Curriculum vitæ - Micol Bolzonella

Current address

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Education

- 12/01/2001: PhD in Astronomy, Milano University
  Galaxy evolution beyond the spectroscopic limit
  Tutor: Guido Chincarini. Supervisors: Dario Maccagni, Roser Pelló (Obs. Midi-Pyrénées, Toulouse, France)
- 25/07/1997: University Degree in Astronomy, Padova University
  Numerical simulations of gravitational lensing from large scale structures
  Supervisors: Francesco Lucchin, Lauro Moscardini, Ornella Pantano

Positions

- Since 30/12/2005: Researcher at INAF- Bologna Astronomical Observatory
- 01/12/2005 - 29/12/2005: Post-doc at INAF- Bologna Astronomical Observatory
- 01/10/2003 - 30/11/2005: Postdoctoral Fellowship at Astronomy Department of the Bologna University
- 01/05/2001 - 30/09/2003: Postdoctoral Fellowship at IASF Milano
- 15/02/2001 - 30/04/2001: Research contract at Observatoire Midi-Pyrénées - Toulouse
- 16/11/2000 - 30/12/2000: Research contract as Visiting Scientist at ESO/Santiago

Research interests

My scientific activity focuses on observational and theoretical/numerical aspects of extragalactic astronomy and cosmology. Spectroscopic and photometric surveys of galaxies provide information on the formation and evolution of galaxies: using statistical description of data, like the stellar mass function of the luminosity function, I try to disentangle the mechanisms affecting galaxies, and causing their transformation. Such mechanisms can be related to either the intrinsic properties of galaxies or the environment and dark matter haloes where they reside. By comparing observations with numerical simulations and models, it is possible to unveil the processes shaping galaxies, and to improve the models as well.

To derive the physical properties of galaxies, I use *Hyperzmass*, a modified version of the public photometric redshift code *Hyperz* I developed during my PhD with Roser Pelló (Bolzonella et al. 2000): I adapted the code to compute from Spectral Energy Distribution (SED) fitting also stellar masses, star formation rates and other parameters.

The code and derived quantities have been extensively used to study the evolution of galaxy properties in different cosmological surveys:

- VIPERS (VIMOS Public Extragalactic Redshift Survey, P.I. Guzzo) is an ESO Large Program approved and started in 2008, consisting in a spectroscopic survey, the widest ever approved by ESO, aiming at mapping the spatial distribution of galaxies at $0.5 < z < 1.2$. The survey will measure 100,000 redshifts of $i_{AB} < 22.5$ galaxies using the VIMOS VLT spectrograph over an area of 24 deg^2 with a sampling of ~40%. The huge amount of data is allowing the international team to study the large-scale structure of the Universe and the evolution of bright galaxies and their environment with a high statistical accuracy, minimising the issues related to the cosmic variance as well. Observations and data reduction are currently ongoing, with about 2/3 of the survey ready to be publicly released in Autumn 2013. The first data have been used by the team to recently publish the first papers. As leader of the galaxy evolution working group, I've been deeply involved in the estimate of the physical properties of galaxies, used in particular to measure the evolution of the galaxy stellar mass function (GSMF, Davidzon et al. 2013), the colour-magnitude relation (Fritz et al. 2013), the dependence on stellar mass and luminosity of galaxy clustering (Marulli et al. 2013);

- zCOSMOS (P.I. Lilly) is a major treasury redshift survey in the COSMOS field project, based on 600 observing hours with VIMOS started on April 2005. This project consists of two parallel surveys: 1. the bright survey, aiming at observing ~20000 magnitude-selected galaxies with $I_{AB} \leq 22.5$ and $0.1 \leq z \leq 1.2$ over 1.7 deg^2; 2. the deep survey, with approximately 10000 galaxies selected through colour-selection criteria expected to be at $1.4 < z < 3.0$, within the central 1 deg^2. The main goal of the spectroscopic survey zCOSMOS is to characterize galactic environments throughout the COSMOS volume out to redshifts $z\sim3$. The observations and measurements of zCOSMOS-bright and of the zCOSMOS-deep samples have been completed. I've been involved in data reduction and redshift measurement and as responsible of computation and comparison of different estimates of stellar masses, both in the bright and the deep samples; moreover I computed statistical weights used both for LFs and GSMFs taking into account the target sampling rate and the spectroscopic success rate and their dependencies on galaxy redshifts, magnitudes and colours. In particular, in two of the many papers in which I actively contributed, we computed the evolution of the GSMFs divided per types (Pozzetti et al. 2010) and considering different environments (Bolzonella et al. 2010). We found that galaxy evolution depends on both the stellar mass and the environment, the latter setting the probability of a galaxy to have a given mass. Our analysis suggested that environmental mechanisms of galaxy transformation start to be more effective at $z < 1$ and that the evolution toward $z = 0$ of the transition mass M_{cross}, i.e., the mass at which the early- and late-type GSMFs match each other, is more rapid in high density environments, with a different rate of evolution for galaxy types divided on the basis of their SEDs or their morphologies, tentatively suggesting that the migration from the blue cloud to the red sequence occurs on a shorter timescale than the transformation from disc-like morphologies to ellipticals.
- GMASS (Galaxy Mass Assembly ultra-deep Spectroscopic Survey, P.I. Cimatti) is a survey performed ultra-deep ESO VLT + FORS2 multi-object spectroscopy with very long integration times (15-40 hours per mask) of infrared-selected galaxies ($m_{4.5} < 23$) in a region of ~50 arcmin^2 located in the GOODS-CDFS field. The GMASS sample includes 1277 objects with photometry from the NUV to mid IR. Spectroscopic targets were preselected to be at $z_{phot}>1.4$, as derived with *Hyperz*, since the main aim of GMASS was to study the cosmic history of galaxy mass assembly, whose bulk is suggested to be at $z\sim1$-3. The observations were completed in 2005 and provided spectra of 208 objects. The most striking feature of the GMASS redshift distribution is a very significant peak in the redshift distribution at $z\sim1.6$ (Kurk et al. 2009). My contribution to the scientific analyses has been the determination of optimised photometric redshifts, stellar masses, star formation efficiency and age of the stellar population through the fitting of the multi-band photometric SEDs using *Hyperzmass*.
- VVDS (VIMOS-VLT Deep Survey, P.I. Le Fèvre): the VIMOS spectrograph, built by a Franco-Italian consortium, saw its first light on 2002 and is currently mounted at VLT-Melipal (UT3). The VVDS has been carried out using the guaranteed time observations started in September 2002 and consists in a Deep sample ($I_{AB} < 24$ over 1 deg^2), and a Wide sample ($I_{AB} < 22.5$ over 8.6 deg^2) for a total of about 50,000 measured redshifts. The data reduction process has been completed in 2009. My involvement in the science analyses has been addressed to the study of the photometric redshifts accuracy, galaxy stellar mass functions (GSMFs), NIR LFs and comparison of galaxy properties and statistical functions with the Millennium simulation. In particular, in Pozzetti et al. (2007) we computed the evolution of the stellar mass function up to $z \sim 2$, finding mild/negligible evolution of the number density of massive galaxies (> 6 $10^{10} M_\odot$) up to $z \sim 0.7$, whereas for less massive systems the no-evolution scenario is excluded. More than 50% of massive galaxies have already been assembled, and converted most of their gas into stars at $z \sim 1$, ruling out dry mergers as the major mechanism of their assembly history below $z \sim 1$. We also studied the evolution of the LFs in the red bands up to redshift $z \sim 2.5$ (Bolzonella et al. 2007): in agreement with literature data, but with a better statistics, we found that the bright end of the K-band LF is already in place at $z \geq 1.5$.
- XMM-LSS (P.I. Pierre): *Hyperz* has been used to select galaxy clusters members (Pierre et al. 2004, Valtchanov et al. 2004) for the spectroscopic follow up in the survey XMM-LSS. Candidate galaxy clusters were found as statistically significant overdensities of photometric redshifts around the coordinates of extended X-ray emission.

In the very past, I also dealt with gravitational lensing, writing a code implementing a numerical method, the so-called *ray shooting*, to trace the path of light rays through the distribution of dark matter computed by means of N-body simulations (Meneghetti et al. 2000).

Besides deriving galaxy properties from SED fitting, during the last years I enjoyed measuring thousands of galaxy and AGN spectroscopic redshifts observed with VIMOS@VLT. I'm full member of many ongoing and past spectroscopic galaxy surveys (VIPERS, zCOSMOS, GMASS, VVDS) and of the Euclid Consortium (Galaxy and AGN working group, OU-PHZ and OU-LE3).

Memberships
- Member of the International Astronomical Union
  http://www.iau.org/administration/membership/individual/10754/
- VIPERS (P.I. Luigi Guzzo)
  http://vipers.inaf.it/
  Coordinator of the VIPERS Galaxy Evolution Working group
- zCOSMOS (P.I. Simon Lilly)
  http://www.exp-astro.phys.ethz.ch/zCOSMOS/
  Responsible of estimate of stellar masses and computation of statistical weights
- GMASS (P.I. Andrea Cimatti)
  http://www.mpe.mpg.de/~kurk/gmass/
- VVDS (P.I. Olivier Le Fèvre)
  http://cesam.oamp.fr/vvdsproject/
- Euclid Consortium (P.I. Yannick Mellier)
  http://www.euclid-ec.org/
  Involved in Galaxy and AGN evolution WG, OU-LE3 and OU-PHZ

Grant awards and observing programmes
- PI of the project *Galaxy evolution and environment in the VIPERS survey* financed with the PICS INAF-CNRS 2012 programme.
- Local coordinator of PRIN-INAF 2010, PI Guzzo: *The VIMOS Public Extragalactic Redshift Survey (VIPERS)*
- Local coordinator of PRIN-INAF 2008, PI Guzzo: *VIPERS: The large-scale structure and growth rate of the Universe at z ~ 1 from a survey of 100,000 galaxy redshifts*

- Co-I of the following approved ESO proposals:
  - Prog ID 182.A-0886, PI Guzzo (Large Programme): *The large-scale structure and growth rate of the Universe at zsim 1 from a survey of 100,000 galaxy redshifts*
  - Prog ID 086.B-0427, PI Fraternali: *Halo gas and gas accretion in intermediate-redshift disk galaxies*
  - Prog ID 085.A-0664, PI Iovino: *The COSMOS structure at z =0.73: exploring the onset of environment-driven trends*
  - Prog ID 080.A-0635, PI Cimatti: *SINFONI imaging spectroscopy of massive galaxies at z>1.5: characterizing the dynamics, star formation, and stellar populations of candidate progenitors of present--day early-type galaxies*
  - Prog ID 078.A-0055, PI Cimatti: *SINFONI spectroscopy of massive galaxy progenitor candidates at z>1.5*
  - Prog ID 075.A-0752, PI Scodeggio: *A large but inexpensive redshift survey of K-band selected galaxies*
  - Prog ID 072.A-0104, PI: Pierre: *Spectroscopic identifications of the XMM Large Scale Structure Survey clusters of galaxies. Part II: toward a complete X-ray flux limited sample with 0.5<1*
  - Prog ID 072.A-0312, PI Willis: *Spectroscopic confirmation of candidate z<0.5 clusters identified from the XMM Large Scale Structure survey*
  - Prog ID 072.A-0651, PI Bremer: *Identifying the most distant clusters in the XMM Large Scale Structure Survey*
  - Prog ID 179.A-2005, PI Dunlop (Large Programme): *Ultra-VISTA: an Ultra Deep Survey with VISTA*

- Co-I of the LUCIFER@LBT approved proposal: PI Zamorani: *Proto-clusters at z ≳ 2: the role of environment and the obscured star formation in massive galaxies,* Period Sep 2012-Jun 2013

Computer skills
- Operating systems: Mac OS (good), Linux/Unix (good), windows
- Programming: fortran 77 (good), fortran 90, sh, html
- Packages: VIPGI (VIMOS Interactive Pipeline Graphical Interface), VMMPS (VIMOS Mask Preparation Software), Skycat, ds9, IRAF, smongo, SExtractor. IDL
- Codes: Hyperz (co-author), Bruzual & Charlot stellar population synthesis code

Languages

Italian (mother tongue); French (fluent); English (good).

Professional activities

- Referee for A&A, MNRAS, and ApJ
- Organiser of VIPERS science meeting and VIPERS galaxy evolution WG in Bologna (2012 and 2013)
- LOC for Schools of Astrophysics "Francesco Lucchin"
  Bertinoro 2004, 2006, 2009, and 2011 http://www.bo.astro.it/~school/
- LOC for the Conference "A Century of Cosmology", Venice (2007) and Editor of the Proceedings
- Responsible of joint seminars of the Bologna Astronomical Observatory and Astronomy Department of the Bologna University from 2007 to 2012
- Lecture on *Reduction of VLT spectra. 1. General methods* at the Fourth Estrela Workshop held in Bologna, January 20, 2009
- Member of the PhD committee for F. Ienna at OAMP-Toulouse, France, November 9, 2007
- Member of the LOC for the Conference "A Century of Cosmology", August 27 – 31, 2007, Venice
- Editor of the Proceedings of the Conference "A Century of Cosmology", August 27 – 31, 2007, Venice
- Co-supervisor of A. Giannuzzi (Degree, Supervisor L. Moscardini, March 3, 2006)

Publications

VIPERS

1. Davidzon I., **Bolzonella M**., et al. 2013, T*he VIMOS Public Extragalactic Redshift Survey (VIPERS). A precise measurement of the galaxy stellar mass function and the abundance of massive galaxies at redshifts 0.5<z<1.3*, A&A in press
2. Marulli F., **Bolzonella M.**, et al. 2013, *The VIMOS Public Extragalactic Redshift Survey (VIPERS). Luminosity and stellar mass dependence of galaxy clustering at 0.5<z<1.1*, A&A 557, id.A17
3. de la Torre S., [...], **Bolzonella M.**, et al. 2013, The VIMOS Public Extragalactic Redshift Survey (VIPERS). Galaxy clustering and redshift-space distortions at z=0.8 in the first data release, A&A 557, id.A54
4. Małek K., [...], **Bolzonella M.**, et al. 2013, *The VIMOS Public Extragalactic Redshift Survey (VIPERS). A Support Vector Machine classification of galaxies, stars and AGNs*, A&A 557, id.A16
5. Guzzo L., [...], **Bolzonella M.**, et al. 2013, *The VIMOS Public Extragalactic Redshift Survey (VIPERS). An unprecedented view of galaxies and large-scale structure at 0.5<z<1.2*, A&A accepted
6. Fritz A., Scodeggio M., Ilbert O., **Bolzonella M.**, et al. 2013, *The VIMOS Public Extragalactic Redshift Survey (VIPERS). A quiescent formation of massive red-sequence galaxies over the past 9 Gyr*, A&A submitted
7. Marchetti A., [...], **Bolzonella M.**, et al. 2013, *The VIMOS Public Extragalactic Redshift Survey (VIPERS): spectral classification through principal component analysis*, MNRAS 428, 1424
8. Granett B.R., [...], **Bolzonella M.**, et al. 2012, *The power spectrum from the angular distribution of galaxies in the CFHTLS-Wide fields at redshift ~ 0.7*, MNRAS 421, 251

zCOSMOS/COSMOS

9. Bordoloi R., [...], **Bolzonella M.**, et al. 2013, *The dependence of Galactic outflows on the properties and orientation of zCOSMOS galaxies at z ~ 1*, ApJ submitted, arXiv:1307.6553
10. Moresco M., Pozzetti L., Cimatti A., Zamorani G., **Bolzonella M.**, et al. 2013, *Spot the difference. Impact of different selection criteria on early-type galaxies observed properties in zCOSMOS 20-k sample*, A&A in press
11. Kovač K., [...], **Bolzonella M.**, et al. 2013, *zCOSMOS 20k: Satellite galaxies are the main drivers of environmental effects in the galaxy population at least to z~0.7*, MNRAS submitted, arXiv:1307.4402
12. Mignoli M., [...], **Bolzonella M.**, et al. 2013, *Obscured AGN at z ~ 1 from the zCOSMOS-Bright Survey. I. Selection and optical properties of a [Ne v]-selected sample*, A&A 556, id.A29
13. Vitale M., [...], **Bolzonella M.**, et al. 2013, *Investigating the relationship between AGN activity and stellar mass in zCOSMOS galaxies at 0 < z < 1 using emission-line diagnostic diagrams*, A&A 556, id.A11
14. Knobel C., [...], **Bolzonella M.**, et al. 2013, *The Colors of Central and Satellite Galaxies in zCOSMOS Out to z ≈ 0.8 and Implications for Quenching*, ApJ 769, id.24
15. Diener C, [...], **Bolzonella M.**, et al. 2013, *Proto-groups at 1.8 < z < 3 in the zCOSMOS-deep Sample*, ApJ 765, id.109
16. Kampczyc P, Lilly S.J., de Ravel L., Le Fèvre O., **Bolzonella M.**, et al. 2013, *Environmental Effects in the Interaction and Merging of Galaxies in zCOSMOS*, ApJ 762, id.43

17. Pérez-Montero E., [...], **Bolzonella M.**, et al. 2013, *The cosmic evolution of oxygen and nitrogen abundances in star-forming galaxies over the past 10 Gyr*, A&A 549, id.A25
18. López-Sanjuan C., [...], **Bolzonella M.**, et al. 2012, *The dominant role of mergers in the size evolution of massive early-type galaxies since z ~ 1*, A&A 548, id.A7
19. Domínguez Sánchez H., [...], **Bolzonella M.**, et al. 2012, *Comparison of star formation rates from Hα and infrared luminosity as seen by Herschel*, MNRAS 426, 330
20. Lusso E., [...], **Bolzonella M.**, et al. 2012, *Bolometric luminosities and Eddington ratios of X-ray selected active galactic nuclei in the XMM-COSMOS survey*, MNRAS 425, 623
21. Moresco M., Cimatti A., Jimenez R., Pozzetti L., Zamorani G., **Bolzonella M.**, et al. 2012, *Improved constraints on the expansion rate of the Universe up to z ~ 1.1 from the spectroscopic evolution of cosmic chronometers*, JCAP 8, 6
22. Knobel C., [...], **Bolzonella M.**, et al. 2012, *A Group-galaxy Cross-correlation Function Analysis in zCOSMOS*, ApJ 755, id.48
23. Amara A. [...], **Bolzonella M.**, et al. 2012, *The COSMOS density field: a reconstruction using both weak lensing and galaxy distributions*, MNRAS 424, 553
24. Knobel C., [...], **Bolzonella M.**, et al. 2012, *The zCOSMOS 20k Group Catalog*, ApJ 753, 121
25. Tanaka M., Finoguenov A., Lilly S.J., **Bolzonella M.**, et al. 2012, *X-Ray Groups of Galaxies at 0.5 < z < 1 in zCOSMOS: Increased AGN Activities in High Redshift Groups*, PASJ 64, 22
26. Presotto V., Iovino A., Scodeggio M., Cucciati O., Knobel C., **Bolzonella M.**, et al. 2012, *A journey from the outskirts to the cores of groups. I. Color- and mass-segregation in 20K-zCOSMOS groups*, A&A 539, id.A55
27. Bordoloi R., Lilly S.J., Knobel C., **Bolzonella M.**, et al. 2011, *The Radial and Azimuthal Profiles of Mg II Absorption around 0.5 < z < 0.9 zCOSMOS Galaxies of Different Colors, Masses, and Environments*, ApJ 743, id.10
28. Silverman J.D., [...], **Bolzonella M.**, et al. 2011, T*he Impact of Galaxy Interactions on Active Galactic Nucleus Activity in zCOSMOS*, ApJ 743, id.2
29. Salvato M., [...], **Bolzonella M.**, et al. 2011, *Dissecting Photometric Redshift for Active Galactic Nucleus Using XMM- and Chandra-COSMOS Samples*, ApJ 742, id.61
30. Mainieri V., [...], **Bolzonella M.**, et al. 2011, *Black hole accretion and host galaxies of obscured quasars in XMM-COSMOS*, A&A 535, id.A80
31. Coppa G., Mignoli M., Zamorani G., Bardelli S., Lilly S.J., **Bolzonella M.**, et al. 2011, *The bimodality of the 10k zCOSMOS-bright galaxies up to z ~ 1: a new statistical and portable classification based on optical galaxy properties*, A&A 535, id.A10
32. Domínguez Sánchez H., [...], **Bolzonella M.**, et al. 2011, *The evolution of quiescent galaxies at high redshifts (z≥ 1.4)*, MNRAS 417, 900
33. Lusso E., Comastri A., Vignali C., Zamorani G., Treister E., Sanders D., **Bolzonella M.**, et al. 2011, *The bolometric output and host-galaxy properties of obscured AGN in the XMM-COSMOS survey*, A&A 534, id.A110
34. de la Torre S., [...], **Bolzonella M.**, et al. 2011, *The zCOSMOS-Bright survey: the clustering of early and late galaxy morphological types since z≈1*, MNRAS 412, 825
35. Kovač K., [...], **Bolzonella M.**, et al. 2011, *The Nonlinear Biasing of the zCOSMOS Galaxies up to z ~ 1 from the 10k Sample*, ApJ 731, id.102
36. de la Torre S., [...], **Bolzonella M.**, et al. 2010, *Understanding the shape of the galaxy two-point correlation function at z ~= 1 in the COSMOS field*, MNRAS 409, 867
37. **Bolzonella M.**, et al. 2010, T*racking the impact of environment on the galaxy stellar mass function up to z ~ 1 in the 10 k zCOSMOS sample*, A&A 524, id.A76
38. MorescoM., Pozzetti L., Cimatti A., Zamorani G., Mignoli M., di Cesare S. **Bolzonella M.**, et al. 2010, *zCOSMOS 10k-bright spectroscopic sample . Exploring mass and environment dependence in early-type galaxies*, A&A 524, id.A67
39. Cucciati O., Iovino A., Kovač K., Scodeggio M., Lilly S.J., **Bolzonella M.**, et al. 2010, *The zCOSMOS 10k-sample: the role of galaxy stellar mass in the colour-density relation up to z ~ 1*, A&A 524, id.A2
40. Pozzetti L., **Bolzonella M.**, et al. 2010, *zCOSMOS - 10k-bright spectroscopic sample. The bimodality in the galaxy stellar mass function: exploring its evolution with redshift*, A&A 523, id.A13
41. Peng Y., Lilly S.J., Kovač K., **Bolzonella M.**, et al. 2010, *Mass and Environment as Drivers of Galaxy Evolution in SDSS and zCOSMOS and the Origin of the Schechter Function*, ApJ 721, 193
42. Kovač K., Lilly S.J., Knobel C., **Bolzonella M.**, et al. 2010, T*he 10k zCOSMOS: Morphological Transformation of Galaxies in the Group Environment Since z ~1*, ApJ 718, 86
43. Civano F., [...], **Bolzonella M.**, et al. 2010, *A Runaway Black Hole in COSMOS: Gravitational Wave or Slingshot Recoil?*, ApJ 717, 209

44. Brusa M., [...], **Bolzonella M.**, et al. 2010, *The XMM-Newton Wide-field Survey in the Cosmos Field (XMM-COSMOS): Demography and Multiwavelength Properties of Obscured and Unobscured Luminous Active Galactic Nuclei*, ApJ 716, 348

45. Huertas-Company M., Aguerri J.A.L., Tresse L., **Bolzonella M.**, et al. 2010, *Evolution of blue E/S0 galaxies from z ~ 1: merger remnants or disk-rebuilding galaxies?*, A&A 515, id.A3

46. Oesch P., [...], **Bolzonella M.**, et al. 2010, *The Buildup of the Hubble Sequence in the Cosmos Field*, ApJL 714, L47

47. Mainieri V., Vignali C., Merloni A., Civano F., Pucccetti S., Brusa M., Gilli R., **Bolzonella M.**, et al. 2010, *Ultraluminous X-ray sources out to z ~ 0.3 in the COSMOS field*, A&A 514, id.A85

48. Lusso E., [...], **Bolzonella M.**, et al. 2010, *The X-ray to optical-UV luminosity ratio of X-ray selected type 1 AGN in XMM-COSMOS*, A&A 512, id.A34

49. Bardelli S., [...], **Bolzonella M.**, et al. 2010, *Properties and environment of radio-emitting galaxies in the VLA-zCOSMOS survey*, A&A 511, id.A1

50. Bongiorno A., Mignoli M., Zamorani G., Lamareille F., Lanzuisi G., Miyaji T., **Bolzonella M.**, et al. 2010, *The [O III] emission line luminosity function of optically selected type-2 AGN from zCOSMOS*, A&A 510, id.A56

51. Kovač K., Lilly S.J., Cucciati O., Porciani C., Iovino A., Zamorani G., Oesch P., **Bolzonella M.**, et al. 2010, *The Density Field of the 10k zCOSMOS Galaxies*, ApJ 708, 505

52. Merloni A., Bongiorno A., **Bolzonella M.**, et al. 2010, ApJ 708, 137

53. Vergani D., [...], **Bolzonella M.**, et al. 2010, *K+a galaxies in the zCOSMOS survey. Physical properties of systems in their post-starburst phase*, A&A 509, id.A42

54. Iovino A., Cucciati O., Scodeggio M., Knobel C., Kovač K., Lilly S.J., **Bolzonella M.**, et al. 2010, *The zCOSMOS redshift survey: how group environment alters global downsizing trends*, A&A 509, id.A40

55. Caputi K.I., [...], **Bolzonella M.**, et al. 2009, *The Optical Spectra of Spitzer 24 μm Galaxies in the Cosmic Evolution Survey Field. II. Faint Infrared Sources in the zCOSMOS-Bright 10k Catalog*, ApJ 707, 1387

56. Zucca E., Bardelli S., **Bolzonella M.**, et al. 2009, *The zCOSMOS survey: the role of the environment in the evolution of the luminosity function of different galaxy types*, 508, 1217

57. Lilly S.J., [...], **Bolzonella M.**, et al. 2009, *The zCOSMOS 10k-Bright Spectroscopic Sample*, ApJS 184, 218

58. Meneux B., Guzzo L., de la Torre S., Porciani C., Zamorani G., Abbas U., **Bolzonella M.**, et al. 2009, *The zCOSMOS survey. The dependence of clustering on luminosity and stellar mass at z=0.2-1*, A&A 505, 463

59. Giodini S., [...], **Bolzonella M.**, et al. 2009, *Stellar and Total Baryon Mass Fractions in Groups and Clusters Since Redshift 1*, ApJ 703, 982

60. Tasca L.A.M., Kneib J.-P., Iovino A., Le Fèvre O., Kovač K., **Bolzonella M.**, et al. 2009, *The zCOSMOS redshift survey: the role of environment and stellar mass in shaping the rise of the morphology-density relation from z ~ 1,* A&A 503, 379

61. Knobel C., [...], **Bolzonella M.**, et al. 2009, *An Optical Group Catalog to z = 1 from the zCOSMOS 10 k Sample*, ApJ 697, 1842

62. Silverman J.D., [...], **Bolzonella M.**, et al. 2009, *Ongoing and Co-Evolving Star Formation in zCOSMOS Galaxies Hosting Active Galactic Nuclei*, ApJ 696, 396

63. Silverman J.D., Kovač K., Knobel C., Lilly S.J., **Bolzonella M.**, et al. 2009, *The Environments of Active Galactic Nuclei within the zCOSMOS Density Field*, ApJ 695, 171

64. Maier C., [...], **Bolzonella M.**, et al. 2009, *The Dependence of Star Formation Activity on Stellar Mass Surface Density and Sersic Index in zCOSMOS Galaxies at 0.5 < z < 0.9 Compared with SDSS Galaxies at 0.04 < z < 0.08*, ApJ 694, 1099

65. Caputi K.I., Kovač K., **Bolzonella M.**, et al. 2009, *The Close Environment of 24 μm Galaxies at 0.6 < z < 1.0 in the Cosmos Field*, ApJ 691, 91

66. Salvato M., [...], **Bolzonella M.**, et al. 2009, *Photometric Redshift and Classification for the XMM-COSMOS Sources*, ApJ 690, 1250

67. Ilbert O., [...], **Bolzonella M.**, et al. 2009, *Cosmos Photometric Redshifts with 30-Bands for 2-deg^2*, ApJ 690, 1236

68. Gilli R., [...], **Bolzonella M.**, et al. 2009, *The spatial clustering of X-ray selected AGN in the XMM-COSMOS field*, A&A 494, 33

69. Mignoli M., [...], **Bolzonella M.**, et al. 2009, *The zCOSMOS redshift survey: the three-dimensional classification cube and bimodality in galaxy physical properties*, A&A 493, 39

70. Caputi K.I., [...], **Bolzonella M.**, et al. 2008, *The Optical Spectra of 24 μm Galaxies in the COSMOS Field. I. Spitzer MIPS Bright Sources in the zCOSMOS-Bright 10k Catalog*, ApJ 680, 939

71. Mandelbaum R., Seljak U., Hirata C.M., Bardelli S., **Bolzonella M.**, et al. 2008, *Precision photometric redshift calibration for galaxy-galaxy weak lensing*, MNRAS 386, 781
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VVDS
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