

## Education

Ph.D. in Astronomy, Bologna University (1990) : Searching for binary White Dwarfs (supervisor A. Renzini)

Laurea degree in Astronomy, Bologna University (1985) : Globular Clusters and HST (supervisor F. Fusi Pecci)

## Positions

Researcher, INAF Osservatorio Astronomico di Bologna	Since December 1990
Visiting Astronomer, Observatoire de la Côte d'Azur, Nice (France)	Nov-Dec 2008
Visiting Astronomer, Santiago, ESO (Chile)	Oct-Nov 2007
C.N.R. fellowship, Lunar & Planetary Lab, Arizona Univ. (USA)	March 1991-Feb 1992

## Main Research Interests

### - The resolved stellar population of the Milky Way and nearby galaxies

(participation to *Gaia* DPAC and *Gaia-ESO Survey*, see the pages at Bologna Observatory for [Gaia](#) and [Gaia-ESO](#))

### - Open Clusters

(*Gaia-ESO Survey*; co-PI of the the *Bologna Open Clusters Chemical Evolution* project, see the [BOCCE](#) webpage)

### - Globular Clusters

(in particular spectroscopy, multiple populations: see *Na-O project* [webpages](#))

## Research and teaching Experience

co-tutor of Laurea thesis (E. Gozzoli 1993-94)  
co-tutor of Laurea thesis (S. Di Tomaso 1998-99)  
co-tutor of Laurea Thesis (E. Taribello 2002-03)  
co-tutor of Laurea Thesis (F. De Luise 2002-03)  
co-tutor of Laurea Thesis (G. Coppa 2003-04)  
co-tutor of Laurea Thesis (V. Sommariva 2003-04)  
co-tutor of Laurea Thesis (V. D'Orazi 2004-05)  
co-tutor of Laurea Thesis (M. Manduchi 2004-05)  
co-tutor of PhD Thesis (P. Donati 2011-14)

## Affiliations/Memberships

-IAU member

(<http://www.iau.org/administration/membership/individual/10681/>)

- member of the “Consiglio di Struttura” of the INAF-OA BO since 2011
- member of Gaia DPAC (DU13 in CU5; CU9) since 2006
- member of Science Team for SIMPLE (Phase A, for E-ELT) 2008-2010
- member of the Science Team for MOONS (O-IR spectrograph VLT) since 2013
- member of the Italian Science Team for NTE since 2014
- member/builder of the Gaia-ESO public Spectroscopic Survey since 2010  
(<http://www.gaia-eso.eu>)

## Professional activities

- Referee for *Astronomy & Astrophysics*, *MNRAS*, *Astronomical Journal*, *Astrophysical Journal*, and *New Astronomy*
- Organizer and SOC co-chair of the GREAT-ESF Workshop “The metallicity distribution in the Milky Way Disks”, Bologna, 29-31 May 2012 (<http://www.bo.astro.it/great-esf-gradient/>)
- SOC co-chair of the GREAT-ESF Workshop “The World of Clusters”, Padova, Sep 23-26 September 2013 (<http://web.oapd.inaf.it/clusters/index.html>)
- PI and co-I of many observational programs (HST, ESO, TNG, LBT, WIYN, AAT, ...)
- ESO TAC member, panel D (4 semesters 2003-2005)
- TNG TAC member (4 semesters 2007-2008)
- Member of the committee for PRIN INAF 2010 (in 2011)
- Supervisor of post-laurea position (E. Gozzoli 1995-96)
- Supervisor of post-doc position (P. Sestito 2005-06)
- Supervisor of post-doc position (P. Donati 2014)
- Member of 15+ committees for fellowship awards/career
- Participation to White Book for WEAVE
- Participation to White Book for HIRES ([http://www.hireseelt.org/hires\\_wp\\_final\\_161013.pdf](http://www.hireseelt.org/hires_wp_final_161013.pdf))

## Funding awards

- PRIN 1998 : Test osservativi della evoluzione stellare (24 months)
- PRIN 2000: Spettrofotometria (24 months)
- PRIN 2001: IL CONTRIBUTO STELLARE A UN SFEROIDE VIVENTE (24 months)
- PRIN 2002: Popolazioni stellari, distanze e storia della formazione stellare in galassie del Gruppo Locale di tutti i tipi morfologici (24 months)
- PRIN 2003: Continuita' e discontinuita' nella formazione della nostra Galassia (UdR resp., 24 months)
- PRIN INAF 2005: Sondare la nucleosintesi stellare in ambienti puliti (24 months)
- PRIN 2008: COMPOSIZIONE CHIMICA E POPOLAZIONI MULTIPLE NEGLI AMMASSI GLOBULARI: OSSERVAZIONI E MODELLI (24 months)
- PRIN INAF 2009 : Formation and Early Evolution of Massive Star Clusters (UdR resp., 24 months)
- PRIN 2010/11: EVOLUZIONE CHIMICA E DINAMICA DELLA NOSTRA GALASSIA E DELLE GALASSIE DEL GRUPPO LOCALE (36 months)

- PREMIALE VLT, Gaia-ESO Survey

- T-REX, Progetti Premiali MIUR 2011

(<http://www.bo.astro.it/premiale.elt/Premiale/Welcome.html>)

## Refereed Publications

As of February 2014: more than 125 refereed papers, with more than 5400 citations, h-factor=40 (normalized =16)

- 1) Cantat-Gaudin, T., P.Donati, E.Pancino, A.Bragaglia, A.Vallenari, E.D.Friel, R.Sordo, H.R.Jacobson, and L.Magrini 2014. DOOp, an automated wrapper for DAOSPEC. *A&A* 562, A10.
- 2) Sollima, A., M.Cignoni, R.G.Gratton, M.Tosi, A.Bragaglia, S.Lucatello, and G.Meurer 2014. Resolved photometry of young massive clusters in the starburst galaxy NGC 4214. *MNRAS* 437, 1918.
- 3) Donati, P., G.Beccari, A.Bragaglia, M.Cignoni, and M.Tosi 2014. NGC 1817, NGC 2141 and Berkeley 81: three BOCCE clusters of intermediate age. *MNRAS* 437, 1241.
- 4) Donati, P., Cantat-Gaudin, T., A.Bragaglia, and 34 colleagues 2014. The Gaia-ESO Survey: Reevaluation of the parameters of the open cluster Trumpler 20 using photometry and spectroscopy. *A&A* 561, A94.
- 5) Carretta, E., A.Bragaglia, R.G.Gratton, V.D'Orazi, S.Lucatello, and A.Sollima 2014. Terzan 8: a Sagittarius-flavoured globular cluster. *A&A* 561, A87.
- 6) D'Orazi, V., M.Lugaro, S.W.Campbell, A.Bragaglia, E.Carretta, R.G.Gratton, S.Lucatello, and F.D'Antona 2013. Rubidium Abundances in the Globular Clusters NGC 6752, NGC 1904, and NGC 104 (47 Tuc). *ApJ* 776, 59.
- 7) Magrini, L., and 11 colleagues 2013. FAMA: An automatic code for stellar parameter and abundance determination. *A&A* 558, A38.
- 8) Carretta, E., A.Bragaglia, R.G.Gratton, S.Lucatello, V.D'Orazi, M.Bellazzini, G.Catanzaro, F.Leone, Y.Momany, and A.Sollima 2013. NGC 362: another globular cluster with a split red giant branch. *A&A* 557, A138.
- 9) Sollima, A., R.G.Gratton, E.Carretta, A.Bragaglia, and S.Lucatello 2013. Infrared photometry of young massive clusters in the starburst galaxy NGC 4214. *MNRAS* 433, 1276.
- 10) Beccari, G., M.Bellazzini, C.Lardo, A.Bragaglia, E.Carretta, E.Dalessandro, A.Mucciarelli, and E.Pancino 2013. Evidence for multiple populations in the massive globular cluster NGC 2419 from deep uVI LBT photometry. *MNRAS* 431, 1995.
- 11) Carretta, E., R.G.Gratton, A.Bragaglia, V.D'Orazi, S.Lucatello, A.Sollima, and C.Snedden 2013. Potassium in Globular Cluster Stars: Comparing Normal Clusters to the Peculiar Cluster NGC 2419. *ApJ* 769, 40.

- 12) Ahumada, A.V., M.Cignoni, A.Bragaglia, P.Donati, M.Tosi, and G.Marconi 2013. NGC 2849 and NGC 6134: two more BOCCE open clusters. *MNRAS* 430, 221.
- 13) Carretta, E., R.G.Gratton, A.Bragaglia, V.D'Orazi, and S.Lucatello 2013. An aluminium tool for multiple stellar generations in the globular clusters 47 Tucanae and M 4. *A&A* 550, A34.
- 14) D'Orazi, V., and 10 colleagues 2013. Fluorine Variations in the Globular Cluster NGC 6656 (M22): Implications for Internal Enrichment Timescales. *ApJ* 763, 22.
- 15) Gratton, R.G., S.Lucatello, A.Sollima, E.Carretta, A.Bragaglia, Y.Momany, V.D'Orazi, S.Cassisi, A.Pietrinferni, and M.Salaris 2013. The Na-O anticorrelation in horizontal branch stars. III. 47 Tucanae and M 5. *A&A* 549, A41.
- 16) Bragaglia, A., R.G.Gratton, E.Carretta, V.D'Orazi, C.Snedden, and S.Lucatello 2012. Searching for multiple stellar populations in the massive, old open cluster Berkeley 39. *A&A* 548, A122.
- 17) Pancino, E., and 25 colleagues 2012. The Gaia spectrophotometric standard stars survey - I. Preliminary results. *MNRAS* 426, 1767.
- 18) Sollima, A., R.G.Gratton, J.A.Carballo-Bello, D.Martinez-Delgado, E.Carretta, A.Bragaglia, S.Lucatello, and J.Penarrubia 2012. Spectroscopic hint of a cold stream in the direction of the globular cluster NGC 1851. *MNRAS* 426, 1137.
- 19) Donati, P., A.Bragaglia, M.Cignoni, G.Cocozza, and M.Tosi 2012. The anticentre old open clusters Berkeley 27, Berkeley 34 and Berkeley 36: new additions to the BOCCE project. *MNRAS* 424, 1132.
- 20) Gratton, R.G., S.Villanova, S.Lucatello, A.Sollima, D.Geisler, E.Carretta, S.Cassisi, and A.Bragaglia 2012. Spectroscopic analysis of the two subgiant branches of the globular cluster NGC 1851. *A&A* 544, A12.
- 21) Kinman, T.D., C.Cacciari, A.Bragaglia, R.Smart, and A.Spagna 2012. The kinematic properties of BHB and RR Lyrae stars towards the Anticentre and the North Galactic Pole: the transition between the inner and the outer halo. *MNRAS* 422, 2116.
- 22) Carretta, E., A.Bragaglia, R.G.Gratton, S.Lucatello, and V.D'Orazi 2012. Chemical Tagging of Three Distinct Populations of Red Giants in the Globular Cluster NGC 6752. *ApJ* 750, L14.
- 23) Mikolaitis, S., G.Tautvaišienė, R.Gratton, A.Bragaglia, and E.Carretta 2012. C, N, O abundances and carbon isotope ratios in evolved stars of the open clusters Collinder 261 and NGC 6253. *A&A* 541, A137.
- 24) Gratton, R.G., S.Lucatello, E.Carretta, A.Bragaglia, V.D'Orazi, Y.Al Momany, A.Sollima, M.Salaris, and S.Cassisi 2012. The Na-O anticorrelation in horizontal branch stars. II. NGC 1851. *A&A* 539, A19.
- 25) Gratton, R.G., E.Carretta, and A.Bragaglia 2012. Multiple populations in globular clusters. Lessons learned from the Milky Way globular clusters. *A&ARv* 20, 50.

- 26) Bellazzini, M., A.Bragaglia, E.Carretta, R.G.Gratton, S.Lucatello, G.Catanzaro, and F.Leone 2012. Na-O anticorrelation and HB. IX. Kinematics of the program clusters A link between systemic rotation and HB morphology?. *A&A* 538, A18.
- 27) Milone, A.P., and 18 colleagues 2012. Multiple Stellar Populations in 47 Tucanae. *ApJ* 744, 58.
- 28) Carretta, E., A.Bragaglia, R.Gratton, V.D'Orazi, and S.Lucatello 2011. A Stromgren view of the multiple populations in globular clusters. *A&A* 535, A121.
- 29) Gratton, R.G., S.Lucatello, E.Carretta, A.Bragaglia, V.D'Orazi, and Y.A.Momany 2011. The Na-O anticorrelation in horizontal branch stars. I. NGC 2808. *A&A* 534, A123.
- 30) D'Orazi, V., R.G.Gratton, E.Pancino, A.Bragaglia, E.Carretta, S.Lucatello, and C.Snedden 2011. Chemical enrichment mechanisms in  $\omega$  Centauri: clues from neutron-capture elements. *A&A* 534, A29.
- 31) Mikolaitis, S., G.Tautvaisiene, R.Gratton, A.Bragaglia, and E.Carretta 2011. Chemical composition of evolved stars in the open cluster NGC 2506. *MNRAS* 416, 1092.
- 32) Cignoni, M., G.Beccari, A.Bragaglia, and M.Tosi 2011. Three new bricks in the wall: Berkeley 23, Berkeley 31 and King 8. *MNRAS* 416, 1077.
- 33) Carretta, E., S.Lucatello, R.G.Gratton, A.Bragaglia, and V.D'Orazi 2011. Multiple stellar populations in the globular cluster NGC 1851. *A&A* 533, A69.
- 34) Mikolaitis, S., G.Tautvaisiene, R.Gratton, A.Bragaglia, and E.Carretta 2011. Chemical composition of evolved stars in the open cluster IC 4651. *MNRAS* 413, 2199.
- 35) Andreuzzi, G., A.Bragaglia, M.Tosi, and G.Marconi 2011. Old open clusters and the Galactic metallicity gradient: Berkeley 20, Berkeley 66 and Tombaugh 2. *MNRAS* 412, 1265.
- 36) Bragaglia, A., E.Carretta, R.G.Gratton, S.Lucatello, A.Milone, G.Piotto, V.D'Orazi, S.Cassisi, C.Snedden, and R.L.Bedin 2011. X-shooter GTO observations and chemical tagging of two main-sequence stars in the globular cluster NGC 2808. *AN* 332, 258.
- 37) Lardo, C., M.Bellazzini, E.Pancino, E.Carretta, A.Bragaglia, and E.Dalessandro 2011. Mining SDSS in search of multiple populations in globular clusters. *A&A* 525, A114.
- 38) Gratton, R.G., V.D'Orazi, A.Bragaglia, E.Carretta, and S.Lucatello 2010. The connection between missing AGB stars and extended horizontal branches. *A&A* 522, A77.
- 39) Carretta, E., and 10 colleagues 2010. Abundances for a Large Sample of Red Giants in NGC 1851: Hints for a Merger of Two Clusters?. *ApJ* 722, L1.
- 40) Mikolaitis, S., G.Tautvaisiene, R.Gratton, A.Bragaglia, and E.Carretta 2010. Chemical composition of clump stars in the open cluster NGC 6134. *MNRAS* 407, 1866.
- 41) Bragaglia, A., E.Carretta, R.G.Gratton, S.Lucatello, A.Milone, G.Piotto, V.D'Orazi, S.Cassisi, C.Snedden, and L.R.Bedin 2010. X-shooter Observations of Main-sequence Stars in the Globular Cluster NGC 2808: First Chemical Tagging of a He-normal and a He-rich Dwarf. *ApJ* 720, L41.

- 42) Carretta, E., A.Bragaglia, R.G.Gratton, S.Lucatello, M.Bellazzini, G.Catanzaro, F.Leone, Y.Momany, G.Piotto, and V.D'Orazi 2010. Detailed abundances of a large sample of giant stars in M 54 and in the Sagittarius nucleus. *A&A* 520, A95.
- 43) Carretta, E., A.Bragaglia, V.D'Orazi, S.Lucatello, and R.G.Gratton 2010. The radial distribution of stars of different stellar generations in the globular cluster NGC 3201. *A&A* 519, A71.
- 44) Bragaglia, A., E.Carretta, R.Gratton, V.D'Orazi, S.Cassisi, and S.Lucatello 2010. Helium in first and second-generation stars in globular clusters from spectroscopy of red giants. *A&A* 519, A60.
- 45) D'Orazi, V., R.Gratton, S.Lucatello, E.Carretta, A.Bragaglia, and A.F.Marino 2010. Ba Stars and Other Binaries in First and Second Generation Stars in Globular Clusters. *ApJ* 719, L213.
- 46) Gratton, R.G., E.Carretta, A.Bragaglia, S.Lucatello, and V.D'Orazi 2010. The second and third parameters of the horizontal branch in globular clusters. *A&A* 517, A81.
- 47) Carretta, E., A.Bragaglia, R.G.Gratton, A.Recio-Blanco, S.Lucatello, V.D'Orazi, and S.Cassisi 2010. Properties of stellar generations in globular clusters and relations with global parameters. *A&A* 516, A55.
- 48) Carretta, E., A.Bragaglia, R.G.Gratton, S.Lucatello, M.Bellazzini, G.Catanzaro, F.Leone, Y.Momany, G.Piotto, and V.D'Orazi 2010. M54 + Sagittarius =  $\omega$  Centauri. *ApJ* 714, L7.
- 49) D'Orazi, V., S.Lucatello, R.Gratton, A.Bragaglia, E.Carretta, Z.Shen, and S.Zaggia 2010. Lithium and Proton-capture Elements in Globular Cluster Dwarfs: The Case of 47 Tuc. *ApJ* 713, L1.
- 50) Bellini, A., and 23 colleagues 2010. The end of the white dwarf cooling sequence in M 67. *A&A* 513, A50.
- 51) Carretta, E., A.Bragaglia, R.Gratton, S.Lucatello, M.Bellazzini, and V.D'Orazi 2010. Calcium and Light-elements Abundance Variations from High-resolution Spectroscopy in Globular Clusters. *ApJ* 712, L21.
- 52) Carretta, E., A.Bragaglia, R.Gratton, V.D'Orazi, and S.Lucatello 2009. Intrinsic iron spread and a new metallicity scale for globular clusters. *A&A* 508, 695.
- 53) Carretta, E., A.Bragaglia, R.Gratton, and S.Lucatello 2009. Na-O anticorrelation and HB. VIII. Proton-capture elements and metallicities in 17 globular clusters from UVES spectra. *A&A* 505, 139.
- 54) Carretta, E., and 14 colleagues 2009. Na-O anticorrelation and HB. VII. The chemical composition of first and second-generation stars in 15 globular clusters from GIRAFFE spectra. *A&A* 505, 117.
- 55) Randich, S., G.Pace, L.Pastori, and A.Bragaglia 2009. Membership and lithium in the old, metal-poor open cluster Berkeley 32. *A&A* 496, 441.
- 56) Sestito, P., A.Bragaglia, S.Randich, R.Pallavicini, S.M.Andrievsky, and S.A.Korotin 2008. Open clusters as key tracers of Galactic chemical evolution. III. Element abundances in Berkeley 20, Berkeley 29, Collinder 261 and Melotte 66. *A&A* 488, 943.

- 57) Cignoni, M., M.Tosi, A.Bragaglia, J.S.Kalirai, and D.S.Davis 2008. Disentangling the Galaxy at low Galactic latitudes. *MNRAS* 386, 2235.
- 58) Bragaglia, A., P.Sestito, S.Villanova, E.Carretta, S.Randich, and M.Tosi 2008. Old open clusters as key tracers of Galactic chemical evolution. II. Iron and elemental abundances in NGC 2324, NGC 2477 NGC 2660, NGC 3960, and Berkeley 32. *A&A* 480, 79.
- 59) Carretta, E., A.Recio-Blanco, R.G.Gratton, G.Piotto, and A.Bragaglia 2007. The Link between Chemical Anomalies along the Red Giant Branch and the Horizontal Branch Extension in Globular Clusters. *ApJ* 671, L125.
- 60) Carretta, E., A.Bragaglia, and R.G.Gratton 2007. The chemical abundance of the very metal-rich old open clusters NGC 6253 and NGC 6791. *A&A* 473, 129.
- 61) Tosi, M., A.Bragaglia, and M.Cignoni 2007. The old open clusters Berkeley 32 and King 11. *MNRAS* 378, 730.
- 62) Sestito, P., S.Randich, and A.Bragaglia 2007. Element abundances in the metal-rich open cluster NGC 6253. *A&A* 465, 185.
- 63) Kinman, T.D., C.Cacciari, A.Bragaglia, A.Buzzoni, and A.Spagna 2007. Kinematic structure in the Galactic halo at the North Galactic Pole: RR Lyrae and blue horizontal branch stars show different kinematics. *MNRAS* 375, 1381.
- 64) Carretta, E., A.Bragaglia, R.G.Gratton, Y.Momany, A.Recio-Blanco, S.Cassisi, P.François, G.James, S.Lucatello, and S.Moehler 2007. Na-O anticorrelation and horizontal branches. VI. The chemical composition of the peculiar bulge globular cluster NGC 6388. *A&A* 464, 967.
- 65) Gratton, R.G., and 18 colleagues 2007. Na-O anticorrelation and horizontal branches. V. The Na-O anticorrelation in NGC 6441 from Giraffe spectra. *A&A* 464, 953.
- 66) Carretta, E., and 11 colleagues 2007. Na-O anticorrelation and horizontal branches. IV. Detection of He-rich and He-poor stellar populations in the globular cluster NGC 6218. *A&A* 464, 939.
- 67) Carretta, E., A.Bragaglia, R.G.Gratton, S.Lucatello, and Y.Momany 2007. Na-O anticorrelation and horizontal branches. II. The Na-O anticorrelation in the globular cluster NGC 6752. *A&A* 464, 927.
- 68) Sestito, P., A.Bragaglia, S.Randich, E.Carretta, L.Prisinzano, and M.Tosi 2006. Old open clusters as key tracers of Galactic chemical evolution. I. Fe abundances in NGC 2660, NGC 3960, and Berkeley 32. *A&A* 458, 121.
- 69) Gratton, R.G., S.Lucatello, A.Bragaglia, E.Carretta, Y.Momany, E.Pancino, and E.Valenti 2006. Na-O anticorrelation and HB. III. The abundances of NGC 6441 from FLAMES-UVES spectra. *A&A* 455, 271.
- 70) Bragaglia, A., M.Tosi, G.Andreuzzi, and G.Marconi 2006. BVI photometry of the very old open cluster Berkeley 17. *MNRAS* 368, 1971.
- 71) D'Orazi, V., A.Bragaglia, M.Tosi, L.Di Fabrizio, and E.V.Held 2006. The old anticentre open cluster Berkeley 32: membership and fundamental parameters. *MNRAS* 368, 471.

- 72) Gratton, R., A.Bragaglia, E.Carretta, and M.Tosi 2006. The Metallicity of the Old Open Cluster NGC 6791. *ApJ* 642, 462.
- 73) Carretta, E., A.Bragaglia, R.G.Gratton, F.Leone, A.Recio-Blanco, and S.Lucatello 2006. Na-O anticorrelation and HB. I. The Na-O anticorrelation in NGC 2808. *A&A* 450, 523.
- 74) Bragaglia, A., M.Tosi, E.Carretta, R.G.Gratton, G.Marconi, and E.Pompei 2006. Photometric and spectroscopic study of the intermediate-age open cluster NGC 3960. *MNRAS* 366, 1493.
- 75) Bragaglia, A. and M.Tosi 2006. The Bologna Open Cluster Chemical Evolution Project: Midterm Results from the Photometric Sample. *AJ* 131, 1544.
- 76) Clementini, G., V.Ripepi, A.Bragaglia, A.F.Martinez Fiorenzano, E.V.Held, and R.G.Gratton 2005. The metal abundance distribution of the oldest stellar component in the Sculptor dwarf spheroidal galaxy. *MNRAS* 363, 734.
- 77) Carretta, E., A.Bragaglia, R.G.Gratton, and M.Tosi 2005. High-resolution spectroscopy of the old open cluster Collinder 261: abundances of iron and other elements. *A&A* 441, 131.
- 78) Clementini, G., R.G.Gratton, A.Bragaglia, V.Ripepi, A.F.Martinez Fiorenzano, E.V.Held, and E.Carretta 2005. Metal Abundances of RR Lyrae Stars in the Metal-rich Globular Cluster NGC 6441. *ApJ* 630, L145.
- 79) Gratton, R.G., A.Bragaglia, E.Carretta, F.de Angeli, S.Lucatello, Y.Momany, G.Piotto, and A.Recio Blanco 2005. Precise reddening and metallicity of NGC 6752 from FLAMES spectra. *A&A* 440, 901.
- 80) Di Fabrizio, L., A.Bragaglia, M.Tosi, and G.Marconi 2005. Berkeley 22, an old and distant open cluster towards the Galactic anticentre. *MNRAS* 359, 966.
- 81) Carretta, E., R.G.Gratton, S.Lucatello, A.Bragaglia, and P.Bonifacio 2005. Abundances of C, N, O in slightly evolved stars in the globular clusters NGC 6397, NGC 6752 and 47 Tuc. *A&A* 433, 597.
- 82) Di Fabrizio, L., G.Clementini, M.Maio, A.Bragaglia, E.Carretta, R.Gratton, P.Montegriffo, and M.Zoccali 2005. Variable stars in the bar of the Large Magellanic Cloud: The photometric catalogue. *A&A* 430, 603.
- 83) Bragaglia, A., E.V.Held, and M.Tosi 2005. Radial velocities and membership of stars in the old, distant open cluster Berkeley 29. *A&A* 429, 881.
- 84) Tosi, M., L.Di Fabrizio, A.Bragaglia, P.A.Carusillo, and G.Marconi 2004. Berkeley 29, the most distant old open cluster. *MNRAS* 354, 225.
- 85) Chugai, N.N., S.I.Blinnikov, R.J.Cumming, P.Lundqvist, A.Bragaglia, A.V.Filippenko, D.C.Leonard, T.Matheson, and J.Sollerman 2004. The Type II supernova 1994W: evidence for the explosive ejection of a circumstellar envelope. *MNRAS* 352, 1213.
- 86) Carretta, E., A.Bragaglia, R.G.Gratton, and M.Tosi 2004. Iron abundances from high-resolution spectroscopy of the open clusters NGC 2506, NGC 6134, and IC 4651. *A&A* 422, 951.

- 87) Carretta, E., A.Bragaglia, and C.Cacciari 2004. Star-to-Star Na and O Abundance Variations along the Red Giant Branch in NGC 2808. *ApJ* 610, L25.
- 88) Gratton, R.G., A.Bragaglia, G.Clementini, E.Carretta, L.Di Fabrizio, M.Maio, and E.Taribello 2004. Metal abundances of RR Lyrae stars in the bar of the Large Magellanic Cloud. *A&A* 421, 937.
- 89) Carretta, E., R.G.Gratton, A.Bragaglia, P.Bonifacio, and L.Pasquini 2004. Abundance analysis of turn-off and early subgiant stars in the globular cluster 47 Tuc (NGC 104). *A&A* 416, 925.
- 90) Andreuzzi, G., A.Bragaglia, M.Tosi, and G.Marconi 2004. UBVI photometry of the intermediate-age open cluster NGC 6939. *MNRAS* 348, 297.
- 91) James, G., and 14 colleagues 2004. Heavy elements abundances in turn-off stars and early subgiants in NGC 6752. *A&A* 414, 1071.
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## Invited talks

- Bragaglia, A., Carretta, E., Gratton, R., D'Orazi, V., Lucatello, S., Sneden, C. 2013. *Reading the book: from "chemical anomalies" to "standard composition" of globular clusters*. *Memorie della Societa Astronomica Italiana* 84, 24.
- Bragaglia, A. 2012. *Multiple Populations in (Massive) Clusters*. American Astronomical Society, AAS Meeting #220, #102.03
- Bragaglia, A. 2010. *Open clusters as tracers of the Galactic disk*. SF2A-2010: Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics 335.
- Bragaglia, A. 2010. *The quite complex "Simple Stellar Populations" of globular clusters*. IAU Symposium 268, 119-128.
- Bragaglia, A., Tosi, M., Marconi, G., Carretta, E. 2000. *Old Open Clusters as Tracers of Galactic Evolution*. *The Evolution of the Milky Way: Stars versus Clusters*, eds F. Matteucci and F. Giovannelli. Published by Kluwer Academic Publishers, p. 281.

## Seminars

- Padova, Oss.Astr. & UniPD – December 2001 “Fotometria e spettroscopia di ammassi aperti”
- Santiago, ESO Chile – January 2005 “Old Open Clusters”
- Santiago, ESO Chile – October 2007 “The BOCCE project”
- Nizza, Observatoire de la Côte d’Azur – December 2008 “Old Open Clusters”

- Monte Porzio, Oss. Astr. - February 2010 “Open clusters as tracers of the galactic disk”
- Santiago, ESO Chile – June 2011 “Chemical tagging of multiple stellar generations in globular

## Observing programmes 2004-2014 as Principal Investigator

ESO 076.D-0119 SUSI2@NTT, 6 h : Photometry of three old Open Clusters as probes of the metallicity distribution in the Galactic Disk: radial abundance gradient or discontinuity?

ESO 386.B-0009 + 007.B-0086; FLAMES@VLT, 5.4 h + 32.5 h; Defining the border between open and globular clusters. Answers from chemistry.

ESO 088.D-0234; XSHOOTER@VLT, 4 n : The chemical tagging of the triple Main Sequence of the Globular Cluster NGC~2808.

ESO 093.B-0583; FLAMES@VLT, 57.2 h : Probing the nature of star clusters: a clearcut test for multiple populations

TNG 2004a + 2005a TAC\_31 + TAC\_36; SARG, 2 n + 18 h: Metal abundances of open clusters as tracers of Galactic chemical evolution : NGC 6791, the oldest one

TNG 2004a + 2004b + 2005b TAC\_57 + TAC\_11 + TAC\_1; MOS/LRS, 18 h + 13 h + 10 h: Membership in old open clusters from multi-slit intermediate resolution spectroscopy: Be17 and Be32

TNG 2007b + 2008a TAC\_1 + TAC\_8; SARG, 24 h + 5 n: Open Clusters as tracers of the Galactic Disk (BOCCE project)

TNG 2010a TAC\_7; LRS, 14 h : Integrated spectroscopy of representative open clusters from the BOCCE sample

LBT 2008 + 2011a; LBC, 0.7 h + 1.8 h : Open Clusters and the Galactic disk: the BOCCE project

## Selected observing programmes 2004-2014 as co-I

ESO 073.D-0211 PI Carretta ; FLAMES@VLT, 74 h : Formation and evolution of Galactic Globular Clusters: the first billion years

ESO 073.D-0550 + 074.D-0571 + 076.D-0220 PI Randich ; FLAMES@VLT, 20 h + 4 n + 20 h : Old Open Clusters as key tracers of the evolution of light elements and the Galactic disk

ESO 081.D-0286 + 083.D-0208 + 085.D-0205 PI Carretta ; FLAMES@VLT, 36 h + 41 h + 31.9 h : Na-O in Galactic Globular Clusters as probe of multiple populations

ESO 386.D-0086 + 087.D-0230 + 091.D-0151 PI Gratton : FLAMES@VLT ; 9.8 h + 17.5 h + 4.6h: Multiple generations and Horizontal Branch in Globular Clusters: a spectroscopic test

ESO 085.D-0810 + 087.D-0276 PI D'Orazi ; FLAMES@VLT, 18 h + 34.5 h: Diagnostics of the dilution processes in Globular Clusters: the Lithium test

ESO 182.D-0287 + 086.D-0176 + 087.D-0213 + 089.D-0077 + 091.D-0276 + 093.D-0197

PI Pancino EFOSC2@NTT, 5 n + 7 n + 4 n + 5 n + 5 n + 6 n + 8 n: The Gaia

Spectrophotometric Standard Stars

ESO 188.B-3002 PIs Gilmore & Randich ; FLAMES@VLT ; 300 n over 5 years : The Gaia-ESO public Spectroscopic Survey

HST cycle 19, id 12580 PI Renzini ; STIS, 10 orbits : A 'Rosetta Stone' to Interpret the UV-HST Photometry of Multiple Stellar Populations in Globular Clusters

WYN 2009a-211 PI Sneden ; Hydra, 2 n : Searching for Abundance Anomalies in the Old, Metal-Rich Open Cluster NGC 6791

AAT 2013b PI D'Orazi ; AAOMEGA, 6 h : Looking outside our Galaxy: light-element variations in the Fornax globular clusters

LBT 2012a PI Donati ; LBC, 1.8 h : Open Clusters and the Galactic disk: the BOCCE project

NOT 2013 48-017 PI Donati; FIES, 3 n : Old Open Clusters as tracers of the Galactic disk