

# Michele Fumagalli

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## Scientific Interests

Gas flows around galaxies, galaxy formation and evolution, the role of environment, absorption line systems, physics of the interstellar medium, star formation, stellar initial mass function.

## Academic History

- 2020- **Professor**, *University of Milano Bicocca*.
- 2020- **Visiting Professor**, *Durham University*.
- 2018-2020 **Professor**, *Durham University*.
- 2017-2018 **Associate Professor (Reader)**, *Durham University*.
- 2014-2017 **Assistant Professor (Lecturer)**, *Durham University*.
- 2013-2014 **Postdoctoral Fellow**, *Carnegie Observatories, Princeton University*.

## Education

- 2016 **Postgraduate Certificate in Academic Practice**, *Durham University, UK*.
- 2012 **Ph.D. in astrophysics**, *University of California, Santa Cruz, USA*.
- 2010 **Master in astrophysics**, *University of California, Santa Cruz, USA*.
- 2008 **Laurea specialistica (MSc)**, *University of Milano Bicocca, Italy*.
- 2006 **Laurea triennale (BSc)**, *University of Milano Bicocca, Italy*.

## Selected Awards and Fellowships

- 2017 **Abilitazione Nazionale Italiana**, *Professore Associato e Ordinario*.
- 2015 **Fellow of the Higher Education Academy**.
- 2014-2015 **Carnegie Visiting Associate**, *Carnegie Observatories*.  
Visiting fellowship at Carnegie Observatories.
- 2012 **Lyman Spitzer Fellowship**, *Princeton University*.  
Postdoctoral fellowship in theoretical astrophysics.
- 2012 **Carnegie-Princeton Fellowship**, *Carnegie Observatories, Princeton University*.  
Postdoctoral fellowship in observational astrophysics.
- 2012 **Hubble Fellowship**, *Carnegie Observatories*.  
Awarded to highly qualified recent postdoctoral scientists to conduct independent research.

- 2012 **CfA Fellowship**, (declined), The Harvard-Smithsonian Center for Astrophysics.  
Awarded to an outstanding researcher displaying significant promise in theory or observation.
- 2012 **Miller Research Fellowship**, (declined), University of California, Berkeley.  
Awarded to exceptional young scientists of great promise.
- 2011 **Price Prize in Cosmology and AstroParticle Physics**, CCAPP, Ohio State University.  
Awarded in recognition of research excellence in cosmology and astro-particle physics.
- 2011 **Chancellor's Dissertation Year Fellowship**, UCSC.  
Awarded based on the academic achievement of the nominee.
- 2010 **Whitford Prize**, Department of Astronomy, UCSC.  
Awarded for outstanding performance during the first and second years.
- 2008 **Regents' fellowship**, UCSC.  
Awarded to promising first-year graduate students.

## Grant History

- 2020 **Durham Astronomy Consolidated Grant**, STFC, (Project co-PI).
- 2019 **NASA grant**, HST-GO-15637, (Science Co-PI).
- 2018 **ERC Attrattività**, Fondazione Cariplo, (PI).
- 2017 **ERC Starting Grant**, ERC, (PI).
- 2017 **Durham Astronomy Consolidated Grant**, STFC, (Project PI).
- 2015 **NASA grant**, HST-GO-14127, (Science PI).
- 2012 **NASA Hubble Fellowship**, grant HF-51305.01-A, (PI).
- 2010 **HIPACC grant**, University California, (PI).

## Talks and Seminars

- Jun., 2020 **KIAA Forum on Gas in Galaxies for Early Career Scientists**, *Kavli Institute for Astronomy and Astrophysics*, invited.  
Flows around galaxies: advancements, challenges and opportunities
- May., 2021 **Multi-object Spectroscopy for Statistical Measures of Galaxy Evolution Workshop**, *Space Telescope Science Institute*, invited review.  
Studying gas flows around galaxies with multi object spectroscopy
- May., 2021 **Extragalactic Seminar Series**, *University of Victoria*, invited.  
Shedding light on gas around galaxies across cosmic times
- Apr., 2021 **Astronomy Colloquium**, *University of California, Santa Cruz*, invited.  
Shedding light on gas around galaxies across cosmic times
- Mar., 2021 **Physics Colloquium**, *North Carolina State University*, invited.  
Shedding light on gas around galaxies across cosmic times
- Nov., 2020 **Kapteyn Institute Colloquium**, *University of Groningen*, invited.  
Shedding light on gas around galaxies across cosmic times
- Jun., 2020 **EAS 2020**, *Leiden*, invited review.  
Flows around galaxies in 2020: advancements, challenges and opportunities
- Jun., 2020 **Insights into the CGM and ICM**, *IAP, France*, invited.  
MUSE observations of the CGM of distant galaxies
- Apr., 2020 **Astronomy Colloquium**, *Royal Observatory/Edinburgh*, invited.  
Shedding light on gas around galaxies across cosmic times
- Mar., 2020 **Astronomy Colloquium**, *INAF/Arcetri*, invited.  
Shedding light on gas around galaxies across cosmic times

- Dec., 2019 **Joint Astronomy Colloquium, MPA-MPE-ESO**, invited.  
Shedding light on gas around galaxies across cosmic times
- Oct., 2019 **CGM in Berlin 2019, Max Planck Society**, invited.  
Gas around galaxies at  $z \sim 2 - 3$ : linking emission and absorption with large surveys
- Jun., 2019 **What Matter(s) Between Galaxies, Abbazia di Spineto, SOC**.  
Gas around galaxies: connecting emission and absorption with large surveys
- Mar., 2019 **Astronomy Seminar, Nottingham University**, invited.  
Shedding light on gas around galaxies across cosmic time
- Dec., 2018 **Twenty years of science at Bicocca, Milano-Bicocca University**, invited review.  
Astrophysics  $\pm 20$ : Deeper, Sharper, and Bigger
- Nov., 2018 **CASTOR UV space observatory, The Royal Observatory Edinburgh**, invited review.  
The galaxy-IGM connection
- Jun., 2017 **What Matter(s) Around Galaxies, Durham University, SOC/LOC co-chair**.  
Probing the gaseous environment of star-forming galaxies in absorption and emission
- Apr., 2017 **Seminar, Department of Physics, University of Milano-Bicocca**, invited.  
MUS(E)ing over gas flows as drivers of galaxy evolution
- May., 2016 **Cavendish Astrophysics Seminar, University of Cambridge**, invited.  
Gas flows as fuel for star formation: a spotlight on strong absorption line systems
- Apr., 2016 **Astronomy Seminar, ETH Zurich**, invited.  
Gas flows as fuel for star formation: a spotlight on strong absorption line systems
- Mar., 2016 **Astronomy Seminar, Stockholm University**, invited.  
Gas flows as fuel for star formation: a spotlight on strong absorption line systems
- Sep., 2015 **Astronomy Seminar, INAF/Trieste**, invited.  
Gas flows as fuel for star formation: a spotlight on strong absorption line systems
- Jun., 2015 **IGM@50, INAF/Firenze**, invited.  
Probing gas flows near galaxies: a spotlight on Lyman Limit Systems
- Jun., 2014 **Intergalactic Matters, MPIA, Heidelberg**, invited.  
A shot in the dark: the star formation rates of DLAs at  $z \sim 2 - 3$
- Apr., 2014 **Colorful galaxies: a conference for Peppo Gavazzi's birthday, Como, Italy**, invited.  
Can we use  $H\alpha$  to trace star formation rates?
- Apr., 2014 **Exploiting VST ATLAS... and its sister surveys, Durham University**, invited.  
ATLAS search for Lyman Limit Systems in quasar pairs.
- Mar., 2014 **Astronomy Friday Lunch Talks, Durham University**.  
The importance of stochastic effects in stellar population synthesis.
- Jan., 2014 **DEX meeting, Durham University**.  
Investigations on the gaseous environment of distant galaxies.
- Dec., 2013 **TAPIR seminar, Caltech**, invited.  
Investigations on the gaseous environment of distant galaxies.
- Oct., 2013 **Metal Production and Distribution in a Hierarchical Universe, Rencontres de l'Observatoire de Paris 2013 - ESO Workshop**, invited review.  
IGM abundances in the high-redshift universe.
- Aug., 2013 **Santa Cruz Galaxy Workshop, UCSC**.  
Lyman limit systems and the circumgalactic medium at  $z \sim 2 - 3$ .
- Jun., 2013 **Intergalactic Interactions, Higgs Centre, Edinburgh**, invited.  
Lyman limit systems and the circumgalactic medium at  $z \sim 2 - 3$ .
- Jun., 2013 **ENIGMA workshop, MPIA**, invited.  
Lyman limit systems and the circumgalactic medium at  $z \sim 2 - 3$ .

- Apr., 2013 **Lunch Talk, Carnegie Observatories.**  
Beyond the disk: The role of halo gas in galaxy formation.
- Mar., 2013 **Hubble Fellows Symposium, STScI, Baltimore.**  
Optically-thick hydrogen in the  $z=3$  universe
- Dec., 2012 **University of Milano-Bicocca, Milan, invited.**  
The gaseous environment of distant galaxies
- Nov., 2012 **UT Astronomy Colloquium, Austin, invited.**  
The gaseous environment of distant galaxies
- Sep., 2012 **Keck Science Meeting, San Diego.**  
Pristine gas two billion years after the Big Bang
- Jun., 2012 **Metals in Tuscany, INAF/Firenze, invited.**  
Pristine gas two billion years after the Big Bang
- May., 2012 **Price Prize lecture, CCAPP Ohio State University, invited.**  
Cosmology with absorption line systems
- Apr., 2012 **Astronomy Colloquium, Osservatorio Astronomico di Brera, invited.**  
Cosmology with absorption line systems
- Mar., 2012 **Turbulence in Cosmic Structure Formation, Arizona State University.**  
Detection of pristine gas two billion years after the Big Bang
- Jan., 2012 **DARK Cake Meeting, DARK Cosmology Centre.**  
Detecting cold accretion and metal poor gas around galaxies
- Jan., 2012 **219th AAS Meeting, Austin, TX.**  
Exploring the gas cycle in high-redshift galaxies: a joint effort of theory and observations
- Dec., 2011 **Theory meeting of the Galaxy and Cosmology group, MPA Heidelberg.**  
Probing inflow in high-redshift galaxies
- Oct., 2011 **Theoretical Astrophysics Center seminar, UC Berkeley, invited.**  
Exploring the gas cycle in high-redshift galaxies: a joint effort of theory and observations
- Oct., 2011 **Lunch Talk, Carnegie Observatories.**  
Exploring the gas cycle in high-redshift galaxies: a joint effort of theory and observations
- Oct., 2011 **Astronomy Tea Talk, Caltech.**  
Exploring the gas cycle in high-redshift galaxies: a joint effort of theory and observations
- Aug., 2011 **Santa Cruz galaxy workshop, Santa Cruz.**  
Cold streams and primordial gas at high redshift
- Jul., 2011 **Celebrating the career of A. Wolfe, Schloss Ringberg, invited.**  
Detecting cold streams with absorption line systems
- Jul., 2011 **MPA, Heidelberg.**  
Stochastic star formation and IMF (non) variation
- Jun., 2011 **Odyssey of cosmic baryons, Marseille.**  
Detecting cold streams with absorption line systems
- Jun., 2011 **Gas in galaxies, Kloster Seeon, Germany.**  
Detecting cold streams with absorption line systems
- Dec., 2010 **CASS, UCSD, San Diego.**  
Gas in and around galaxies
- Aug., 2010 **Santa Cruz galaxy workshop, Santa Cruz.**  
Gas in simulations of  $z > 2$  galaxies
- May, 2010 **Como+Milano+Heidelberg+Marseille.**  
Images and simulations to connect gas and stars in  $z > 2$  galaxies
- Apr., 2010 **UCSC, Santa Cruz.**  
Hunting gas and stars in galaxies across the Universe

- Aug., 2009 **Santa Cruz Galaxy Workshop, Santa Cruz.**  
A shot in the dark: probing galaxies giving rise to DLAs at  $z > 2$
- Aug., 2009 **UCSC Friday Lunch Talk, Santa Cruz.**  
Molecular gas deficiency in HI poor galaxies
- Jun., 2009 **University of Chicago, Chicago.**  
A shot in the dark: imaging of DLAs
- Mar., 2009 **Università dell'Insubria, Como, Italy.**  
Star formation  $z = 0 - 3$
- Dec., 2008 **CASS, UCSD, San Diego.**  
The star formation rate and gas content in local spiral galaxies
- Jul., 2008 **Università di Milano-Bicocca, Milano, Italy.**  
The relationship between gas content and star formation rate in spiral galaxies

## Proposal History (principal investigator or primary co-investigator)

- 2021 ALMA; 9 hours, cycle 8.
- 2019 ESO/VLT; 25 hours, P105.
- 2019 Hubble Space Telescope; 8 orbits, cycle 27.
- 2019 JCMT/SCUBA-2; 30 hours, 2019B.
- 2018 Hubble Space Telescope; 90 orbits, cycle 26 (LP).
- 2017 ESO/VLT; 250 hours, P101 (LP).
- 2018 JCMT/SCUBA-2; 16 hours, 2018A.
- 2017 ESO/VLT; 36 hours, P100.
- 2017 JCMT/SCUBA-2; 9 hours, 2017B.
- 2016 ESO/VLT; 18 hours, P99.
- 2016 Keck Telescope; 2 nights, 2016B.
- 2016 Hubble Space Telescope; 96 orbits, cycle 24 (LP).
- 2016 JCMT/SCUBA-2; 9 hours, 2016B.
- 2016 Keck Telescope; 1 night, 2016A.
- 2016 WHT; 12 nights, 2016A.
- 2016 ESO/VLT; 106 hours, P97-100 (LP).
- 2015 WHT; 9 nights, 2015B.
- 2015 ESO/VLT; 9 hours, P96.
- 2015 Hubble Space Telescope; 55 orbits, cycle 23.
- 2014 ESO/VLT; 28 hours, P95.
- 2014 ESO/VLT; 5 hours, P94.
- 2014 Gemini-S Telescope; 30 hours, 2014A.
- 2014 Magellan Telescope; 4 nights, 2014A.
- 2013 Magellan Telescope; 5 nights, 2013B.
- 2013 Keck Telescope; 1 night, 2013B.
- 2012 Keck Telescope; 1 night, 2013A.
- 2012 Magellan Telescope; 4 nights, 2013A.
- 2012 Magellan Telescope; 4 nights, 2012B.

2011 IRAM 30m Telescope; 64 hours, 2011B.

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## Teaching and Advising

- 2019- Astrophysics Laboratory; MSc at University of Milano-Bicocca.
- 2018-2019 Radiative processes in astrophysics; PhD lecture series at Durham University.
- 2018 The role of baryonic process in galaxy formation and evolution; PhD lecture series at University of Milano-Bicocca.
- 2016-2017 PHYS2651: Physics in Society, BSc at Durham University.
- 2014-2019 PHYS1081: Introduction to Astronomy, BSc at Durham University.
- 2014-2018 PHYS1101: Discovery Skills in Physics, BSc at Durham University.
- 2009 Ay2: Overview of the Universe, BSc at UCSC.

PhD Students    Mr. Georg Herzog (2020-), University of Milano-Bicocca.  
                      Mr. Calvin Sykes (2017-2021), Durham University (PhD, 2021).  
                      Ms. Louise Welsh (2017-), Durham University.  
                      Mr. Ruari Mackenzie (2014-2018), Durham University (PhD, 2018).  
                      Mr. Greg Ashworth (2014-2018), Durham University (PhD, 2018).

PDRAs        Dr. Alejandro Benitez Llambay (2021-), University of Milano-Bicocca.  
                      Dr. Alessia Longobardi (2021-), University of Milano-Bicocca.  
                      Dr. Rajeshwari Dutta (2019-), Durham University, University of Milano-Bicocca.  
                      Dr. Matteo Fossati (2018-2021), Durham University, University of Milano-Bicocca.  
                      Dr. Emma Lofthouse (2018-), Durham University, University of Milano-Bicocca.  
                      Dr. Elisabeta Lusso (2017-2019), Junior Research Fellow, Durham University.  
                      Dr. Richard Bielby (2017-2019), Durham University.

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## Membership and Activities

- 2021 Member of the MOSAIC/ELT Science working groups “First Light” and “Inventory of matter”
- 2021 Member of the Science Working Group, WEAVE survey
- 2020 Coordinator of Absorption Line Studies in the Quasar Working Group, WEAVE survey
- 2020 Chair of PhD Admission Committee, Physics Department, University of Milano-Bicocca
- 2020 Panel Member, USA National Science Foundation
- 2018- Peer reviewer, Nature
- 2018- Peer reviewer, European Research Council
- 2017- Peer reviewer, Nature Astronomy
- 2016-2018 Member of Van Mildert College Council, Durham University
- 2016- HIRES/ELT Galaxy and IGM Working Group
- 2012- Peer reviewer, Astrophysical Journal
- 2012- Peer reviewer, Monthly Notices of the Royal Astronomical Society
- 2012- Peer reviewer, Astronomy and Astrophysics
- 2011-2012 Graduate Student Mentor, UCSC Astronomy & Astrophysics Department

2011-2015 Member, European Physical Society  
2011-2012 Member, American Astronomical Society  
2008-2015 Member, Società Italiana di Fisica

## Refereed publications

1. Lehner, N. et al. 2022, ApJ submitted (arXiv:2112.03304). *KODIAQ-Z: Metals and Baryons in the Cool Intergalactic and Circumgalactic Gas at  $2.2 < z < 3.6$* .
2. Nowotka, M. et al. 2022, A&A in press (arXiv:2111.15374). *A Multiwavelength Study of ELAN Environments (AMUSE<sup>2</sup>): Ubiquitous dusty star-forming galaxies associated with enormous Ly $\alpha$  nebulae on megaparsec scales*.
3. Arrigoni Battaia, F. et al. 2022, ApJ submitted (arXiv:2111.15392). *A Multiwavelength Study of ELAN Environments (AMUSE<sup>2</sup>): Mass budget, satellites spin alignment and gas infall in a massive  $z \sim 3$  quasar host halo*.
4. Orozco-Duarte, R. et al. 2022, MNRAS, 509, 522. *Synthetic photometry of OB star clusters with stochastically sampled IMFs: analysis of models and HST observations*.
5. Benitez-Llambay, A., **Fumagalli, M.** 2021, ApJL, 921, 9. *The Tail of Late-Forming Dwarf Galaxies in  $\Lambda$ CDM*.
6. Dutta, R., **Fumagalli, M.**, Fossati, M. et al. 2021, MNRAS, 508, 4573. *Metal-enriched halo gas across galaxy overdensities over the last 10 billion years*.
7. Dalton, T., Morris, S.L., **Fumagalli, M.**, Gattuzzi, E. 2021, MNRAS, 508, 1701. *Probing the physical properties of the intergalactic medium using blazars*.
8. Menon, S.H. et al. 2021, MNRAS, 507, 5542. *The Dependence of the Hierarchical Distribution of Star Clusters on Galactic Environment*.
9. Beckett, A., Morris, S.L., **Fumagalli, M.** et al. 2021, MNRAS, 506, 2574. *The relationship between gas and galaxies at  $z < 1$  using the Q0107 quasar triplet*.
10. Della Bruna, L. et al., 2021, A&A, 650, 103. *Studying the ISM at  $\sim 10$  pc scale in NGC 7793 with MUSE – II. Constraints on the oxygen abundance and ionising radiation escape*.
11. Fossati, M., **Fumagalli, M.**, Lofthouse, E.K. et al. 2021, MNRAS, 503, 3044. *MUSE Analysis of Gas around Galaxies (MAGG) - III: The gas and galaxy environment of  $z = 3 - 4.5$  quasars*.
12. Dalton, T., Morris, S.L., **Fumagalli, M.** 2021, MNRAS, 502, 5981. *Probing the physical properties of the intergalactic medium using gamma-ray bursts*.
13. Berg, T.A.M., **Fumagalli, M.**, D’Odorico, V. et al. 2021, MNRAS, 502, 4009. *Sub-damped Lyman alpha systems in the XQ-100 survey II – Chemical evolution at  $2.4 < z < 4.3$* .
14. Joshi, R., **Fumagalli, M.**, Srianand, R. et al. 2021, ApJ, 908, 129. *Discovery of a damped Ly $\alpha$  galaxy at  $z \sim 3$  towards the quasar SDSS J011852+040644*.
15. Welsh, L., Cooke, R., **Fumagalli, M.** 2021, MNRAS, 500, 5214. *The stochastic enrichment of Population II stars*.
16. Dutta, R., **Fumagalli, M.**, Fossati, M. et al. 2020, MNRAS, 499, 5022. *MUSE Analysis of Gas around Galaxies (MAGG) - II: Metal-enriched halo gas around  $z < 1$  galaxies*.
17. Decataldo, D., Lupi, A., Ferrara, A., Pallottini, A., **Fumagalli, M.** 2020, MNRAS, 497, 4718. *Shaping the structure of a GMC with radiation and winds*.

18. **Fumagalli, M.**, Fotopoulou, S., Thomson, L. 2020, MNRAS, 498, 1951. *Detecting neutral hydrogen at  $z > 3$  in large spectroscopic surveys of quasars.*
19. Stott, J.P. et al. 2020, MNRAS, 497, 3083. *Quasar Sightline and Galaxy Evolution (QSAGE) survey – II. Galaxy overdensities around UV luminous quasars at  $z = 1 - 2$ .*
20. Bielby, R., **Fumagalli, M.**, Fossati, M. et al. 2020, MNRAS, 493, 5336. *Into the Ly $\alpha$  jungle: exploring the circumgalactic medium of galaxies at  $z \sim 4 - 5$  with MUSE.*
21. Cooke, R., Welsh, L., **Fumagalli, M.**, Pettini, M. 2020, MNRAS, 494, 4884. *A limit on Planck-scale froth with ESPRESSO.*
22. Welsh, L., Cooke, R., **Fumagalli, M.**, Pettini, M. 2020, MNRAS, 494, 1411. *A bound on the 12C/13C ratio in near-pristine gas with ESPRESSO.*
23. Della Bruna, L., Adamo, A., Bik A., **Fumagalli M.** et al. 2020, A&A, 635, 134. *Studying the ISM at 10 pc scale in NGC 7793 with MUSE – I. Data description and properties of the ionised gas.*
23. Buie, E., **Fumagalli, M.**, Scannapieco, E. 2020, 890, 33. *Interpreting Observations of Absorption Lines in the Circumgalactic Medium with a Turbulent Medium.*
24. Lofthouse, E.K., **Fumagalli, M.**, Fossati, M. et al. 2020, MNRAS, 491, 2057. *MUSE Analysis of Gas around Galaxies (MAGG) – I: Survey design and the environment of a near pristine gas cloud at  $z \sim 3.5$ .*
25. Sykes, C., **Fumagalli, M.**, Cooke, R., Theuns, T. 2020, MNRAS, 492, 2151. *Determining the primordial helium abundance and UV background using fluorescent emission in star-free dark matter haloes.*
26. Fossati, M., **Fumagalli, M.**, Lofthouse, E.K. et al. 2019, MNRAS, 490, 1451. *The MUSE Ultra Deep Field (MUDF). II. Survey design and the gaseous properties of galaxy groups at  $0.5 < z < 1.5$ .*
27. Umehata, H., **Fumagalli, M.**, Smail, I. et al. 2019, Science, 366, 97. *Gas filaments of the cosmic web located around active galaxies in a proto-cluster.*
28. Becker, G.D. et al. 2019, ApJ, 883, 163. *The Evolution of OI over  $3.2 < z < 6.5$ : Reionization of the Circumgalactic Medium.*
29. Jachym, P. et al. 2019, ApJ, 883, 145. *ALMA unveils widespread molecular gas clumps in the ram pressure stripped tail of the Norma jellyfish galaxy.*
30. **Fumagalli, M.** 2019, Nature Astronomy, 3, 796. *Thirsty galaxies thriving on gas streams.*
31. Sykes, C., **Fumagalli, M.**, Cooke, R., Theuns, T., Benitez-Llambay, A. 2019, MNRAS, 487, 609. *Fluorescent rings in star-free dark matter haloes.*
32. Mackenzie, R., **Fumagalli, M.**, Theuns, T. et al. 2019, MNRAS, 487, 5070. *Linking gas and galaxies at high redshift: MUSE surveys the environments of six damped Ly $\alpha$  galaxies at  $z \sim 3$ .*
33. Welsh, L., Cooke, R., **Fumagalli, M.** 2019, MNRAS, 487, 3363. *Modelling the chemical enrichment of Population III supernovae: The origin of the metals in near-pristine gas clouds.*
34. Bielby, R.M. et al. 2019, MNRAS, 86, 21. *Quasar Sightline and Galaxy Evolution (QSAGE) Survey - I. The Galaxy Environment of OVI Absorbers up to  $z = 1.4$  around PKS 0232-04.*
35. Lusso, E., **Fumagalli, M.**, Fossati, M., et al. 2019, MNRAS, 485, 62. *The MUSE Ultra Deep Field (MUDF). I. Discovery of a group of Ly $\alpha$  nebulae associated with a bright  $z \approx 3.23$  quasar pair.*



36. Furniss, A., Worseck, G., **Fumagalli, M.** et al. 2019, AJ, 157, 41. *Spectroscopic Redshift of the Gamma-Ray Blazar B2 1215+30 from Ly $\alpha$  Emission.*
37. Cook, D.O. et al. 2019, MNRAS, 484, 4897. *Star Cluster Catalogs for the LEGUS Dwarf Galaxies.*
38. Fossati, M., **Fumagalli, M.**, Gavazzi, G. et al. 2019, MNRAS, 484, 2212. *MUSE sneaks a peek at extreme ram-pressure stripping events - IV. Hydrodynamic and gravitational interactions in the Blue Infalling Group.*
39. Grasha, K. et al. 2019, 483, 4707. *The Spatial Relation between Young Star Clusters and Molecular Clouds in M 51 with LEGUS.*
40. P. Frédéric Robert et al. 2019, MNRAS, 483, 2736. *Exploring the origins of a new, apparently metal-free gas cloud at  $z = 4.4$ .*
41. Jauzac, M. et al. 2019, MNRAS, 483, 3082. *The core of the massive cluster merger MACS J0417.5-1154 as seen by VLT/MUSE.*
42. Arrigoni Battaia, F., Chen, C.-C., **Fumagalli, M.** et al. 2018, A&A, 620, 202. *Over-density of submillimeter galaxies around the  $z=2.3$  MAMMOTH-1 nebula.*
43. Boselli, A. et al. 2018, A&A, 620, 164. *A Virgo Environmental Survey Tracing Ionised Gas Emission (VESTIGE).IV. A tail of Ionised Gas in the Merger Remnant NGC 4424.*
44. Krumholz, M. R., Adamo, A., **Fumagalli, M.**, Calzetti, D. 2019, MNRAS, 482, 3550. *SLUG IV: A Novel Forward-Modelling Method to Derive the Demographics of Star Clusters.*
45. Caruso, D., Haardt, F., **Fumagalli, M.**, Cantalupo, S. 2019, MNRAS, 482, 2833. *MCMC determination of the cosmic UV background at  $z \approx 0$  from H $\alpha$  fluorescence.*
46. Cooke, R. & **Fumagalli, M.** 2018, Nature Astronomy, 2, 957. *Measurement of the primordial helium abundance from the intergalactic medium.*
47. Krogager, J.-K. et al. 2018, A&A, 619, 142. *Dissecting cold gas in a high-redshift galaxy using a lensed background quasar.*
48. Grasha, K. et al. 2018, MNRAS, 481, 1016. *Connecting Young Star Clusters to CO Molecular Gas in NGC 7793 with ALMA-LEGUS.*
49. Ashworth, G., **Fumagalli, M.**, Adamo, A., Krumholz, M.R. 2018, MNRAS, 480, 3091A. *Theoretical predictions for IMF diagnostics in UV spectroscopy of star clusters.*
50. Hunter, D. et al. 2018, AJ, 156, 21. *A comparison of young star properties with local galactic environment for LEGUS/LITTLE THINGS dwarf irregular galaxies.*
51. Boselli, A. et al. 2018, A&A, 615, 114. *A Virgo Environmental Survey Tracing Ionised Gas Emission (VESTIGE).III. Star formation in the stripped gas of NGC 4254.*
52. Chehade, B. et al. 2018, MNRAS, 478, 1649. *Two more, bright,  $z > 6$  quasars from VST ATLAS and WISE .*
53. Boselli, A. et al. 2018, A&A, 614, 56. *A Virgo Environmental Survey Tracing Ionised Gas Emission (VESTIGE).I. Introduction to the Survey.*
54. Fossati, M. et al. 2018, A&A, 614, 57. *A Virgo Environmental Survey Tracing Ionised Gas Emission (VESTIGE). III. Constraining the quenching time in the stripped galaxy NGC 4330.*
55. Lusso, E., **Fumagalli, M.**, Rafelski, M. et al. 2018, ApJ, 860, 41. *The spectral and environment properties of  $z \sim 2.0 - 2.5$  quasar pairs.*
56. Findlay, J.R. et al. 2018, ApJS, 236, 44. *Quasars probing quasars X: The quasar pair spectral database.*

57. Messa, M. et al. 2018, MNRAS, 477, 1683. *The Young Star Cluster population of M51 with LEGUS: II. Testing environmental dependencies.*
58. Kahre, L. et al. 2018, ApJ, 855, 133. *Extinction Maps and Dust-to-Gas Ratios in Nearby Galaxies.*
59. Gavazzi, G., Consolandi, G., Pedraglio, S., Fossati, M., **Fumagalli, M.**, Boselli, A. 2018, A&A, 611, 28. *H $\alpha$  imaging observations of early-type galaxies from the ATLAS3D survey.*
60. Hunter, D. et al. 2018, ApJ, 855, 7. *A study of two dwarf irregular galaxies with asymmetrical star formation distributions.*
61. Sabbi, E. et al. 2018, ApJS, 235, 23. *The resolved stellar populations in the LEGUS galaxies.*
62. Messa, M. et al. 2018, MNRAS, 473, 996. *The Young Star Cluster population of M51 with LEGUS: I. A comprehensive study of cluster formation and evolution.*
63. Consolandi, G., Gavazzi, G., Fossati, M., **Fumagalli, M.**, Boselli, A., Yagi, M., Yoshida, M. et al. 2017, A&A, 606, 83. *MUSE sneaks a peek at extreme ram-pressure events - III. Tomography of UGC 6697, a massive galaxy falling into Abell 1367.*
64. **Fumagalli, M.**, Mackenzie, R., Trayford, J. et al. 2017, MNRAS, 471, 3686. *Witnessing galaxy assembly in an extended  $z \approx 3$  structure.*
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## Non-refereed publications

1. Richard, J. et al. 2019, arXiv:1906.01657. *BlueMUSE: Project Overview and Science Cases.*
2. DESI collaboration 2016, arXiv:1611.00037. *The DESI Experiment Part II: Instrument Design.*
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