

Michele Fumagalli

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Scientific Interests

Gas accretion and galaxy formation, absorption line systems, physics of the interstellar medium, star formation, stellar initial mass function, blazar redshifts.

Academic History

- 2014 **Lecturer**, *Durham University*.
- 2013 **Postdoctoral Fellow**, *Carnegie Observatories, Princeton University*.
- 2012 **Ph.D. in astrophysics**, *University of California, Santa Cruz*.
- 2010 **Master in astrophysics**, *University of California, Santa Cruz*.
- 2008 **Laurea specialistica (MSc)**, *Milano Bicocca University*, 110/110 with highest honor.
- 2006 **Laurea triennale (BSc)**, *Milano Bicocca University*, 110/110 with highest honor.

Awards and Fellowships

- 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

- 2016 **Astrophysics Data Analysis Program**, KODIAQ-Z, (co-I).
2015 **NASA grant**, HST-GO-14127, (sci-PI).
2014 **NASA grant**, HST-GO-13651, (co-I).
2013 **NASA grant**, HST-GO-13364, (co-I).
2013 **NASA grant**, HST-GO-13300, (co-I).
2013 **NASA grant**, HST-GO-13288, (co-I).
2013 **Archival Researcher Program**, grant HST-AR-13275-A, (co-I).
2013 **Archival Researcher Program**, grant HST-AR-13256-A, (co-I).
2012 **NASA Hubble Fellowship**, grant HF-51305.01-A, (PI).
2011 **NASA grant**, HST-GO-12863, (co-I).
2010 **NASA grant**, HST-GO-12555, (co-I).
2010 **HIPACC grant**, University California, (PI).

Talks and Seminars

- 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

Proposal History (principal investigator or primary co-investigator)

- 2016 Keck Telescope; 2 nights, 2016B.x
- 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

- 2016- PHYS2651: Physics in Society, Durham University.
- 2014- PHYS1081: Introduction to Astronomy, Durham University.
- 2014- PHYS1101: Discovery Skills in Physics, Durham University.

2009 Ay2: Overview of the Universe, UCSC.

PhD Students Mr. Greg Ashworth (2014), Durham University.
Mr. Ruari Mackenzie (2014), Durham University.
Ms. Stephanie Bartle (2014), Durham University.

Membership and Activities

2016 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

Refereed publications

1. Bielby, R., Crighton, N.H.M, **Fumagalli, M.** et al. 2016, MNRAS submitted (arXiv:1607.03386). *Probing the intra-group medium of a $z = 0.28$ galaxy group.*
2. 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.*
3. Toy, V.L. et al. 2016, ApJ, 832, 175. *Exploring Damped Lyman- α System Host Galaxies using Gamma-ray Bursts.*
4. **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.*
5. 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 $z \sim 3$.*
6. 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.*
7. 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 $z < 1$.*
8. Archambault, S. et al. 2016, AJ, 151, 142. *Upper limits from five years of blazar observations with the VERITAS Cherenkov telescopes.*
9. Boselli, A. et al. 2016, A&A, 587, 68. *Spectacular tails of ionised gas in the Virgo cluster galaxy NGC 4569*
10. Grasha, K. et al. 2015, ApJ, 815, 93. *The Spatial Distribution of the Young Stellar Clusters in the Star Forming Galaxy NGC 628.*

11. **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.*
12. 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.*
13. Farina, E., **Fumagalli, M.**, Decarli, R. et al. 2016, MNRAS, 455, 618. *The Cluster-Scale Environment of PKS 2155-304.*
14. 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.*
15. Calzetti, D. et al. 2015, ApJ, 811, 75. *The Brightest Young Star Clusters in NGC 5253.*
16. Prochaska, J.X. et al. 2015, ApJS, 221, 2. *The Keck+Magellan Survey for Lyman Limit Absorption III: Sample Definition and Column Density Measurements.*
17. Crighton, N. et al. 2015, MNRAS, 452, 217. *The Neutral Hydrogen Cosmological Mass Density at $z = 5$.*
18. Krumholz, M., **Fumagalli, M.**, da Silva, R., Rendahl, T., Parra, J. 2015, MNRAS, 452, 1447. *SLUG – Stochastically Lighting Up Galaxies. III: A Suite of Tools for Simulated Photometry, Spectroscopy, and Bayesian Inference with Stochastic Stellar Populations.*
19. Gavazzi, G. et al. 2015, A&A, 580, 116. *Halpa3: an Halpa imaging survey of HI selected galaxies from ALFALFA . VI. The role of bars in quenching star formation from $z = 3$ to the present epoch.*
20. Carnall, A. C. et al. 2015, MNRAS, 451, 16. *Two bright $z > 6$ quasars from VST ATLAS and a new method of optical plus mid-infra-red colour selection.*
21. Cucchiara, A., **Fumagalli, M.**, Rafelski, M., Kocevski, D., Prochaska, J.X., Cooke, R.J., Becker, G.D. 2015, ApJ, 804, 51. *Unveiling the Secrets of Metallicity and Massive Star Formation Using DLAs along Gamma-ray Bursts.*
22. Gavazzi, G. et al. 2015, A&A, 576, 16. *Halpa3: an Halpa imaging survey of HI selected galaxies from ALFALFA . V. The Coma supercluster survey completion.*
23. Calzetti, D. et al. 2015, AJ, 149, 51. *Legacy ExtraGalactic UV Survey (LEGUS) with The Hubble Space Telescope. I. Survey Description.*
24. **Fumagalli, M.**, O'Meara, J.M., Prochaska, J.X., Rafelski, M., Kanekar, N. 2015, MNRAS, 446, 3178. *Directly imaging damped Ly α galaxies at $z > 2$. III: The star formation rates of neutral gas reservoirs at $z \sim 2.7$.*
25. Crighton, N. et al. 2015, MNRAS, 446, 18. *Metal-enriched, sub-kiloparsec gas clumps in the circumgalactic medium of a faint $z = 2.5$ galaxy.*
26. **Fumagalli, M.**, Fossati, M., Hau, G. et al. 2014, MNRAS, 445, 4335. *MUSE sneaks a peek at extreme ram-pressure stripping events. I. A kinematic study of the archetypal galaxy ESO137-001.*
27. Aliu, E. et al. 2014, ApJ, 797, 89. *Investigating Broadband Variability of the TeV Blazar 1ES 1959+650.*
28. Boselli, A. et al. 2014, A&A, 570, 69. *The GALEX Ultraviolet Virgo Cluster Survey (GUViCS). IV: The role of the cluster environment on galaxy evolution*

29. Worseck, G. et al. 2014, MNRAS, 445, 1745. *The Giant Gemini GMOS survey of $z > 4.4$ quasars. I: Measuring the mean free path across cosmic time.*
30. da Silva, R.L., **Fumagalli, M.**, Krumholz, M. 2014, MNRAS, 444, 3275. *SLUG - Stochastically Lighting Up Galaxies. II: Quantifying the Effects of Stochasticity on Star Formation Rate Indicators.*
31. **Fumagalli, M.**, O'Meara, J.M., Prochaska, J.X., Kanekar, N., Wolfe, A. 2014, MNRAS, 444, 1282. *Directly imaging damped Ly α galaxies at $z > 2$. II: Imaging and spectroscopic observations of 32 quasar fields.*
32. Lusso, E. et al. 2014, MNRAS, 441, 316. *The nature of massive black hole binary candidates: II. Spectral energy distribution atlas.*
33. Finn, C. et al. 2014, MNRAS, 440, 3317. *A compact, metal-rich, kpc-scale outflow in FBQS J0209-0438: Detailed diagnostics from HST/COS extreme UV observations.*
34. da Silva, R.L., Krumholz, M., **Fumagalli, M.**, Fall, M. 2014, MNRAS, 438, 2355. *An Analytic Method to Compute Star Cluster Luminosity Statistics.*
35. Wright, E. et al., 2014, AJ, 147, 61. *The First AllWISE Proper Motion Discovery: WISEA J070720.50+170532.7.*
36. Rafelski, M., Neeleman, M., **Fumagalli, M.**, Wolfe, A.M., Prochaska, J.X. 2014, ApJL, 782, 29. *The Rapid Decline in Metallicity of Damped Ly- α Systems at $z \sim 5$.*
37. Prochaska, J.X., Madau, P., O'Meara, J.M., **Fumagalli, M.** 2014, MNRAS, 438, 476. *Towards a Unified Description of the Intergalactic Medium at Redshift $z \sim 2.5$.*
38. **Fumagalli, M.**, Hennawi, J., Prochaska, J.X., Kasen, D., Dekel, A., Ceverino, D., Primack, J. 2014, ApJ, 780, 74. *Confronting Simulations of Optically Thick Gas in Massive Halos with Observations at $z = 2 - 3$.*
39. VERITAS collaboration et al., 2013, ApJ, 779, 92. *Long term observations of B2 1215+30 with VERITAS.*
40. **Fumagalli, M.**, O'Meara, J.M., Prochaska, J.X., Worseck, G. 2013, ApJ, 775, 78. *Dissecting the properties of optically-thick hydrogen at the peak of cosmic star formation history.*
41. Decarli, R., Dotti, M., **Fumagalli, M.**, et al. 2013, MNRAS, 433, 1492. *The nature of massive black hole binary candidates: I. Spectral properties and evolution.*
42. Furniss, A., **Fumagalli, M.**, Falcone, A., Williams, D. A. 2013, ApJ, 770, 109. *The Blazar Emission Environment: Insight from Soft X-ray Absorption.*
43. Furniss, A. et al. 2013, ApJ, 768, L31. *The Firm Redshift Lower Limit of the Most Distant TeV-Detected Blazar PKS 1424+240.*
44. Fossati, M. et al. 2013, A&A, 553, 91. *Halpa3: an Halpa imaging survey of HI selected galaxies from ALFALFA. IV. The structure of galaxies in the Local and Coma Superclusters.*
45. Gavazzi, G. et al. 2013, A&A, 553, 90. *Halpa3: an Halpa imaging survey of HI selected galaxies from ALFALFA. III. Nurture shapes up the Hubble sequence in the Great Wall.*
46. Gavazzi, G., **Fumagalli, M.**, Fossati, M. et al. 2013, A&A, 553, 89. *Halpa3: an Halpa imaging survey of HI selected galaxies from ALFALFA. II. The star formation properties of galaxies in the Virgo cluster and surroundings.*
47. Furniss, A., **Fumagalli, M.**, Danforth, C., Williams, D., & Prochaska, X. 2013, ApJ, 766, 35. *On the Redshift of the Very High Energy Blazar 3C66A.*

48. Farina, E., Montuori, C., Decarli, R., **Fumagalli, M.** 2013, MNRAS, 431, 1019. *Caught in the Act: Discovery of a Physical Quasar Triplet.*
49. Aliu, E. et. al 2012, ApJ, 759, 102. *VERITAS Observations of Six Bright, Hard-Spectrum Fermi-LAT Blazars.*
50. **Fumagalli, M.**, Furniss, A., O'Meara, J., Prochaska, X., Williams, D., Farina, E. 2012, A&A, 545, 68. *On the redshift of the blazar PKS0447-439.*
51. Fossati, M., Gavazzi, G., Boselli, A., **Fumagalli, M.** 2012, A&A, 544, A128. *65 kpc of ionized gas trailing behind NGC 4848 during its first crossing of the Coma cluster.*
52. Gavazzi, G., **Fumagalli, M.**, Galardo, V., et al. 2012, A&A, 545, 16. *H α ³: H α imaging survey of HI selected galaxies from ALFALFA. I. Catalogue in the local supercluster.*
53. **Fumagalli, M.**, Dessauges-Zavadsky, M., Furniss, A., et al. 2012, MNRAS, 424, 2276. *A search of CO emission lines in blazars: the low molecular gas content of BL Lac objects compared to quasars.*
54. Arrigoni Battaia, F. et al. 2012, A&A, 543 A112. *Stripped gas as fuel for newly formed HII regions in the encounter between VCC1249 and M49: a unified picture from NGVS and GUViCS.*
55. da Silva, R.L., **Fumagalli, M.**, & Krumholz, M. 2012, ApJ, 745, 145. *SLUG - Stochastically Lighting Up Galaxies I: Methods and Validating Tests.*
56. **Fumagalli, M.**, O'Meara, J.M., & Prochaska, J.X. 2011, Science, 334, 1245. *Detection of pristine gas two billion years after the Big Bang.*
57. Barth, A. et al. 2011, ApJ, 743, L4. *The Lick AGN monitoring project 2011: reverberation mapping of Markarian 50.*
58. **Fumagalli, M.**, da Silva, R.L., & Krumholz, M. 2011, ApJ, 741, L26. *Stochastic star formation and a (nearly) uniform stellar initial mass function.*
59. Aliu, E. et al. 2011, ApJ, 742, 127. *Multiwavelength Observations of the Previously Unidentified Blazar RX J0648.7+1516.*
60. Cucchiara, A. et al. 2011, ApJ, 743, 154. *Constraining GRB Emission Physics with Extensive Early-Time, Multiband Follow-up.*
61. **Fumagalli, M.**, Prochaska, J.X., Kasen, D., Dekel, A., Ceverino, D., & Primack, J.R. 2011, MNRAS, 418, 1796. *Absorption line systems in simulated galaxies fed by cold streams.*
62. Barth, A. et al. 2011, ApJ, 732, 121. *Broad-line Reverberation in the Kepler-field Seyfert Galaxy Zw 229-015.*
63. Abdo, A.A. et al. 2011, ApJ, 726, 43. *Multi-wavelength Observations of the Flaring Gamma-ray Blazar 3C 66A in 2008 October.*
64. **Fumagalli, M.**, O'Meara, J.M., Prochaska, J.X., & Kanekar, N. 2010, MNRAS, 408, 362. *Directly imaging damped Lyman- α galaxies at $z > 2$ - I. Methodology and first results.*
65. **Fumagalli, M.**, Krumholz, M.R., & Hunt, L.K. 2010, ApJ, 722, 919. *Testing models for molecular gas formation in galaxies: hydrostatic pressure or gas and dust shielding?*
66. **Fumagalli, M.**, Krumholz, M.R., Prochaska, J.X., Gavazzi, G., & Boselli, A. 2009, ApJ, 697, 1811 *Molecular hydrogen deficiency in HI-poor galaxies and its implications for star formation.*

67. **Fumagalli, M.**, & Gavazzi, G. 2008, A&A, 490, 571. *The relationship between gas content and star formation rate in spiral galaxies. Comparing the local field with the Virgo cluster.*
68. Gavazzi, G. et al. 2008, A&A, 482, 43. *HI content and other structural properties of galaxies in the Virgo cluster from the Arecibo Legacy Fast ALFA Survey.*

Non-refereed publications

1. **DESI collaboration** 2016, arXiv:1611.00037. *The DESI Experiment Part II: Instrument Design.*
2. **DESI collaboration** 2016, arXiv:1611.00036. *The DESI Experiment Part I: Science, Targeting, and Survey Design.*
3. **Pieri, M.** et al. 2016, Proceedings of the SF2A conference, Lyon, 2016. *WEAVE-QSO: A Massive Intergalactic Medium Survey for the William Herschel Telescope.*
4. **Fumagalli, M.** 2014, MmSAI, 85, 355. *Metal abundances in the high-redshift intergalactic medium.*
5. **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.*
6. **Fumagalli, M.**, da Silva, R., Krumholz, M., & Bigiel, F. 2011, Astronomical Society of the Pacific Conference Series, 440, 155. *SLUG: A New Way to Stochastically Light Up Galaxies.*
7. **Fumagalli, M.** 2008, MSc thesis, Università Milano-Bicocca. *High resolution multifrequency analysis of gas behavior and star formation in spiral galaxies.*
8. **Fumagalli, M.** 2006, BSc thesis, Università Milano-Bicocca. *Impact of low frequencies measurements on the knowledge of spectral distortions expected for Cosmic Microwave Background Radiation.*