

# 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*.
- 2018 **Professor**, *Durham University*.
- 2017 **Associate Professor (Reader)**, *Durham University*.
- 2014 **Assistant Professor (Lecturer)**, *Durham University*.
- 2013 **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 **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**, *MPIA 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 **MPIA**, *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

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

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.

## 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. Calvin Sykes (2017-), Durham University.  
 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. Rajeshwari Dutta (2019-), Durham University.  
Dr. Matteo Fossati (2018-), 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

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- E-ELT HIRES 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

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## Refereed publications

1. Dutta, R., **Fumagalli, M.**, Fossati, M. et al. 2020, MNRAS submitted (arXiv:2009.14219). *MUSE Analysis of Gas around Galaxies (MAGG) - II: Metal-enriched halo gas around  $z \sim 1$  galaxies.*
2. Decataldo, D., Lupi, A., Ferrara, A., Pallottini, A. **Fumagalli, M.** 2020, MNRAS, 487, 3377. *Shaping the structure of a GMC with radiation and winds.*
3. **Fumagalli, M.**, Fotopoulou, S., Thomson, L. 2020, MNRAS in press (arXiv:2009.03322). *Detecting neutral hydrogen at  $z > 3$  in large spectroscopic surveys of quasars.*
4. Stott, J.P. et al. 2020, MNRAS in press (arXiv:2006.07384). *Quasar Sightline and Galaxy Evolution (QSAGE) survey – II. Galaxy overdensities around UV luminous quasars at  $z = 1 - 2$ .*
5. Bielby, R., **Fumagalli, M.**, Fossati, M. et al. 2020, MNRAS in press (arXiv:2001.09058). *Into the Ly $\alpha$  jungle: exploring the circumgalactic medium of galaxies at  $z \sim 4 - 5$  with MUSE.*
6. Cooke, R., Welsh, L., **Fumagalli, M.**, Pettini, M. 2020, MNRAS in press (arXiv:2001.06016). *A limit on Planck-scale froth with ESPRESSO.*

7. Welsh, L., Cooke, R., **Fumagalli, M.**, Pettini, M. 2020, MNRAS in press (arXiv:2001.04983). *A bound on the  $^{12}\text{C}/^{13}\text{C}$  ratio in near-pristine gas with ESPRESSO.*
9. 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.*
9. Buie, E., **Fumagalli, M.**, Scannapieco, E. 2020, 890, 33. *Interpreting Observations of Absorption Lines in the Circumgalactic Medium with a Turbulent Medium.*
10. 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  $z \sim 3.5$ .*
11. 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.*
12. 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  $0.5 < z < 1.5$ .*
13. 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.*
14. Becker, G.D. et al. 2019, ApJ, 883, 163. *The Evolution of OI over  $3.2 < z < 6.5$ : Reionization of the Circumgalactic Medium.*
15. 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.*
16. **Fumagalli, M.** 2019, Nature Astronomy, 3, 796. *Thirsty galaxies thriving on gas streams.*
17. Sykes, C., **Fumagalli, M.**, Cooke, R., Theuns, T., Benitez-Llambay, A. 2019, MNRAS, 487, 609. *Fluorescent rings in star-free dark matter haloes.*
18. 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  $\text{Ly}\alpha$  galaxies at  $z \sim 3$ .*
19. 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.*
20. 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.*
21. Lusso, E., **Fumagalli, M.**, Fossati, M., et al. 2019, MNRAS, 485, 62. *The MUSE Ultra Deep Field (MUDF). I. Discovery of a group of  $\text{Ly}\alpha$  nebulae associated with a bright  $z \approx 3.23$  quasar pair.*
22. Furniss, A., Worseck, G., **Fumagalli, M.** et al. 2019, AJ, 157, 41. *Spectroscopic Redshift of the Gamma-Ray Blazar B2 1215+30 from  $\text{Ly}\alpha$  Emission.*
23. Cook, D.O. et al. 2019, MNRAS, 484, 4897. *Star Cluster Catalogs for the LEGUS Dwarf Galaxies.*
24. 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.*

25. Grasha, K. et al. 2019, 483, 4707. *The Spatial Relation between Young Star Clusters and Molecular Clouds in M 51 with LEGUS.*
26. P. Frédéric Robert et al. 2019, MNRAS, 483, 2736. *Exploring the origins of a new, apparently metal-free gas cloud at  $z = 4.4$ .*
27. Jauzac, M. et al. 2019, MNRAS, 483, 3082. *The core of the massive cluster merger MACS J0417.5-1154 as seen by VLT/MUSE.*
28. 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.*
29. 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.*
30. 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.*
31. 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.*
32. Cooke, R. & **Fumagalli, M.** 2018, Nature Astronomy, 2, 957. *Measurement of the primordial helium abundance from the intergalactic medium.*
33. Krogager, J.-K. et al. 2018, A&A, 619, 142. *Dissecting cold gas in a high-redshift galaxy using a lensed background quasar.*
34. Grasha, K. et al. 2018, MNRAS, 481, 1016. *Connecting Young Star Clusters to CO Molecular Gas in NGC 7793 with ALMA-LEGUS.*
35. Ashworth, G., **Fumagalli, M.**, Adamo, A., Krumholz, M.R. 2018, MNRAS, 480, 3091A. *Theoretical predictions for IMF diagnostics in UV spectroscopy of star clusters.*
36. 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.*
37. 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.*
38. Chehade, B. et al. 2018, MNRAS, 478, 1649. *Two more, bright,  $z > 6$  quasars from VST ATLAS and WISE .*
39. Boselli, A. et al. 2018, A&A, 614, 56. *A Virgo Environmental Survey Tracing Ionised Gas Emission (VESTIGE).I. Introduction to the Survey.*
40. 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.*
41. 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.*
42. Findlay, J.R. et al. 2018, ApJS, 236, 44. *Quasars probing quasars X: The quasar pair spectral database.*
43. Messa, M. et al. 2018, MNRAS, 477, 1683. *The Young Star Cluster population of M51 with LEGUS: II. Testing environmental dependencies.*
44. Kahre, L. et al. 2018, ApJ, 855, 133. *Extinction Maps and Dust-to-Gas Ratios in Nearby Galaxies.*
45. 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.*



46. Hunter, D. et al. 2018, ApJ, 855, 7. *A study of two dwarf irregular galaxies with asymmetrical star formation distributions.*
47. Sabbi, E. et al. 2018, ApJS, 235, 23. *The resolved stellar populations in the LEGUS galaxies.*
48. 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.*
49. 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.*
50. **Fumagalli, M.**, Mackenzie, R., Trayford, J. et al. 2017, MNRAS, 471, 3686. *Witnessing galaxy assembly in an extended  $z \approx 3$  structure.*
51. Grasha, K. et al. 2017, ApJ, 842, 25. *Hierarchical Star Formation in Turbulent Media: Evidence from Young Star Clusters.*
52. Ashworth, G., **Fumagalli, M.**, Krumholz, M.R. et al. 2017, MNRAS, 469, 2464. *Exploring the IMF of star clusters: a joint SLUG and LEGUS effort.*
53. Ryon, J.E. et al. 2017, ApJ, 841, 92. *Effective Radii of Young, Massive Star Clusters in Two LEGUS Galaxies.*
54. Adamo, A. et al. 2017, ApJ, 841, 131. *Legacy ExtraGalactic UV Survey with The Hubble Space Telescope. Stellar cluster catalogues and first insights into cluster formation and evolution in NGC 628.*
55. Grasha, K. et al. 2017, ApJ, 840, 113. *The Hierarchical Distribution of the Young Stellar Clusters in Six Local Star Forming Galaxies.*
56. Bielby, R., Crighton, N.H.M., **Fumagalli, M.** et al. 2017, MNRAS, 468, 1373. *Probing the intra-group medium of a  $z = 0.28$  galaxy group.*
57. Swinbank, M. et al. 2017, MNRAS, 467, 3140. *Angular momentum evolution of galaxies over the past 10 Gyr: A MUSE and KMOS dynamical survey of 400 star-forming galaxies from  $z = 0.3 - 1.7$ .*
58. **Fumagalli, M.**, Haardt, F., Theuns, T., Morris, S.L., Cantalupo, S., Madau, P., Fossati, M. 2017, MNRAS, 467, 4802. *A measurement of the  $z = 0$  UV background from  $H\alpha$  fluorescence.*
59. Prochaska et al. 2017, ApJ, 837, 169. *The COS-Halos Survey: Metallicities in the Low-Redshift Circumgalactic Medium.*
60. Lehner, N., O'Meara, J.M., Howk, J.C., Prochaska, J.X., **Fumagalli, M.** 2016, ApJ, 833, 283. *The Cosmic Evolution of the Metallicity Distribution of Ionized Gas Traced by Lyman Limit Systems.*
61. Toy, V.L. et al. 2016, ApJ, 832, 175. *Exploring Damped Lyman- $\alpha$  System Host Galaxies using Gamma-ray Bursts.*
62. **Fumagalli, M.**, Cantalupo, S., Dekel, A., Morris, S.L., O'Meara, J.M., Prochaska, J.X., Theuns, T. 2016, MNRAS, 462, 1978. *MUSE searches for galaxies near very metal-poor gas clouds at  $z \sim 3$ : new constraints for cold accretion models.*
63. Rafelski, M., Gardner, J.P., **Fumagalli, M.** et al. 2016, ApJ, 825, 87. *The Star Formation Rate Efficiency of Neutral Atomic-dominated Hydrogen Gas in the Outskirts of Star Forming Galaxies from  $z \sim 1$  to  $z \sim 3$ .*
64. Consolandi, G., Gavazzi, G., **Fumagalli, M.** et al. 2016, A&A, 591, 38. *Robust automatic photometry of local galaxies from SDSS. Dissecting the color magnitude relation with color profiles.*

65. Finn, C. et al. 2016, MNRAS, 460, 590. *On the connection between the metal-enriched intergalactic medium and galaxies: an OVI-galaxy cross-correlation study at  $z < 1$ .*
66. Archambault, S. et al. 2016, AJ, 151, 142. *Upper limits from five years of blazar observations with the VERITAS Cherenkov telescopes.*
67. Boselli, A. et al. 2016, A&A, 587, 68. *Spectacular tails of ionised gas in the Virgo cluster galaxy NGC 4569*
68. Grasha, K. et al. 2015, ApJ, 815, 93. *The Spatial Distribution of the Young Stellar Clusters in the Star Forming Galaxy NGC 628.*
69. **Fumagalli, M.**, O'Meara, J.M., Prochaska, J.X. 2016, MNRAS, 455, 4100. *The physical properties of  $z > 2$  Lyman limit systems: new constraints for feedback and accretion models.*
70. Fossati, M., **Fumagalli, M.**, Boselli, A. et al. 2016, MNRAS, 455, 2028. *MUSE sneaks a peek at extreme ram-pressure stripping events. II. The physical properties of the gas tail of ESO137-001.*
71. Farina, E., **Fumagalli, M.**, Decarli, R. et al. 2016, MNRAS, 455, 618. *The Cluster-Scale Environment of PKS 2155-304.*
72. Krumholz, M. R., Adamo, A., **Fumagalli, M.**, et al. 2015, ApJ, 812, 147. *Star Cluster Properties in Two LEGUS Galaxies Computed with Stochastic Stellar Population Synthesis Models.*
73. Calzetti, D. et al. 2015, ApJ, 811, 75. *The Brightest Young Star Clusters in NGC 5253.*
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## Non-refereed publications

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2. DESI collaboration 2016, arXiv:1611.00037. *The DESI Experiment Part II: Instrument Design.*
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6. **Fumagalli, M.** 2012, Ph.D. dissertation, University of California, Santa Cruz. *Food for stars: the role of hydrogen in the formation and evolution of galaxies.*
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