title: 'Resolved chemical abundances with MaNGA: shedding new light on feedback processes in galaxies'.

Tenerife, EWASS 2015, Talk title: 'Where are the metals? Using spatially resolved chemical abundances of gas and stars to shed new light on feedback processes'.

2014

Portsmouth, NAM 2014, Talk title: 'MaNGA: the first large scale IFU survey'.

ESO Garching, Gas and stars in galaxies: A multi-wavelength 3D perspective, Talk title: 'The resolved mass-metallicity relation and its dependence on gas mass content'.

TEACHING

Teaching assistant (`Cambridge style supervisor'): First year (Part IA) Maths (2014-15) and Physics (2013-15) courses at St John's College, University of Cambridge.
Co-advisor for Masters Projects (Part III Projects), together with Prof. R. Maiolino.
2014-2015 S. Yang. Project title: 'Metallicity gradients in the CALIFA galaxies'.
A. Zukovsky. Project title: 'LINER emission in SDSS galaxies'.

OTHER ACTIVITIES and SKILLS

Scientific Collaborations
Active member of SDSS IV MaNGA (PI: Bundy). From 2015 member of the MaNGA management as Early Career Scientist representative.

Press Releases
AAS 2016 Press Release, `Why some galaxies are LIERs', associated with the SDSS IV MaNGA special session.

Professional Service
Local organizing committee for the Kavli Workshop 'Modelling galaxies through cosmic time' (2015).

Memberships
American Astronomical Society (Junior member).

Outreach
Physics at Work 2014 (2014), a three-day event that aims to stimulate interest and encourage wider participation in physics amongst 14- to 16-year-olds.

Magdalene College Science Residential (2014 and 2015), outreach event dedicated to perspective Cambridge applicants.

Public Observing at the Institute of Astronomy, Cambridge (2014).

SDSS IV blog post author (2015).

Member of the regional selection panel for UWC studentship allocation in Sicily (2012-14).

Language skills
Fluent Italian and English, intermediate French and German.