

Paolo Romano CV

Born in Catania (Italy), July 13, 1974; degree in Physics, Catania University, May 22, 1999; PhD in Physics, February 25, 2003; post-doc fellow at Catania University since August 1, 2003 to July 31, 2004; astronomer at the Istituto Nazionale di Astrofisica (INAF) since December 30, 2005; Member of the INAF Thematic Committee "Sun and Solar System". Responsible of the preliminary design for the instrument control of the European Solar Telescope (EST). He is responsible of the solar telescope of INAF – Catania Astrophysical Observatory (INAF-OACT) and leading responsible for the INAF-OACT contribution to the Space Weather Service Network of ESA (contract No 4000134036/21/D/MRP). He is member of Metis/SOLO core team. He is also member of the scientific teams of SOLAR-C (JAXA) and MUSE (NASA). He is project scientist of the Interferometric Bidimensional Spectrometer 2.0 (IBIS2.0). He has been leading responsible for the INAF-OACT contribution to the Space Situational Awareness programme of ESA (contract No 400113186/15/D/MRP). He has been PI for INAF-OACT in several funded national and international research projects, including the EU-FP7 funded EST, eHEROES, SOLID, and SOLARNET, and the H2020 funded PRE-EST and SOLARNET. He was co-PI of two PRIN INAF. He cooperated to the teaching of Solar Physics at the University of Catania; worked on the realization of the ICARUS archive (INAF Catania Astrophysics Research Utility for the Sun Archive), which is part of the SOLar ARchive NETwork (SOLARNET). Experience in international coordinated observing campaigns and in ground-based and space data analysis. Referee for Solar Physics, Astronomy and Astrophysics, Astrophysical Journal, Astrophysical Journal Letters, Astrophysical Journal Special Series, Advances in Astronomy, Annals of Geophysics, Publications of the Astronomical Society of Japan and AGU books. He has supervised several PhD students and postdocs. He has published 99 refereed research articles (h-index 22).

Track Record

30 July 2005 – present: Researcher (permanent position, III level) at INAF – Osservatorio Astrofisico di Catania (OACT)

2003-2005: Post-Doc Fellow at Università degli Studi di Catania (UniCT), 2 years

2003: Research Contract at INAF – OACT, 4 months

2000-2003: XV cycle, PhD course in Physics, UniCT, with fellowship, 3 years

2000: Research Contract at Osservatorio Astrofisico di Catania, 6 months

1999-2000: Research Contract at Osservatorio Astrofisico di Catania, 6 months

Education

2003: PhD Degree in Physics, curriculum Astrophysics, «cum laude» Thesis: **“The role played by the helicoidal structure on the eruption of filaments”**

2000-2003: XX cycle, PhD course in Physics, UniCT, with fellowship, 3 years

1999: Master’s Degree in Physics, Thesis: **“I flare solari. Studio di un evento innescato da due loop di classe I”**

1993-1999: Master’s Degree course in Physics, UniCT

1993: Maturità classica (Classics High-school Diploma)

Scientific production

148 publications

97 peer-reviewed papers (20 as first author)

53 proceedings

Citations: **1294** (November 2022)

H-index: **22** (source Web of Knowledge/Scopus, November 2022)

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List of publications via NASA ADS: <https://ui.adsabs.harvard.edu/search/q=orcid%3A0000-0001-7066-6674&sort=date%20desc%2C%20bibcode%20desc&p =0>

Referee for Solar Physics, Astronomy and Astrophysics, Astrophysical Journal, Astrophysical Journal Supplement Series, Advances in Astronomy, Annals of Geophysics, Publications of the Astronomical Society of Japan, Astrophysics and Space Science and AGU books.

Scientific activity

Research fields

Solar activity, solar magnetism, high-resolution spectropolarimetry of solar atmosphere, dynamic and magnetic parameters of solar active regions, emergence of magnetic flux in the solar atmosphere, storage of magnetic energy in force-free fields before solar flares, magnetic helicity transport into corona, analysis of IR, optical, UV, EUV, and X data to study highly energetic events (flares, eruptive prominences, CMEs), Space Weather.

Projects

Responsibilities

- Responsible of the solar telescope of INAF – Catania Astrophysical Observatory (INAF-OACT): June 2011 - present
- Leading responsible for the INAF-OACT contribution to the Space Situational Awareness programme of ESA (contract No 4000134036/21/D/MRP): November 2015 – February 2021
- Leading responsible for the INAF-OACT contribution to the Space Weather Service Network of ESA (contract No 400113186/15/D/MRP): March 2021 - present
- Project scientist of the Interferometric Bidimensional Spectrometer 2.0 (IBIS2.0): December 2019 – present

- Member of the INAF Thematic Committee "Sun and Solar System": July 2011 – December 2015, October 2019 - present
- Responsible of the preliminary design for the instrument control of the European Solar Telescope (EST): June 2008 – May 2011
- Associated Scientist for the Solar Orbiter Metis instrument: July 2018 – present
- PI for INAF-OACT in EU-FP7 F-Chroma Flare chromospheres: Observations, Models and Archive: January 2014 – December 2016
- PI for INAF-OACT in EU-FP7 eHeroes Environment for Human Exploration and RObotic Experimentation in Space: April 2012 – February 2015
- PI for INAF-OACT in EU-FP7 SOLARNET - High-resolution Solar Physics Network: April 2013 – March 2017
- PI for INAF-OACT in EU-H2020 SOLARNET - High-resolution Solar Physics Network: January 2019 - present
- co-PI of PRIN-INAF 2010 "Magnetic fine structure of the solar atmosphere": March 2011 – February 2014
- co-PI of PRIN-INAF 2014 "Plasma-magnetic field interplay in the solar atmosphere": May 2015 – December 2017

Participations

Present projects:

- PRIN-MIUR 2017 "Circumterrestrial Environment: Impact of Sun-Earth Interaction": November 2019 – present
- SWICO Space Weather Italian Community: October 2014 – present
- IBIS 2.0 Interferometric Bldimensional Spectrometer 2.0: December 2019 – present
- H2020 SOLARNET – Integrating High Resolution Solar Physics: January 2019 – present

Past projects:

- FP6 SOLAIRE Solar Atmospheric and Interplanetary Research: June 2007 – May 2011
- PRIN-INAF 2010 "Magnetic fine structure of the solar atmosphere": April 2012 – March 2013

- PRIN-INAF 2014 “Plasma-magnetic field interplay in the solar atmosphere”: May 2015 – May 2018
- PRIN-MIUR 2012 “The active sun and its effects on space and Earth climate”: January 2014 – December 2015
- FP7 F-Chroma Flare chromospheres: Observations, Models and Archive: January 2014 – December 2016
- FP7 eHeroes Environment for Human Exploration and RObotic Experimentation in Space: April 2012 – February 2015

Meetings

More than 40 attended Meetings and Symposia

5 Invited Talks

- "Magnetic helicity and active filaments", 26-29 October 2015, "12th Potsdam Thinkshop" - Potsdam (Germany)
- "Magnetic helicity and reconnection", 20-23 April 2016, "4th SOLARNET WORKSHOP" - London (UK)
- "Formation and evolution of sunspot penumbrae", 10-13 September 2018, "Hinode12, The many suns" - Granada (Portugal)
- "Two different approaches to the observation of solar flares: science or forecasting?", 28-31 October 2018, "SOHE 3" – Turin (Italy)
- "The largest flares of solar cycle 24 as potential clues for stellar superflares", 12 April 2019, "Royal Astronomical Society meeting" - London (UK)

More than 30 Contributed Talks and 20 Posters

2 SOC memberships

- "SoHe 2016: 2016 Meeting of the Italian Community in Solar and Heliospheric Physics", 30/05-01/06/2016, Rome, Italy
- "SoHe 2013: 2013 Meeting of the Italian Community in Solar and Heliospheric Physics", 4-6/09/2013, Catania, Italy

5 LOC memberships

- "EST Science Meeting", 11/06-15/06-2018, Giardini-Naxos, Italy
- "SoHe 2016: 2016 Meeting of the Italian Community in Solar and Heliospheric Physics", 30/05-01/06/2016, Rome, Italy

- SoHe 2013: 2013 Meeting of the Italian Community in Solar and Heliospheric Physics", 04-06/09/2013, Catania, Italy
- "2nd SOLAIRE Network-Wide Meeting", 12/01-15/01-2009, Catania, Italy
- "SOHO-17: 10 Years of SOHO and Beyond" 07/05-12/05-2006, Giardini Naxos, Italy

International Schools

- "School in Solar Physics: Data Analysis and Theory", 09/2000, Dorking, UK
- ESMN-PLATON spring school: "Solar Magnetism", 02-06/4/2002, Dwingeloo, Netherlands
- International school of Space Science: "New prospects for space observations of the dynamics of the Sun", 01-06/09/2003, L'Aquila, Italy
- International School of Space Science "The Physics of the Sun: the Active Sun on your Active Desktop", 27/03-1/04/2006, L'Aquila, Italy
- International School of Astrophysics "F. Lucchin" "The Sun: a Plasma Physics Laboratory – Formation of the Solar System: clues from exploration", 17-22/09/2012, Vulcano, Italy

Observing campaigns

- PI international observing campaign: "Magnetic flux emergence during penumbra formation", Giant Solar Telescope, Big Bear, USA (5-11/10/2019)
- PI international observing campaign: "Magnetic flux emergence during penumbra formation", Dunn Solar Telescope of National Solar Observatory, USA (15-19/05/2017)
- PI international observing campaign: "Energy Dissipation and Magnetic Evolution in the Lower Layers of the Solar Atmosphere During a Flare", Dunn Solar Telescope of National Solar Observatory, USA (15-23/05/2015)
- Co-I international observing campaign: "Searching for signatures of White Light Flares", Dunn Solar Telescope of National Solar Observatory, USA (01-31/10/2014)
- PI international observing campaign: "Interaction between new emerging magnetic flux and the preexisting chromospheric and coronal field", Dunn Solar Telescope of National Solar Observatory, USA (23-31/05/2012)
- PI international observing campaign: "Observations of Flux Emergence at Various Spatial Scales", Dunn Solar Telescope of National Solar Observatory, USA (17-24/10/2010)
- PI international observing campaign: "Magnetic helicity in active filament", Dunn Solar Telescope of National Solar Observatory, USA (28/11-06/12/2007)
- Co-I international observing campaign: "AFS dynamic evolution", Dunn Solar Telescope of National Solar Observatory, USA (03-12/09/2007)

- Co-I international observing campaign: “Arch filament system dynamic evolution”, Dunn Solar Telescope of National Solar Observatory, USA (01-08/10/2006)

Invited seminar talks

- "Magnetic flux emergence and reconnection in the solar atmosphere", 15/04/2015, King Saud University, Riyadh, Saudi Arabia

Outreach activity

Participation to outreach programmes at INAF – OACT:

- hundreds of guided visits at OACT for school pupils
- tens of public conferences
- outreach events: European Researchers’ Night, Solar System Tour, Week of the Scientific Culture, activities for astronomical events, public engagement

Participation to the XIX International Astronomy Olimpiad as Team Leader of the Italian Team, Bishkek-Cholpon-Ata, Kyrgyzstan (12-21/11/2014)

Organization of the International Remote Astronomy Olympiad (5-13/11/2021).

Awards

Winner of the concorso del Consorzio Nazionale per l’Astronomia e l’Astrofisica per l’assegnazione di n. 10 contributi di addestramento presso Osservatori o altri enti pubblici di ricerca italiani e stranieri (19-05-2000)

Winner of the concorso a premi di studio dell’Accademia Gioenia per giovani ricercatori (24/02/2006)

press release <https://www.media.inaf.it/2017/08/10/flux-rope-heart-sunspot/>

press release <https://www.media.inaf.it/2021/07/23/il-campo-magnetico-del-sole-balla-il-twist/>

Teaching activity

Assistant Supervisor of 8 Master Theses

- Iacopino Luigia, Studio del flusso magnetico nelle regioni attive ricorrenti ed effimere, 2004 – 2005
- Epaminonda Sabrina, Applicazione del modello breakout al flare di classe X17.2 avvenuto nella regione attiva NOAA 10486, 2004 - 2005
- Salerno Cristina, Osservazioni multi-frequenza ad elevata risoluzione spaziale di una regione attiva sul Sole, 2007 - 2008
- Sicari Marianna, Studio dell'elicità magnetica in una regione attiva sede di un'eruzione solare, 2008 - 2009
- Di Mauro Bruno Nicola, Analisi multi-banda di eventi solari esplosivi, 2012-2013
- Faro Germana Maria, Studio Statistico delle Proprietà dei Coronal Mass Ejection e delle Macchie Solari, 2012 - 2013
- Frasca Daniela, Dinamica e configurazione magnetica di una penombra in formazione, 2012 - 2013
- Murabito Mariarita, Processi fisici associati alla formazione della penombra nelle macchie solari, 2012 - 2013

Assistant Supervisor of 3 PhD students

- Guglielmino Salvatore Luigi, New perspectives on emergence of magnetic flux on the solar surface: models and observations, XX cycle, 2005 - 2008
- Murabito Mariarita, Analysis of the Penumbra Formation in Sunspots, XXX cycle, 2014 – 2017
- Compagnino Alessio, Properties and correlation of flares and coronal mass ejections and their possible relevance on the southern night sky background: a statistical study, XXX cycle, 2014 – 2017

Collaborations

- INAF – Osservatorio Astrofisico di Catania (Italy; Dr. S.L. Guglielmino, Dr. D. Spadaro)
- Università degli Studi di Catania (Italy; Prof. F. Zuccarello)
- INAF – Osservatorio Astronomico di Roma (Italy; Dr. I. Ermolli, Dr. M. Murabito)
- ASI – Agenzia Spaziale Italiana (Italy, Dr. M. Stangalini)
- Università di Roma "Tor Vergata" (Italy; Prof. F. Berrilli, Dr. D. Del Moro)
- Instituto de Astrofísica de Andalucía (Spain; Dr. L. Bellot Rubio, Prof. J. C. del Toro Iniesta)
- Instituto de Astrofísica de Canarias (Spain; Prof. F. Moreno Insertis, Prof. B. Ruiz Cobo)

- Max Planck Institute for Solar System Research (Germany, Prof. S. K. Solanki)
- National Solar Observatory (USA; Dr. S. Criscuoli)
- University of Glasgow (Scotland; Dr. D. MacTaggart)
- UCL – Mullard Space Science Laboratory (UK; Dr. G. Valori)

Peer-reviewed papers

Zuccarello F., Contarino L., Romano P., Description of a procedure to analyze EUV loops Solar Phys., 199, 97, 2001.

Zuccarello F., Contarino L., Romano P., Priest, E.R., Flare activity in AR 8421 observed by TRACE, A&A, 402, 1085, 2003.

Romano P., Contarino L., Zuccarello F., Eruption of a helically twisted prominence, Solar Phys., 214, 313, 2003.

Contarino L., Romano P., Yurchyshyn V.B., Zuccarello F., THEMIS, BBSO, MDI and TRACE observations of a filament eruption, Solar Phys., 216, 173, 2003.

Romano P., Contarino L., Zuccarello F., Magnetic helicity transport in corona and filament eruptions, Solar Phys., 218, 137, 2003.

Spadaro D., Billotta S., Contarino L., Romano P., Zuccarello F., AFS dynamic evolution during the emergence of an active region, A&A, 425, 309, 2004.

Romano P., Contarino L., Zuccarello F., Observational evidence of the primary role played by photospheric motions in magnetic helicity transport before a filament eruption, A&A, 433, 683, 2005.

Zuccarello F., Battiato V., Contarino L., Romano P., Spadaro D., Vlahos, L., AFS dynamics in a short-lived active region, A&A, 442, 661, 2005.

Ternullo M., Contarino L., Romano P., Zuccarello F., A statistical analysis on sunspot-groups hosting M and X flares, Astron. Nachr., 327, 36, 2006.

Contarino L., Romano P., Zuccarello F., RHESSI and TRACE observations of a M2.5 flare: a simple application of the Kopp and Pneuman model, A&A, 458, 297, 2006.

Contarino L., Romano P., Zuccarello F., Cancelling magnetic feature and filament activation, Astron. Nachr., 327, 674, 2006.

Abramenko V.I., Pevtsov A.A., Romano P., Coronal heating and photospheric turbulence parameters: observational aspects, ApJ, 646, 81, 2006.

Romano P., Zuccarello F., Contarino L., An M1.5 flare triggered by a multi reconnection process, Solar Phys., 240, 49, 2007.

Zuccarello F., Battiato V., Contarino L., Romano P., Spadaro D., Plasma motions in a short-lived filament related to a magnetic flux cancellation, A&A, 468, 299, 2007.

Romano P., Zuccarello F., Photospheric magnetic evolution of super active regions, A&A, 474, 633, 2007.

Catanzaro G., Leone F., Busà E., Romano P., Spectroscopy of the hot pulsating star Beta Cephei. Velocities and EWs from C,N,O and Si lines, New Astronomy, 13, 113, 2008.

Zuccarello F., Battiato V., Contarino L., Guglielmino S.L., Romano P., Spadaro D., A C-level flare observed in an arch filament system: reconnection between pre-existing and emerging field lines?, A&A, 488, 1117, 2008

Guglielmino S.L., Zuccarello F., Romano P., Bellot Rubio L.R., HINODE Observations of Chromospheric Brightenings in the Ca II H Line during small-scale Flux Emergence Events, ApJ, 688, 111, 2008

Zuccarello F., Romano P., Farnik F., Karlicky M., Contarino L., Battiato V., Guglielmino S.L., The X17.2 flare occurred in NOAA 10486: an example of multiple reconnection caused by a domino effect, A&A, 493, 629, 2009

Zuccarello F., Guglielmino S.L., Battiato V., Contarino L., Spadaro D., Romano P., Emergence and evolution of active and ephemeral regions: comparison between observations and models, Acta Geophysica, 57, 15, 2009

Contarino L., Zuccarello F., Romano P., Spadaro D., Guglielmino S.L., Battiato V., Flare forecasting based on sunspot-groups characteristics, Acta Geophysica, 57, 52, 2009

Romano P., Zuccarello F., Fletcher L., Rubio da Costa F., Contarino L., Evolution of an eruptive flare loop system, A&A, 498, 901, 2009

Zuccarello F., Romano P., Guglielmino S.L., Centrone M., Criscuoli S., Ermolli I., Berrilli F., Del Moro D., Observation of bipolar moving magnetic features streaming out from a naked-spot, A&A, 500, L5, 2009

Criscuoli S., Romano P., Giorgi F., Zuccarello F., Magnetic evolution of super active regions. Complexity and potentially unstable magnetic discontinuities, A&A, 506, 1429, 2009

Romano P., Zuccarello F., Poedts S., Soenen A., Zuccarello F.P., Magnetic helicity and active filament configuration, A&A, 506, 895, 2009

Contarino L., Zuccarello F., Romano P., Spadaro D., Ermolli I., Morphological and dynamical properties of small-scale chromospheric features deduced from IBIS observations, A&A, 507, 1625, 2009

Zuccarello F., Contarino L., Romano P., Battiato V., Guglielmino, S.L., Multi-wavelength observations of flares and eruptive filaments, Acta Geophysica, Volume 57, Issue 1, pp.24-30, 2009

Smyrli A., Zuccarello F., Romano P., Zuccarello F.P., Guglielmino S.L., Spadaro D., Hood A.W., Mackay D., Trend of photospheric magnetic helicity flux in active regions generating halo coronal mass ejections, A&A, 521, 56, 2010

ADAHELI Team, Berrilli, F., Bigazzi, A., Roselli, L., Sabatini, P., Velli, M., Alimenti, F., Cavallini, F., Greco, V., Moretti, P. F. and 21 coauthors, The ADAHELI solar mission: Investigating the structure of Sun's lower atmosphere, AdSpR, 45, 1191, 2010

Romano P., Pariat E., Sicari M., Zuccarello F., A solar eruption triggered by the interaction between two magnetic flux systems with opposite magnetic helicity, A&A, 525, 13, 2011

Zuccarello F.P., Romano P., Zuccarello F., Poedts, S., Magnetic helicity balance during a filament eruption that occurred in active region NOAA 9682, A&A, 530, 36, 2011

Zuccarello F., Contarino L., Romano P., Solar observations carried out at the INAF - Catania Astrophysical Observatory, CoSka, 41, 2, 85, 2011

Zuccarello F., Contarino L., Farnik F., Karlicky M., Romano P., Ugarte-Urra I., Filament destabilization and CME release during a long duration flare, A&A, 533, 100, 2011

Romano, P., Zuccarello, F., Flare occurrence and the spatial distribution of the magnetic helicity flux, A&A, 535, 1, 2011

Zuccarello F.P., Romano P., Zuccarello F., Poedts S., The role of photospheric shearing motion in a filament eruption, A&A, 537, 28, 2012.

Rubio da Costa F., Zuccarello F., Fletcher L., Romano P., Labrosse N., The role of filament activation in an M6.6 flare, A&A, 539, 27, 2012

Romano, P., Berrilli, F., Criscuoli, S., Del Moro, D., Ermolli, I., Giorgi, F., Viticchiè, B., Zuccarello, F., A comparative analysis of photospheric Bright Points in an Active Region and in the Quiet Sun, Sol. Phys, 280, 407, 2012

Telloni D., Ventura R., Romano P., Spadaro D., Antonucci E., Detection of plasma fluctuations in white-light images of the outer solar corona: investigation of the spatial and temporal evolution, ApJ, 767, 138, 2013

Zuccarello, F., Balmaceda, L., Cessateur, G., Cremades, H., Guglielmino, S. L., Liliensten, J., Dudok de Wit, T., Kretzschmar, M., Lopez, F. M., Mierla, M., Parenti, S., Pomoell, J., Romano, P., Rodriguez, L., Srivastava, N., Vainio, R., West, M., Zuccarello, F. P., Solar activity and its evolution across the corona: recent advances, JSWSC, 3, 18, 2013

Romano, P., Frasca, D., Guglielmino, S. L., Ermolli, I., Tritschler, A., Reardon, K. P., Zuccarello, F., Velocity and Magnetic Field Distribution in a Forming Penumbra, ApJ, 771L, 3, 2013

Elmhamdi, A., Romano, P., Kordi, A.S., Al-trabusly, H.A., Twist and writhe of the magnetic flux in the super active region NOAA 11429, Sol. Phys., 289, 2957, 2014

Romano, P., Guglielmino, S.L., Cristaldi, A., Ermolli, I., Falco, M., Zuccarello, F., Evolution of the magnetic field inclination in a forming penumbra, *ApJ*, 784, 10, 2014

Zuccarello, F.P., Seaton, D.B., Mierla, M., Poedts, S., Rachmeler, L.A., Romano, P., Zuccarello, F., Observational evidence of torus instability as trigger mechanism for coronal mass ejections: the 2011 August 4 filament eruption, *ApJ*, 785, 88, 2014

Ermolli, I., Giorgi, F., Romano, P., Zuccarello, F., Criscuoli, S., Stangalini, M., Fractal and Multifractal properties of Active Regions as flare precursors: a case study based on SOHO/MDI and SDO/HMI simultaneous observations, *Sol. Phys.*, 289, 2525, 2014

Telloni, D., Dolei, S., Romano, P., Spadaro, D., Ventura, R., Antonucci, E., Stereoscopic investigation on the plasma density fluctuations in the outer solar corona (Research Note), *A&A*, 565, 22, 2014

Guglielmino, S.L., Zuccarello, F., Romano P., Penumbra-like filaments in the solar photosphere as a manifestation of flux emergence, *ApJL*, 786, 22, 2014

Zuccarello, F., Guglielmino, S.L., Romano, P., Evolution and dynamics of orphan penumbrae in the solar photosphere: analysis from multi-instrument observations, *ApJ*, 787, 57, 2014

Dolei, S., Romano, P., Spadaro, D., Ventura, R., Stereoscopic observations of the effects of a halo CME on the solar corona structure, *A&A*, 567, 9, 2014

Cristaldi, A., Guglielmino, S.L., Zuccarello, F., Romano, P., Falco, M., Rouppe van der Voort, L., de la Cruz Rodriguez, J., Ermolli, I., Criscuoli, S., Dynamic properties along the neutral line of a delta spot inferred from high-resolution observations, *ApJ*, 789, 162, 2014

Madonia, P., Romano, P., Inguaggiato, S., Decoupling of ground level pressures observed in Italian volcanoes: are they driven by space weather geo-effectiveness?, *Annals of Geophys.*, 57, 3, 2014

Romano, P., Zuccarello, F.P., Guglielmino, S.L., Zuccarello, F., Evolution of the magnetic helicity flux during the formation and eruption of flux ropes, *ApJ*, 794, 118, 2014

Zuccarello, F.P., Seaton, D.B., Mierla, M., Poedts, S., Rachmeler, L.A., Romano, P., Zuccarello, F., Flippov, B.P., Erratum: Observational evidence of torus instability as trigger mechanism for coronal mass ejections: the 2011 August 4 filament eruption (2014, *ApJ*, 785, id. 88), *ApJ*, 795, 15, 2014

Giorgi, F., Ermolli, I., Romano, P., Stangalini, M., Zuccarello, F., Criscuoli, S., The signature of flare activity in multifractal measurements of active regions observed by SDO/HMI, *Sol. Phys.*, 290, 507, 2015

Valori, G., Romano, P., Ermolli, I., Giorgi, F., Steed, K., van Driel-Gesztelyi, L., Zuccarello, F., Time evolution of force-free parameter and free magnetic energy in the Active Region 10365, *Sol. Phys.*, 290, 291, 2015

Romano, P., et al., Recurrent flares in active region NOAA 11283, *A&A*, 582, 55, 2015

Berrilli, F., et al., ADAHELI: exploring the fast, dynamic Sun in the x-ray, optical, and near-infrared, *JATIS*, 1, 4006, 2015

Guglielmino, S.L., Zuccarello, F., Romano, P., Cristaldi, A., Ermolli, I., Criscuoli, S., Falco, M., Zuccarello, F.P., A multi-instrument analysis of a C4.1 flare occurs in a delta sunspot, *ApJ*, 819, 157, 2016

Falco, M., Borrero, J.M., Guglielmino, S.L., Romano, P., Zuccarello, F., Criscuoli, S., Cristaldi, A., Ermolli, I., Jafazadeh, S., Rouppe van der Voort, L., Kinematics and magnetic properties of a light bridge in a decaying sunspot, *Sol. Phys*, 291, 1239, 2016

Murabito, M., Romano, P., Guglielmino, S.L., Zuccarello, F., Solanki, S.K., Formation of the penumbra and start of the Evershed flow, *ApJ*, 825, 75, 2016

Compagnino, A., Romano, P., Zuccarello, F., A statistical study of CME properties and the correlation between flares and CMEs over the solar cycles 23 and 24., *Sol Phys*, 292, 5, 2017

Murabito, M., Romano, P., Guglielmino, S.L., Zuccarello, F., On the formation of a stable penumbra in a region of flux emergence in the Sun, *ApJ*, 834, 76, 2017

Ermolli, I., Cristaldi, A., Giorgi, F., Giannattasio, F., Stangalini, M., Romano, P., Tritschler, A., Zuccarello, F., Plasma Flows and Magnetic Field Interplay during the Formation of a Pore, *A&A*, 600, 102

Romano, P., Falco, M., Guglielmino, S., Murabito, M., Observation of a 3D magnetic null point, *ApJ*, 837, 173, 2017

Falco, M., Puglisi, G., Guglielmino, S.L., Romano, P., Ermolli, I., Zuccarello, F., Comparison of different populations of granular features in the solar photosphere, *A&A*, 605, 87, 2017

Piersanti et al., Comprehensive Sun-to-Earth analysis of the Geoeffective Solar event of June 21, 2015: Effects on the Magnetosphere Plasmasphere Ionosphere system, *Sol. Phys.*, 292, 169, 2017

Guglielmino, S.L., Romano, P., Zuccarello, F., Observational evidence of a flux rope in a sunspot umbra, *ApJL*, 846, 16, 2017

Capparelli, V., Zuccarello, F., Romano, P., Simoes, P.J.A., Fletcher, L., Kuridze, D., Mathioudakis, M., Keys, P., Cauzzi, G., $H\alpha$ and $H\beta$ emission in a C3.3 solar flare: comparison between observations and simulations, *ApJ*, 850, 36, 2017

Romano, P., Elhamdi, A., Falco, M., Costa, P., Kordi, A.S., Al-Trabulsi, H.A., Al-Shammari, R.M., Homologous white light solar flares driven by photospheric shear motions, *ApJL*, 852, 10, 2018

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