

# CURRICULUM VITAE ET STUDIORUM

## December 2016

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### 1. PERSONAL DATA

Name: BUFANO Filomena  
Birth: Canosa di Puglia (BA), Italia, on April 17, 1979  
Citizenship: Italian  
Languages: English (Advanced); Spanish (Advanced); Italian (mother tongue)  
Current Position: Post-Doc  
E-mail: filomena.bufano@oact.inaf.it

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### 2. CURRICULUM STUDIORUM

- Jan. 2006 - Apr. 2009:  
Ph.D. Student at the University of Padova (Italy), INAF Studentship.  
Title of the Thesis: “The Ultraviolet View of Supernovae”  
Abstract On-Line: <http://paduaresearch.cab.unipd.it/1704/>
- Oct. 1998 - Mar. 2004:  
Degree in Astronomy at the University of Padova (Italy), with first honour grade:  
*110/110 cum laude*.  
Title of the Thesis: “Photometric Reduction Methods Applied to SN studies”

### 3. PREVIOUS POSITIONS AND GRANTS

- Nov.2016 - Present:  
Marie-Curie AstroFIit2 FELLOWSHIP  
INAF - Osservatorio Astrofisico di Catania
- Feb. 2015- Oct. 2016:  
Assegno di Ricerca - “Via Lactea”, FP7 Project #607380  
INAF, Osservatorio Astrofisico di Catania
- Oct. 2014- Jan. 2015:  
Millennium Institute of Astrophysics (MAS) Post-Doctoral Position  
Departamento de Ciencias Fisicas, Universisad Andres Bello, Santiago, Chile.
- Jan 2012- Sept. 2014:  
FONDECYT Post-Doctoral FELLOWSHIP  
Departamento de Ciencias Fisicas, Universisad Andres Bello, Santiago, Chile.
- Dec. 2010 - Dec. 2011:  
INAF Post-Doctoral FELLOWSHIP  
INAF, Osservatorio Astrofisico di Catania
- Jan. 2009 - Nov. 2010:  
Assegno di Ricerca - “Spectrophotometry of Supernovae from the UV to the NIR”  
INAF, Osservatorio Astrofisico di Padova.
- Nov. 2006 - Nov. 2007:  
Visiting Student at NASA-Goddard Space Flight Center (GSFC), Greenbelt, MD, USA.  
Research Project: “Analysis of UV spectra of SNe taken with Swift/UVOT”.
- Apr. 2005 - Nov. 2005:  
“Contratto di Collaborazione Occasionale” within the *Italian Intensive Supernova Project (IISP)*.  
INAF - Osservatorio Astrofisico di Padova

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#### 4. OBSERVING EXPERIENCE AND MULTIWAVELENGTH DATA REDUCTION SKILLS:

- Visiting Astronomer for spectroscopical and photometrical observational campaigns at: VLT/FORS2, VLT/HAWKI, VLT/EMMI, NTT/EFOSC, NTT/SOFI, Magellan/LDSS3, DuPont/WFCCD, TNG/LRS, TNG/NICS, SOAR/Goodman, NOT/ALFOSC;
  - Queue-scheduled observations with VLT/FORS2, VLT/ISAAC, VLT/X-Shooter, LBT/Lucifer, REM/REMIR;
  - Extensive Data Reduction of Ultraviolet, Optical and NIR imaging and spectroscopy. Data from e.g. Swift/UVOT, HST+STIS, GALEX, WHT+ISIS, VLT+XShooter, VLT+FORS2, Gemini-N/S+GMOS, LT+RATCam, TNG+LRS, TNG+NICS, SOAR/Goodman, REM/REMIR.
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#### 5. SKILLS IN MANAGEMENT AND ANALYSIS OF BIG DATASETS:

- Data from *Hi-GAL* survey at FarInfrared (FIR) wavelengths obtained with *Herschel* satellite (PI. S. Molinari);
  - FIR data from the GLIMPSE (Benjamin et al. 2003, PASP, 115, 953) and MIPS GAL (Carey et al. 2009, PASP, 121, 76) surveys, obtained with *Spitzer* satellite;
  - Radio data from different surveys, such as VLA Galactic Plane Survey (VLA, USA) and Molonglo Galactic Plane Survey (Molonglo Observatory Synthesis Telescope, Australia).
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#### 6. TELESCOPE TIME AWARDS (AS P.I.):

- 094.D-0358, *Spectral characterization of extremely young supernovae and possible shock breakout events found by a high cadence transient search*, PI Bufano  
2.2h Hard ToO at VLT/FORS2, Paranal Observatory, Chile;
  - CN2015A-85, CN2014B-60, CN2014A-56, CN2013B-56, *Prompt and Detailed Spectroscopy of Supernovae in the Local Universe*, PI. Bufano  
4.5 notti/ semester at SOAR/Spettrografo Goodman, Cerro Tololo Observatory, Chile;
  - Long Term AOT25-28 and AOT21-24: *Near-IR Monitoring of Local Supernovae with REM*, PI. Bufano  
300h = 75h x 4semesters/ Long Program in ToO/Queue mode, at REM/REMIR, ESO La Silla Observatory, Chile;
  - Programs Cycle5-5080132, Cycle6-6090721 (2 years): *Ultraviolet spectroscopy of Supernovae with SWIFT*, PI. Bufano  
81ks/ cycle in ToO Mode, with SWIFT/UVOT Satellite.
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#### 7. RECENT TALKS/SEMINARS

- Sep. 2016 International Conference *ViaLactea: The Milky Way as a Star Forming Engine*, Roma, Italia;
- Jul. 2016 *EWASS 2016; European Week of Astronomy and Space Science*, Symposium 16, Athens, Greece;
- Jul. 2016 *EWASS 2016; European Week of Astronomy and Space Science*, Special Session 3, Athens, Greece;
- Mar. 2016. Consortium meeting *VIALACTEA*, at LAM, Marseille, France;
- Jul. 2014. Invited Seminar at INAF-Osservatorio Astrofisico di Catania, Italia;
- Ago. 2013 *The SN Type II Workshop: observations meet models*. Workshop at Universidad de Chile, Santiago, Chile;
- Jun. 2013. Workshop *UK-Chile workshop on Supernova progenitors*, at Oxford University, UK;

- Apr. 2013 ESO Conference *The deaths of stars and the lives of galaxies*, , Santiago, Chile;
- Dec. 2012. Workshop *Focus week for supernovae near and far*, at Kavli IPMU, Tokio, Japan;
- Dec. 2011/ Dec. 2010/ Oct .2009. Annual collaboration meeting of the ESO/NTT Large Programme *Supernova Variety and Nucleosynthesis Yields*, at INAF- Osservatorio Astronomico di Padova, Italia;
- Oct. 2011 *Analisi dati di Astrofisica delle Alte Energie e la Cosmologia delle Strutture Formate*. ASI-INAF Workshop. Palermo;
- Jun. 2011 *Supernovae and their Host Galaxies*. Sydney, Australia;
- Oct. 2010. Invited Talk at the International Conference *The first year of Science with X-shooter Conference*, at Como, Italia.

## 8. PUBLICATIONS

70 peer reviewed papers, 2728 citations, 6 first-author papers, h-index= 34.  
Full list of publications on ADS.

First Author Best Cited Papers:

- Bufano, F.; Pignata, G.; Bersten, M.; Mazzali, P.A.; Ryder, S.D.; Margutti, R.; Milisavljevic, D.; Morelli, L.; Benetti, S.; Cappellaro, E.; Gonzalez-Gaitan, S.; Romero-Canizales, C.; Stritzinger, M.; Walker, E.S.; Anderson, J.P.; Contreras, C.; de Jaeger, T.; Forster, F.; Gutierrez, C.; Hamuy, M.; Hsiao, E.; Morrell, N.; Olivares E., F.; Paillas, E.; Pian, E.; Pickering, T.E.; Sanders, N.; Stockdale, C.; Turatto, M.; Valenti, S.; Fesen, R.A.; Maza, J.; Nomoto, K.; Phillips, M.M.; Soderberg, A., SN 2011hs: a Fast and Faint Type IIb Supernova from a Supergiant Progenitor, 2014, MNRAS, 439, 1807;  
<http://mnras.oxfordjournals.org/content/439/2/1807>
- Bufano, F.; Pian, E.; Sollerman, J.; Benetti, S.; Pignata, G.; Valenti, S.; Covino, S.; D'Avanzo, P.; Malesani, D.; Cappellaro, E.; Della Valle, M.; Fynbo, J.; Hjorth, J.; Mazzali, P. A.; Reichart, D. E.; Starling, R.L.C.; Turatto, M.; Vergani, S.D.; Wiersema, K.; Amati, L.; Bersier, D.; Campana, S.; Cano, Z.; Castro-Tirado, A. J.; Chincarini, G.; D'Elia, V.; de Ugarte Postigo, A.; Deng, J.; Ferrero, P.; Filippenko, A. V.; Goldoni, P.; Gorosabel, J.; Greiner, J.; Hammer, F.; Jakobsson, P.; Kaper, L.; Kawabata, K. S.; Klose, S.; Levan, A. J.; Maeda, K.; Masetti, N.; Milvang-Jensen, B.; Mirabel, F. I.; Miller, P.; Nomoto, K.; Palazzi, E.; Piranomonte, S.; Salvaterra, R.; Stratta, G.; Tagliaferri, G.; Tanaka, M.; Tanvir, N.R.; Wijers, R. A. M. J., The Highly Energetic Expansion of SN 2010bh Associated with GRB 100316D, 2012, ApJ, 753, 67B;  
<http://iopscience.iop.org/0004-637X/753/1/67/>
- Bufano, F.; Immler, S.; Turatto, M.; Landsman, W.; Brown, P.; Benetti, S.; Cappellaro, E.; Holland, S. T.; Mazzali, P.; Milne, P.; Panagia, N.; Roming, P.; Zampieri, L.; Gehrels, N., Ultraviolet Spectroscopy of Supernovae: The First Two Years of Swift Observations., 2009, ApJ, 700, 1456B;  
<http://iopscience.iop.org/0004-637X/700/2/1456/>

Most Recent Papers:

- Ingallinera, A.; Trigilio, C.; Leto, P.; Umana, G.; Buemi, C.; **Bufano, F.**; Agliozzo, C.; Riggi, S.; Flagey, N.; Silva, K.; Cerrigone, L.; Cavallaro, F. *High-resolution Very Large Array observations of 18 MIPS GAL bubbles*, 2016, MNRAS, 463, 723  
<http://mnras.oxfordjournals.org/content/463/1/723.full.pdf>

- Fremling, C.; Sollerman, J.; Taddia, F.; Ergon, M.; Fraser, M.; Karamehmetoglu, E.; Valenti, S.; Jerkstrand, A.; Arcavi, I.; **Bufano, F.**; Elias Rosa, N.; Filippenko, A. V.; Fox, D.; Gal-Yam, A.; Howell, D. A.; Kotak, R.; Mazzali, P.; Milisavljevic, D.; Nugent, P. E.; Nyholm, A.; Pian, E.; Smartt, S. *PTF12os and iPTF13bvn. Two stripped-envelope supernovae from low-mass progenitors in NGC 5806*, 2016, *A&A*, 593, 68.  
<http://www.aanda.org/articles/aa/pdf/2016/09/aa28275-16.pdf>
- Riggi, S.; Ingallinera, A.; Leto, P.; Cavallaro, F.; Bufano, F.; Schillirò, F.; Trigilio, C.; Umana, G.; Buemi, C. S.; Norris, R. P., *Automated detection of extended sources in radio maps: progress from the SCORPIO survey*, 2016, *MNRAS*, 460, 1486  
<http://mnras.oxfordjournals.org/content/460/2/1486.full.pdf>
- Dong, S.; Shappee, B. J.; Prieto, J. L.; Jha, S. W.; Stanek, K. Z.; Holoien, T. W.-S.; Kochanek, C. S.; Thompson, T. A.; Morrell, N.; Thompson, I. B.; Basu, U.; Beacom, J. F.; Bersier, D.; Brimacombe, J.; Brown, J. S.; Bufano, F.; Chen, Ping; Conseil, E.; Danilet, A. B.; Falco, E.; Grupe, D.; Kiyota, S.; Masi, G.; Nicholls, B.; Olivares E., F.; Pignata, G.; Pojmanski, G.; Simonian, G. V.; Szczygiel, D. M.; Woniak, P. R., *ASASSN-15lh: A highly super-luminous supernova*, 2016, *Science*, 351, 257  
<http://science.sciencemag.org/content/sci/351/6270/257.full.pdf>
- Gutiérrez, C. P.; González-Gaitán, S.; Folatelli, G.; Pignata, G.; Anderson, J. P.; Hamuy, M.; Morrell, N.; Stritzinger, M.; Taubenberger, S.; Bufano, F.; Olivares E., F.; Haislip, J. B.; Reichart, D. E., *Supernova 2010ev: A reddened high velocity gradient type Ia supernova*, 2016, *A&A*, 590, 5  
<http://www.aanda.org/articles/aa/pdf/2016/06/aa27228-15.pdf>
- Cappellaro, E.; Botticella, M. T.; Pignata, G.; Grado, A.; Greggio, L.; Limatola, L.; Vaccari, M.; Baruffolo, A.; Benetti, S.; Bufano, F.; Capaccioli, M.; Cascone, E.; Covone, G.; De Cicco, D.; Falocco, S.; Della Valle, M.; Jarvis, M.; Marchetti, L.; Napolitano, N. R.; Paolillo, M.; Pastorello, A.; Radovich, M.; Schipani, P.; Spiro, S.; Tomasella, L.; Turatto, M., *Supernova rates from the SUDARE VST-OmegaCAM search. I. Rates per unit volume*, 2015, *A&A*, 584, 62  
<http://www.aanda.org/articles/aa/pdf/2015/12/aa26712-15.pdf>
- Morales-Garoffolo, A.; Elias-Rosa, N.; Bersten, M.; Jerkstrand, A.; Taubenberger, S.; Benetti, S.; Cappellaro, E.; Kotak, R.; Pastorello, A.; Bufano, F.; Domínguez, R. M.; Ergon, M.; Fraser, M.; Gao, X.; García, E.; Howell, D. A.; Isern, J.; Smartt, S. J.; Tomasella, L.; Valenti, S., *SN 2011fu: a type IIb supernova with a luminous double-peaked light curve*, 2015, *MNRAS*, 454, 95  
<http://mnras.oxfordjournals.org/content/454/1/95.full.pdf>
- Takáts, K.; Pignata, G.; Pumo, M. L.; Paillas, E.; Zampieri, L.; Elias-Rosa, N.; Benetti, S.; Bufano, F.; Cappellaro, E.; Ergon, M.; Fraser, M.; Hamuy, M.; Inserra, C.; Kankare, E.; Smartt, S. J.; Stritzinger, M. D.; Van Dyk, S. D.; Haislip, J. B.; LaCluyze, A. P.; Moore, J. P.; Reichart, D., *SN 2009ib: a Type II-P supernova with an unusually long plateau*, 2015, *MNRAS*, 450, 3137  
<http://mnras.oxfordjournals.org/content/450/3/3137.full.pdf>
- de Jaeger, T.; Anderson, J. P.; Pignata, G.; Hamuy, M.; Kankare, E.; Stritzinger, M. D.; Benetti, S.; Bufano, F.; Elias-Rosa, N.; Folatelli, G.; Forster, F.; González-Gaitán, S.; Gutiérrez, C. P.; Inserra, C.; Kotak, R.; Lira, P.; Morrell, N.; Taddia, F.; Tomasella, L., *SN 2011A: an low-luminosity interacting transient, with a double plateau and strong sodium absorption*, 2015, *ApJ*, 807, 63  
<http://iopscience.iop.org/article/10.1088/0004-637X/807/1/63/pdf>
- Santiago González-Gaitán, N. Tominaga, J. Molina, L. Galbany, F. Bufano, J. P. Anderson, C. Gutierrez, F. Forster, G. Pignata, M. Bersten, D. A. Howell, M. Sullivan, R. Carlberg, T. de Jaeger, M. Hamuy, P. V. Baklanov, S. I. Blinnikov, *The Rise-Time of Type II Supernovae*, 2015, *MNRAS*, 451, 2212.  
<http://mnras.oxfordjournals.org/content/451/2/2212.full.pdf>

- Smartt, S. J.; Valenti, S.; Fraser, M.; Inserra, C.; Young, D. R.; Sullivan, M.; Pastorello, A.; Benetti, S.; Gal-Yam, A.; Knapic, C.; Molinaro, M.; Smareglia, R.; Smith, K. W.; Taubenberger, S.; Yaron, O.; Anderson, J. P.; Ashall, C.; Ballard, C.; Baltay, C.; Barbarino, C.; Bauer, F. E.; Baumont, S.; Bersier, D.; Blagorodnova, N.; Bongard, S.; Botticella, M. T.; Bufano, F.; Bulla, M.; Cappellaro, E.; Campbell, H.; Cellier-Holzem, F.; Chen, T.-W.; Childress, M. J.; Clocchiatti, A.; Contreras, C.; Dall'Orta, M.; Danziger, J.; de Jaeger, T.; Della Valle, M.; Dennefeld, M.; Elias-Rosa, N.; Elman, N.; Feindt, U.; Fleury, M.; Gall, E.; Gonzalez-Gaitan, S.; Galbany, L.; Greggio, L.; Guillou, L. L.; Hachinger, S.; Hadjiyska, E.; Hage, P. E.; Hillebrandt, W.; Hodgkin, S.; Hsiao, E. Y.; James, P. A.; Jerkstrand, A.; Kangas, T.; Kankare, E.; Kotak, R.; Kromer, M.; Kuncarayakti, H.; Leloudas, G.; Lundqvist, P.; Hook, I. M.; Maguire, K.; Manulis, I.; Margheim, S. J.; Mattila, S.; Maund, J. R.; Mazzali, P. A.; McCrum, M.; McKinnon, R.; Moreno-Raya, M. E.; Nicholl, M.; Nugent, P.; Pain, R.; Phillips, M. M.; Pignata, G.; Polshaw, J.; Pumo, M. L.; Rabinowitz, D.; Reilly, E.; Romero-Canizales, C.; Scalzo, R.; Schmidt, B.; Schulze, S.; Sim, S.; Sollerman, J.; Taddia, F.; Tartaglia, L.; Terreran, G.; Tomasella, L.; Turatto, M.; Walker, E.; Walton, N. A.; Wyrzykowski, L.; Yuan, F.; Zampieri, L., *PESSTO : survey description and products from the first data release by the Public ESO Spectroscopic Survey of Transient Objects*, 2015, *A&A*, 579, 40.  
<http://www.aanda.org/articles/aa/pdf/2015/07/aa25237-14.pdf>
- D'Elia, V.; Pian, E.; Melandri, A.; D'Avanzo, P.; Della Valle, M.; Mazzali, P. A.; Piranomonte, S.; Tagliaferri, G.; Antonelli, L. A.; Bufano, F.; Covino, S.; Fugazza, D.; Malesani, D.; Moller, P.; Palazzi, E., *SN 2013dx associated with GRB 130702A: a detailed photometric and spectroscopic monitoring and a study of the environment*, 2015, *A&A*, 577A, 116D;  
<http://www.aanda.org/articles/aa/abs/2015/05/aa25381-14/aa25381-14.html>
- Pastorello, A.; Benetti, S.; Brown, P. J.; Tsvetkov, D. Y.; Inserra, C.; Taubenberger, S.; Tomasella, L.; Fraser, M.; Rich, D. J.; Botticella, M. T.; Bufano, F.; Cappellaro, E.; Ergon, M.; Gorbovskoy, E. S.; Harutyunyan, A.; Huang, F.; Kotak, R.; Lipunov, V. M.; Magill, L.; Miluzio, M.; Morrell, N.; Ochner, P.; Smartt, S. J.; Sollerman, J.; Spiro, S.; Stritzinger, M. D.; Turatto, M.; Valenti, S.; Wang, X.; Wright, D. E.; Yurkov, V. V.; Zampieri, L.; Zhang, T., *Massive stars exploding in a He-rich circumstellar medium - IV. Transitional Type Ibn supernovae*, 2015, *MNRAS*, 449, 1921P;  
<http://mnras.oxfordjournals.org/content/449/2/1921>
- Tartaglia, L.; Pastorello, A.; Taubenberger, S.; Cappellaro, E.; Maund, J. R.; Benetti, S.; Boles, T.; Bufano, F.; Duszynowicz, G.; Elias-Rosa, N.; Harutyunyan, A.; Hermansson, L.; Hflich, P.; Maguire, K.; Navasardyan, H.; Smartt, S. J.; Taddia, F.; Turatto, M., *Interacting supernovae and supernova impostors. SN 2007sv: the major eruption of a massive star in UGC 5979*, 2015, *MNRAS*, 447, 117T;  
<http://mnras.oxfordjournals.org/content/447/1/117>

## 9. OUTREACH ACTIVITIES:

- Sep. 2016, first collaboration with the online magazine *Coelum Astronomia* ([www.coelum.com](http://www.coelum.com))
- Nov. 28, 2015 “Solar System Tour”, Catania
- Jan. 11, 2014 and Feb. 12, 2013 “Viajes a las Estrellas”, Rancagua (Chile)  
Public Event with Physics Experiments and Night Time Sky Observations
- Jun. 1, 2013, Public talk “Apetito por Astronomia” presso Casona Debois, Quinta Normal, Santiago (Chile)
- June 5, 2012. Public Astronomical Event for the Transit of Venus, Easter Island (Chile)  
Public seminars, Physics Experiments, Visit to the Schools, Direct Observations of the Venus Transit ( [http://www.das.uchile.cl/~drodrigu/easter/index\\_en.html](http://www.das.uchile.cl/~drodrigu/easter/index_en.html) )
- Mar. 2011. Public Seminar of Astronomy at the Planetarium of Padova (Italy)