

PERSONAL INFORMATION

MARTINA CARDILLO✉ martina.cardillo@inaf.it

Sex Female | Date of birth 26 Jul 1985 | Nationality Italian

PREFERRED JOB

Astrophysicist

WORK EXPERIENCE

20/12/2021- on-going **Researcher**

INAF-IAPS
Via del Fosso del Cavaliere 100, 00133 ROMA (Italy)
www.iaps.inaf.it

Topics:

- CR acceleration and propagation physics;
- programming
- gamma-ray data analysis and modeling
- multi-wavelength source analysis
- gamma-ray sources
- Instrument Response Function improvement
- Managing and tutoring
- Cherenkov telescopes and data analysis
- Member of AGILE, ASTRI, CTA, LST collaborations and associated member of MAGIC team

17/06/2024-15/11/2024 **Parental leave (maternity)**

Temporary career break for maternity leave

05/2022-2023-2024 **Teaching**

Università di Roma Tor Vergata
Via della Ricerca Scientifica 1, 00100 Rome (Italy)
www.uniroma2.it

"High Energy Astrophysics"

Topics:

- CR acceleration and propagation physics;
- Radiative processes
- gamma-ray data analysis and modeling
- gamma-ray sources
- Cherenkov Detectors and Astronomy

01/03/2021- 19/12/2021 **Fixed-term position**

INAF-IAPS
Via del Fosso del Cavaliere 100, 00133 ROMA (Italy)
www.iaps.inaf.it

"Astrofisica Gamma con AGILE, CTA, ASTRI".

Topics:

- CR acceleration and propagation physics;
- programming
- gamma-ray data analysis and modeling

- multi-wavelength source analysis
- gamma-ray sources
- Instrument Response Function improvement
- managing

02/05/2017- 28/02/2021

Postdoc

INAF-IAPS

Via del Fosso del Cavaliere 100, 00133 ROMA (Italy)

www.iaps.inaf.it

"Studio di fenomeni alto-energetici di natura Galattica e Extragalattica"

Topics:

- CR acceleration and propagation physics;
- programming
- gamma-ray data analysis and modeling
- multi-wavelength source analysis
- gamma-ray sources
- Instrument Response Function improvement

04/02/2016–04/02/2017

PostDoc

INAF- Osservatorio Astrofisico di Arcetri

Largo Enrico Fermi 5, 50125 Florence (Italy)

www.arcetri.astro.it

"Phenomenology of particle acceleration in supernova remnants in the proximity of molecular clouds"

Topics:

- theoretical study of CR acceleration and propagation physics;
- programming
- data modeling

01/03/2014–31/01/2017

Outreach Activity

INAF-Osservatorio Astrofisico di Arcetri

Largo Enrico Fermi 5, Florence (Italy)

www.arcetri.astro.it

- Guide at the Observatory
- Observation of the sky with the "Amici" telescope

03/02/2014–03/02/2016

Postdoc

INAF-Osservatorio Astrofisico di Arcetri

Largo Enrico Fermi 5, 50125 Florence (Italy)

www.arcetri.astro.it

"High energy phenomena in the remnants of stellar explosions"

Topics:

- theoretical study of CR acceleration and propagation physics;
- programming
- modeling experimental data

01/03/2012–30/07/2012

Tutoring

Università di Roma Tor Vergata

Via della Ricerca Scientifica 1, 00100 Rome (Italy)

www.uniroma2.it

Matter: Mechanics and Thermodynamics.

- Tutorials for students

- Exam preparation
- student assistance
- Examination committee

01/03/2011–31/07/2011 **Tutoring in the "Astromundus" project**
Università degli studi di Roma Tor Vergata
Via Della Ricerca Scientifica 1, 00133 Rome (Italy)
www.uniroma2.it
Matter: extragalactic astrophysics

- student assistance
- Weekly meeting for assistance
- examination committee

11/03/2011–08/04/2011 **Secondary education teaching professional**
Liceo Scientifico Amaldi
Domenico Parasacchi 21, 00133 Rome (Italy)
www.liceoamaldi.it
Matter: mathematics.

- Teaching in the afternoon recovery courses

01/11/2010–17/02/2011 **Tutoring**
Università di Roma Tor Vergata
Via della Ricerca Scientifica, 00133 Rome (Italy)
www.uniroma2.it
Matter: programming and computer.

- student assistance and tutoring
- exam preparation
- examination committee

12/08/2009–12/09/2009 **Research collaborator**
MPI-k
Saupfercheckweg 1, 69117 Hidelberg (Germany)
www.mpi-hd.mpg.de

EDUCATION AND TRAINING

01/11/2010–31/10/2013 **PhD** EQF level 8
Università degli studi di Roma Tor Vergata, Rome (Italy)
I worked in the AGILE team of the professor Marco Tavani.
I analyzed the AGILE gamma-ray data in order to understand the relation between CR acceleration and Supernova Remnants, developing models able to explain these data together with the ones from other wavelengths.

Thesis: "The origin of cosmic rays in supernova remnants: new challenges after a breakthrough"
Supervisor: Prof. Marco Tavani

Keywords: High Energy Astrophysics, programming, data analysis, plasma physics and magnetohydrodynamics

12/2007–27/09/2010 **Master degree in Astrophysics (110/110 cum Laude)** EQF level 7
Università degli studi di Roma Tor Vergata, Rome (IT)

Thesis: "The Supernova Remnant W28: a study of particle acceleration"

Supervisor: Prof. Marco Tavani

Keywords: Astrophysics, plasma physics, relativity, experimental methods, celestial mechanics

10/2004–12/2007

Bachelor degree in Physics (105/110)

EQF level 6

Università degli studi di Roma Tor Vergata, Rome (Italy)

Thesis: "L'effetto di lente gravitazionale sulle anisotropie della radiazione cosmica di fondo"

Supervisor: Prof. Amedeo Balbi

Keywords: Mathematics, physics, computer, programming, english

07/2004–08/2004

Medicine admission test

EQF level 4

Università degli studi di Roma Tor Vergata, Rome (Italy)

Keywords: Biology, chemistry, mathematics, physics, general knowledge

15/09/1999–10/07/2004

High School diploma

EQF level 4

Liceo Classico Benedetto da Norcia, Rome (Italy)

Keywords: Latin, Greek, Italian literature, art, philosophy

PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	C1
French	B1	B2	A2	A2	B1
German	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

- Speaker in several congresses and conferences;
- Invited speaker for different conferences and seminars;
- Teacher both at secondary school and University;
- Founding member of the science communication association "ScienzeImpresa"
- I'm involved in a lot of Outreach activities both in my Institute and outside
- Member of the Astronomy Olympics committee in 2017;

(details in the related section of the CV)

Organizational / managerial skills

I have some important responsibility roles in the ASTRI Mini-Array team (details in the related sections of the CV).

I'm the tutor of the PhD student Alan Sunny (2023-2026) with the PNRR fellowship "Particle Acceleration in our Galaxy in the new era of Cherenkov Telescopes".

Job-related skills

- Gamma-ray data analysis both in the GeV and TeV energy bands;
- Multi-wavelength study of galactic astrophysical sources and theoretical interpretation of experimental

data;

- Referee reporter;
- Programming (fortran, python);
- Communication and expression capabilities acquired thanks to several talks, seminars and outreach and teaching activities;
- Organization and leadership capabilities;
- Project management

Digital skills

Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Independent user	Independent user	Independent user

Optimal capacities in the use of Internet (Google, Social Network, YouTube, Information research...)

Operative Systems:

- Very good knowledge of Windows OS;
- Good knowledge of Linux (Ubuntu, Kile) and Mac;

Writing and Graphics:

- Microsoft Office software package (Word, Power Point, Excel);
- LaTeX
- Gnuplot (graphic design application);

Programming:

- Very good knowledge of Fortran95;
- Good knowledge of python2.7/3.6 and related software (Gammapy)
- Knowledge of IDL

Driving license B

ADDITIONAL INFORMATION

Publications According to Scopus (<https://www.scopus.com/authid/detail.uri?authorId=36193627800>), these are the most important information about the author Martina Cardillo (updated to February 29th, 2024) :

H-index: 24
Publications number 142
Citation number 5758

Referred papers:

[2024]

1. Abe, K. et al.: "GRB 221009A: Observations with LST-1 of CTAO and Implications for Structured Jets in Long Gamma-Ray Bursts"
<https://doi.org/10.3847/2041-8213/ade4cf>
2. Abe, K. et al. "Detection of the Geminga pulsar at energies down to 20 GeV with the LST-1 of CTAO"
<https://doi.org/10.1051/0004-6361/202554350>
3. Abe, K. et al. "Detection of RS Oph with LST-1 and modelling of its HE/VHE gamma-ray emission"
<https://doi.org/10.1051/0004-6361/202452447>

[2024]

4. Abe, K. et al.: "A new method of reconstructing images of gamma-ray telescopes applied to the LST-1 of CTAO",
<https://doi.org/10.1051/0004-6361/202450889>
5. Abe, K. et al.: "A detailed study of the very high-energy Crab pulsar emission with the LST-1"
<https://doi.org/10.1051/0004-6361/202450059>
6. Roy, A., Joshi, J., **Cardillo, M.** et al.: "Gamma-rays and Neutrinos from Giant Molecular Cloud Populations in the Galactic Plane"
<https://doi.org/10.1088/1475-7516/2024/06/074>
7. Ferrazzoli, R., Prokhorov D., Bucciantini, N., Slane, P., Vink, J., **Cardillo, M.** et al.: "Discovery of a shock-compressed magnetic field in the north-western rim of the young supernova remnant RX J1713.7-3946 with X-ray polarimetry"
<https://doi.org/10.3847/2041-8213/ad4a68>
8. Giuliani, A. & **Cardillo, M.**: "Supernova Remnants in gamma rays",
<https://doi.org/10.3390/universe10050203>

[2023]

9. Abe, H et al.: "Performance of the joint LST-1 and MAGIC observations evaluated with Crab Nebula data"
<https://doi.org/10.1051/0004-6361/202346927>
10. Abe, H. et al.: "Star tracking for pointing determination of Imaging Atmospheric Cherenkov Telescopes: Application to the Large-Sized Telescope of the Cherenkov Telescope Array"
<https://doi.org/10.1051/0004-6361/202347128>
11. Tavani, M. et al.: "AGILE Gamma-Ray Detection of the Exceptional GRB 221009A"
<https://doi.org/10.3847/2041-8213/acaff>
12. Abe et al.: "Observations of the Crab Nebula and Pulsar with the Large-sized Telescope Prototype of the Cherenkov Telescope Array"
<https://doi.org/10.3847/1538-4357/ace89d>
13. Roy, Abhijit; Joshi, Jagdish C.; Cardillo, Martina et al.: "Interpreting the GeV-TeV gamma-ray spectra of local giant molecular clouds using GEANT4 simulation"
<https://doi.org/10.1088/1475-7516/2023/08/047>
14. Acero et al.: "Sensitivity of the Cherenkov Telescope Array to spectral signatures of hadronic PeVatrons with application to Galactic Supernova Remnants"
<https://doi.org/10.1016/j.astropartphys.2023.102850>
15. **M. Cardillo** & A. Giuliani, 2023, Appl. Sci. ,13, 6433, *The LHAASO PeVatron Bright Sky: What We Learned*.
<https://doi.org/10.3390/app13116433>
16. **M. Cardillo** for the ASTRI project, 2023, Proceedings of Science, accepted, "The ASTRI Mini-Array: in the search for hidden Pevatrons"
<https://doi.org/10.48550/arXiv.2302.10059>

[2022]

17. S. Vercellone, C. Bigongiari, A. Burtovoi, **M. Cardillo** et al, 2022, JHEAP, 35, 1 V "ASTRI Mini-Array Core Science at the Observatorio del Teide"
<https://ui.adsabs.harvard.edu/abs/2022JHEAp..35....1V/abstract>
18. D'Ai, E. Amato, A. Burtovoi, A. A. Compagnino, M. Fiori, A. Giuliani, N. La Palombara, A. Paizis, G. Piano, F. G. Saturni, A. Tutone, A. Belfiore, **M. Cardillo** et al., JHEAP, 35, 139, "Galactic observatory science with the ASTRI Mini-Array at the Observatorio del Teide"
<https://www.sciencedirect.com/science/article/abs/pii/S2214404822000350>
19. Saturni, F. G.; Arcaro, C. H. E.; Balmaverde, B.; Becerra González, J.; Caccianiga, A.; Capalbi, M.; Lamastra, A.; Lombardi, S.; Lucarelli, F.; Alves Batista, R.; Antonelli, L. A.; de

- Gouveia Dal Pino, E. M.; Della Ceca, R.; Green, J. G.; Pagliaro, A.; Righi, C.; Tavecchio, F.; Vercellone, S.; Wolter, A.; Amato, E.; Bigongiari, C.; Böttcher, M.; Brunetti, G.; Bruno, P.; Bulgarelli, A.; **Cardillo, M.** et al, 2022, JHEAP, 35, 91, “*Extragalactic observatory science with the ASTRI mini-array at the Observatorio del Teide*”
<https://ui.adsabs.harvard.edu/abs/2022JHEAp..35...91S/abstract>
20. Scuderi, S.; Giuliani, A.; Pareschi, G.; Tosti, G.; Catalano, O.; Amato, E.; Antonelli, L. A.; Becerra Gonzàles, J.; Bellassai, G.; Bigongiari, C.; Biondo, B.; Böttcher, M.; Bonanno, G.; Bonnoli, G.; Bruno, P.; Bulgarelli, A.; Canestrari, R.; Capalbi, M.; Caraveo, P.; **Cardillo, M.** et al., 2022, JHEAP, 35, 52, “*The ASTRI Mini-Array of Cherenkov telescopes at the Observatorio del Teide*”
<https://ui.adsabs.harvard.edu/abs/2022JHEAp..35...52S/abstract>
21. Ursi, A., Romani, M., Piano, G., Verrecchia, F., Longo, F., Pittori, C., Tavani, M., Bulgarelli, A., Cardillo, M. et al., 2022, ApJ, 933, 214 “*AGILE Observations of GRB 220101A: A “New Year’s Burst” with an Exceptionally Huge Energy Release*”
<https://ui.adsabs.harvard.edu/abs/2022arXiv220514199U/abstract>
22. Ursi A., Romani M., Verrecchia F., Pittori C., Tavani M., Marisaldi M., Galli M., Labanti C., Parmiggiani N., Bulgarelli A., Addis A., Baroncelli L., Cardillo M. et al. 2022, ApJ, 925, 152, “*The Second AGILE MCAL Gamma-Ray Burst Catalog: 13 yr of Observations*”
<https://iopscience.iop.org/article/10.3847/1538-4357/ac3df7/pdf>
23. Ursi A., Verrecchia F., Piano G., Casentini, C., Tavani M., Bulgarelli A., Cardillo M. et al. 2022, ApJ, 924, 80, “*AGILE Observations of the LIGO-Virgo Gravitational-wave Events of the GWTC-1 Catalog*”
<https://iopscience.iop.org/article/10.3847/1538-4357/ac332f/pdf>
- [2021]
24. Verrecchia, F., Casentini, C., Tavani, M., Ursi, A., Mereghetti, S., Pilia, M., Cardillo, M. et al. 2021, ApJ, 915, 102V, “*AGILE Observations of Fast Radio Bursts*”
<https://iopscience.iop.org/article/10.3847/1538-4357/abfda7/pdf>
25. Tavani, M., Casentini, C., Ursi, A., Verrecchia, F., Addis, A., Antonelli, L. A., Argan, A., Barbiellini, G., Baroncelli, L., Bernardi, G.; Bianchi, G., Bulgarelli, A., Caraveo, P., Cardillo, M. et al. 2021, NatAs 5, 401Y, “*An X-ray burst from a magnetar enlightening the mechanism of fast radio bursts*”
<https://www.nature.com/articles/s41550-020-01276-x>
- [2020]
26. Ursi, A., Tavani, M., Frederiks, D. D., Romani, M., Verrecchia, F., Marisaldi, M., Aptekar, R. L., Antonelli, L. A., Argan, A., Bulgarelli, A., Barbiellini, G., Caraveo, P., Cardillo, M. et al. 2020, ApJ 904, 133U, “*AGILE and Konus-Wind Observations of GRB 190114C: The Remarkable Prompt and Early Afterglow Phases*”
<https://iopscience.iop.org/article/10.3847/1538-4357/abc2d4/pdf>
27. Casentini, C.; Verrecchia, F.; Tavani, M.; Ursi, A.; Antonelli, L. A.; Argan, A.; Barbiellini, G.; Bulgarelli, A.; Caraveo, P.; Cardillo, M. et al., 2020, ApJ, 890L, 32C, “*AGILE Observations of Two Repeating Fast Radio Bursts with Low Intrinsic Dispersion Measures*”
<https://iopscience.iop.org/article/10.3847/2041-8213/ab720a/pdf>
28. Lombardi, S.; Catalano, O.; Scuderi, S.; Antonelli, L. A.; Pareschi, G.; Antolini, E.; Arrabito, L.; Bellassai, G.; Bernloehr, K.; Bigongiari, C.; Biondo, B.; Bonanno, G.; Bonnoli, G.; Böttcher, G. M.; Bregeon, J.; Bruno, P.; Canestrari, R.; Capalbi, M.; Caraveo, P.; Conconi, P.; Conforti, V.; Contino, G.; Cusumano, G.; de Gouveia Dal Pino, M.; Distefano, A.; Farisato, G.; Fermio, C.; Fiorini, M.; Frigo, A.; Gallozzi, S.; Gargano, C.; Garozzo, S.; Gianotti, F.; Giarrusso, S.; Gimenes, R.; Giro, E.; Grillo, A.; Impiombato, D.; Incorvaia, S.; La Palombara, N.; La Parola, V.; La Rosa, G.; Leto, G.; Lucarelli, F.; Maccarone, M. C.; Marano, D.; Martinetti, E.; Micciche, A.; Millul, R.; Mineo, T.; Nicotra, G.; Occhipinti, G.; Pagano, I.; Perri, M.; Romeo, G.; Russo, F.; Russo, F.; Sacco, B.; Sangiorgi, P.; Satumi, F. G.; Segreto, A.; Sironi, G.; Sottile, G.; Stamerra, A.; Stringhetti, L.; Tagliaferri, G.; Tavani, M.; Testa, V.; Timpanaro, M. C.; Toso, G.; Tosti, G.; Trifoglio, M.; Umana, G.; Vercellone, S.; Zanmar Sanchez, R.; Arcaro, C.; Bulgarelli, A.; **Cardillo, M.** et al., 2020, **A&A**, 634,

"First detection of the Crab Nebula at TeV energies with a Cherenkov telescope in dual-mirror Schwarzschild-Couder configuration: the ASTRI-Horn telescope"

<https://www.aanda.org/articles/aa/abs/2020/02/aa36791-19/aa36791-19.html>

[2019]

29. MAGIC collaboration; (...) Ursi, A.; Tavani, M.; **Cardillo, M. et al.**, 2019, **Nature**, 575..459M, "Observation of inverse Compton emission from a long γ -ray burst"
<https://ui.adsabs.harvard.edu/abs/2019Natur.575..459M/abstract>
30. **Cardillo, M.**, ", 2019, **Galaxies**, 7, 49 "The important Role of Cosmic-Ray Re-Acceleration"
<https://ui.adsabs.harvard.edu/abs/2019Galax...7...49C/abstract>
31. Piano, G., **Cardillo, M.** et al., 2019, **ApJ**, 878, 54P, "AGILE study of the gamma-ray emission from the SNR G78.2+2.1 (GammaCygni)"
<https://ui.adsabs.harvard.edu/abs/2019ApJ...878...54P/abstract>
32. Bulgarelli, A., Fioretti, V., Parmiggiani, N., Verrecchia, F., Pittori, C., Lucarelli, F., Tavani, M., Aboudan, A., **Cardillo, M.** et al., 2019, **A&A**, 627A, 13B, "The second AGILE Catalog of Gamma-Ray Sources"
<https://ui.adsabs.harvard.edu/abs/2019A%26A...627A..13B/abstract>
33. Verrecchia F., Tavani, M., Bulgarelli, A., Cardillo, M. et al., 2019, RLSFN, 33V, "AGILE search for gamma-ray counterparts of gravitational wave events"
<https://ui.adsabs.harvard.edu/abs/2019RLSFN.tmp...33V/abstract>
34. **Cardillo M.**, 2019, RLSFN, 25C, "Gamma-ray astronomy as a milestone in the Cosmic Ray origin issue",
<https://ui.adsabs.harvard.edu/abs/2019RLSFN.tmp...25C/abstract>
35. **Cardillo, M.**, Marchili, N., Piano, G. et al., 2019, **A&A**, 622, 57, "The Orion Region: evidence of enhanced Cosmic Rays density in a Stellar Wind Forward Shock interaction with a high density shell."
<http://adsabs.harvard.edu/abs/2019A%26A...622A..57C>
36. Loru, S., Pellizzoni, A., Egron, E., Righini, S., Iacolina, M.N., Milas, S., Cardillo, M. et al., 2018, **MNRAS**, 482, 3857, "Investigating the high-frequency spectral features of SNRs Tycho, W44 and IC443 with the Sardinia Radio Telescope"
<http://adsabs.harvard.edu/abs/2019MNRAS.482.3857L>
37. Lucarelli, F., M. Tavani, G. Piano, A. Bulgarelli, I. Donnarumma, F. Verrecchia, C. Pittori, L. A. Antonelli, A. Argan, G. Barbiellini, P. Caraveo, **M. Cardillo** et al., 2018, **ApJ**, 870, 136, "AGILE detection of gamma-ray sources coincident with cosmic neutrino events"
<http://adsabs.harvard.edu/abs/2018arXiv181107689L>

[2018]

38. Marchili, N.; Piano, G.; **Cardillo, M.** et al., 2018, **A&A**, 615, 82, "A new gamma-ray source unveiled by AGILE in the region of Orion nebula"
<http://adsabs.harvard.edu/abs/2018A%26A...615A..82M>
39. Cattaneo, P.W., Rappoldi, A., Argan, A., Barbiellini, G., Boffelli, F., Bulgarelli, A.m Buonomo, B., **Cardillo, M.** et al., 2018, **ApJ**, 861, 125, "Calibration of AGILE-GRID with On-ground Data and

Monte Carlo Simulations"

<http://adsabs.harvard.edu/abs/2018ApJ...861..125C>

[2017]

40. Verrecchia, F.; Tavani, M.; Donnarumma, I.; Bulgarelli, A.; Evangelista, Y.; Pacciani, L.; Ursi, A.; Piano, G.; Pilia, M.; **Cardillo, M.** et al., 2017, **ApJ**, 850, 27V, "AGILE Observations of the Gravitational-wave Source GW170817: Constraining Gamma-Ray Emission from an NS-NS Coalescence"
<http://adsabs.harvard.edu/abs/2017ApJ...850L..27V>
41. E. Egron, A. Pellizzoni, M.N. Iacolina, S.Loru, M. Marongiu, S.Righini, **M.Cardillo** et al., 2017, **MNRAS**, 470, 1329, "Imaging of SNR IC443 and W44 with the Sardinia Radio Telescope at 1.5 GHz and 7 GHz."
<http://adsabs.harvard.edu/abs/2017MNRAS.470.1329E>
42. F.Verrecchia et al., 2017, **ApJ**, 847L, 20V "AGILE observations of the GW source GW170104"
<http://adsabs.harvard.edu/abs/2017ApJ...847L..20V>
43. Abbott et al., 2017, **ApJ**, 848L, 12A, "Multi-messenger Observations of a Binary Neutron Star Merger"
<http://adsabs.harvard.edu/abs/2017ApJ...848L..12A>
44. De Angelis, A. et al., 2017, **ExA**, 44, 25D, "The e-ASTROGAM mission. Exploring the extreme Universe with gamma rays in the MeV - GeV range"
<http://adsabs.harvard.edu/abs/2017ExA....44...25D>
45. De Angelis, A. et al., 2017, **arXiv:1711.01265**, "Science with e-ASTROGAM (A space mission for MeV-GeV gamma-ray astrophysics)"
<http://adsabs.harvard.edu/abs/2017arXiv171101265D>

[2016]

46. M.Tavani, on behalf of AGILE collaboration, 2016, **ApJ**, 825, 4T, "AGILE Observations of the Gravitational-wave Event GW150914"
<http://adsabs.harvard.edu/abs/2016ApJ...825L...4T>
47. **M.Cardillo**, E.Amato, P.Biasi, **A&A**, 595, 58, 2016, "The Supernova Remnant W44: a case of Cosmic Ray reacceleration."
<http://adsabs.harvard.edu/abs/2016A%26A...595A..58C>

[2015]

48. **M.Cardillo**, E.Amato, P.Biasi, 2015, **APh**, 69, 1C, "On the cosmic ray spectrum from type II supernovae expanding in their red giant presupernova wind"
http://adsabs.harvard.edu/abs/2015APh...69_1C

[2014]

49. F. de Gasperin, C. Evoli, M. Bruggen, A. Hektor, **M. Cardillo** et al., 2014, **A&A**, 568, A107, "Discovery of the supernova remnant G351.0-5.4"
<http://adsabs.harvard.edu/abs/2014A%26A...568A.107D>

50. **M.Cardillo**, M. Tavani, A.Giuliani, 2014, **NuPhS**, 256, 65 "The origin of Cosmic-Rays from SNRs: confirmations and challenges after the first direct proof"
[.harvard.edu/abs/2014NuPhS.256...65C](http://adsabs.harvard.edu/abs/2014NuPhS.256...65C)

51. **M. Cardillo**, M.Tavani, A.Giuliani et al., 2014, **A&A**, 565, 74-85, " The supernova remnant W44: confirmations and challenges for cosmic-ray acceleration"
<http://adsabs.harvard.edu/abs/2014A%26A...565A..74C>

[2013]

52. F.Verrecchia et al., AGILE COLLABORATION, 2013, **A&A**, 558, 137V, " An updated list of AGILE bright γ -ray sources and their variability in pointing mode "
<http://adsabs.harvard.edu/abs/2013A%26A...558A.137V>
53. A. Morselli et al., ASTROGAM COLLABORATION, 2013, **NuPhS**, 239, 193, " Gamma-Light: High-Energy Astrophysics above 10 MeV"
<http://adsabs.harvard.edu/abs/2013NuPhS.239..193M>

54. E. Striani et al., AGILE COLLABORATION, 2013, **ApJ**, 765, 52S, "Variable Gamma-Ray Emission from the Crab Nebula: Short Flares and Long "Waves " "
<http://adsabs.harvard.edu/abs/2013ApJ...765...52S>

[2012]

55. **M.Cardillo**, A.Giuliani, M. Tavani, 2012, **PhCS**, 383, 0122007-01220012, "The SNR W44: an ideal laboratory for Cosmic-Ray acceleration"
<http://adsabs.harvard.edu/abs/2012JPhCS.383a2007C>
56. F. Longo et al., AGILE COLLABORATION, 2012, **A&A**, 547, 95L, " Upper limits on the high-energy emission from gamma-ray bursts observed by AGILE-GRID "
<http://adsabs.harvard.edu/abs/2012A%26A...547A..95L>
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<http://adsabs.harvard.edu/abs/2012A%26A...545A.110P>

[2011]

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<http://adsabs.harvard.edu/abs/2011ApJ...741L...5S>
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<http://adsabs.harvard.edu/abs/2011ApJ...736L..38V>
60. A. Giuliani, **M.Cardillo**, M.Tavani et al., 2011, **ApJ**, 742, L30, "Neutral pion emission from accelerated protons in the Supernova Remnant W44"
<http://adsabs.harvard.edu/abs/2011ApJ...742L..30G>

[2010]

61. A.Giuliani, M. Tavani, A. Bulgarelli, E. Striani, S. Sabatini, **M. Cardillo** et al, AGILE COLLABORATION, 2010, **A&A**, 516L, 11G, "AGILE detection of GeV γ -ray emission from the SNR W28"
<http://adsabs.harvard.edu/abs/2010A%26A...516L..11G>

Proceedings:

[2022]

62. Abe et al. 2022, "Multi-wavelength study of the galactic PeVatron candidate LHAASO J2108+5157", 2022arXiv221000775A
<https://arxiv.org/pdf/2210.00775.pdf>
63. Rodriguez-Fernandez G., Bigongiari C., Bulgarelli A., Camarri P., Cardillo M. et al., 2022, "STACEX: RPC-based detector for a multi-messenger observatory in the Southern Hemisphere", 2022icrc.confE.715R
<https://arxiv.org/pdf/2109.08594.pdf>

[2021]

64. Boisson et al., 2021, arXiv:2106.05971, "Probing extreme environments with the Cherenkov Telescope Array"
<https://arxiv.org/pdf/2106.05971.pdf>
65. Bošnjak, Ž. et al., 2021, arXiv:2106.03621, "Multi-messenger and transient astrophysics with the Cherenkov Telescope Array"
<https://arxiv.org/pdf/2106.03621.pdf>
66. Araudo et al., 2021, arXiv:2106.03599, "Origin and role of relativistic cosmic particles"
<https://arxiv.org/pdf/2106.03599.pdf>

[2019]

67. Di Sciacio, G.; Camarri, P.; Santonico, R.; **Cardillo, M.** et al., "STACEX: RPC-based detector for a multi-messenger observatory", 2019ICRC, 36, 210
<https://ui.adsabs.harvard.edu/abs/2019ICRC...36..660D/abstract>
68. **M. Cardillo**, "The role of re-acceleration in the understanding of Cosmic-Ray direct and indirect data", 2019ICRC, 36, 210
<https://ui.adsabs.harvard.edu/abs/2019ICRC...36..210C/abstract>

[2018]

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<https://spie.org/Publications/Proceedings/Paper/10.1117/12.2311293>

[2017]

70. V. Tatischeff et al., 2017, proceeding SPIE, "The e-ASTROGAM gamma-ray space mission", **2016SPIE.9905E..2NT**
<http://adsabs.harvard.edu/abs/2016SPIE.9905E..2NT>
71. Egron, E.; Pellizzoni, A.; Iacolina, M. N.; Loru, S.; Marongiu, M.; Righini, S.; **Cardillo, M.**; et al., 2017, 2017, IAUS, 331, 184E, "High-resolution imaging of SNR IC443 and W44 with the Sardinia Radio Telescope"
<http://adsabs.harvard.edu/abs/2017IAUS..331..184E>

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2017, IAUS..331..194P, "Evidence for a wide electron spectra scatter among different SNR regions from high radio-frequency observations"

<http://adsabs.harvard.edu/abs/2017IAUS..331..194P>

[2016]

73. M.Cardillo, E.Amato, P.Biasi, 2016, "*The middle aged SNRs W44: most likely reacceleration without any break*", sros.confE, 90C

<http://adsabs.harvard.edu/abs/2016sros.confE..90C>

74. P.Soffitta et al., 2016, proceeding SPIE, "*XIPE: the X-ray imaging polarimetry explorer*", 2016SPIE.9905E..15S

<http://adsabs.harvard.edu/abs/2016A%26A...595A..58C>

[2015]

75. **M.Cardillo**, E.Amato, P.Biasi, 2015, "*On the cosmic ray spectrum from type II Supernovae expanding in their red giant presupernova wind*", ICRC, 34, 531C

<http://adsabs.harvard.edu/abs/2015ICRC...34..531C>

76. **M. Cardillo**, 2015, "*On the cosmic ray spectrum from type II Supernovae expanding in their red giant presupernova wind*", EPJWC, 10502004C

<http://adsabs.harvard.edu/abs/2015EPJWC.10502004C>

77. **M. Cardillo**, 2015, "*Cosmic-ray world with gamma-ray astronomy: a wealth on information, an even more open issue*", EPJWC, 9003001C

<http://adsabs.harvard.edu/abs/2015EPJWC..9003001C>

[2012]

78. **M.Cardillo**, A.Giuliani, M.Tavani, 2012, "*AGILE and SNRs: A comparison between W44 and W28*", AIP, 1505, 221-224

<http://adsabs.harvard.edu/abs/2012AIPC.1505..221C>

[2011]

79. A. Giuliani, **M.Cardillo** and M.Tavani, 2011, "*AGILE observations of Supernova Remnants*", **Fermi Symposium proceedings - eConf C110509**, arXiv1111.3592

<http://adsabs.harvard.edu/abs/2011arXiv1111.3592G>

[2010]

80. A. Giuliani, M. Tavani, G. Piano, **M. Cardillo** et al, 2010, "*Middle-aged Supernova Remnants with AGILE*", tsra.confE, 125

<http://adsabs.harvard.edu/abs/2010tsra.confE.125G>

Honours and awards

[2014]**ARAP prize (Associazione Romana per le Astro-Particelle) 2013**

I won this award for my PhD thesis: "The origin of cosmic-rays in Supernova Remnants: new challenges after a breakthrough" and (in italian) "per aver concorso, all'interno della Collaborazione AGILE alla scoperta della natura adronica dei segnali gamma di alta energia da resti di Supernovae".

Fellowship of the Angelo Della Riccia foundation.

I won this fellowship to go 6 months in France at Laboratoire APC - CNRS/Université Paris 7 Denis Diderot and work with Dr Stefano Gabici. I declined this fellowship because I won a post-doc position for two years at the Osservatorio Astrofisico di Arcetri.

[2012]**Bruno Rossi Prize:** Marco Tavani and the AGILE team:

The 2012 Rossi Prize has been awarded to astrophysicist Marco Tavani and the AGILE team for the discovery of gamma-ray flares from the Crab Nebula. Long thought to be a steady source of energy - from optical to gamma rays - this finding has changed the understanding of this very important cosmic object.

Invited Talks

[2025]

- 2025 KPS Fall Meeting (Kimdaejung Convention Center, Gwangju, South Korea), "PeVatron Fiction (Everything Everywhere All at PeV)", **Cardillo M.**, Oral

CONTACTS: koun@ibs.re.kr

https://www.kps.or.kr/conference/event/content/content.php?_mid=1401,1406#

- Indo - Japan Workshop on Extreme Plasma Phenomena in Universe (ARIES Nainital), "PeVatron Fiction (Everything Everywhere All at PeV)", **Cardillo M.**, Oral

CONTACTS: jagdishjoshi86@gmail.com

https://www.aries.res.in/sites/default/files/Indo_Japan_workshop.pdf

- KMI2025 : The 6th KMI International Symposium" (Nagoja, Japan), "Gamma Ray Busters: the search of the lost PeVatrons", **Cardillo M.**, Oral

CONTACTS: kmi2025@kmi.nagoya-u.ac.jp

<https://indico.kmi.nagoya-u.ac.jp/event/10/overview>

[2023]

- PRISMA Day (Prato): "Frammenti di Cielo": il primo fumetto INAF nasce nel segno di PRISMA" ", **Cardillo, M.**, Oral

<https://indico.ict.inaf.it/event/2601/>

- "AVENGe - Advances in Very-High Energy Astrophysics with Next-Generation Cherenkov Telescopes" (Rome), "Gamma-ray astronomy and the search of the lost PeVtrons", **Cardillo M.**, Oral

CONTACT PERSON: Alessandro Carosi (alessandro.carosi@inaf.it)

<https://indico.ict.inaf.it/event/2281/overview>

[2022]

- Hands-on the Extreme Universe with High Energy Gamma-ray data (Sexten, Bolzano), "The fascinating Galactic Science to understand with future Cherenkov Telescopes", **Cardillo M.**, Oral

CONTACT PERSON: Francesco Longo (francesco.longo@ts.infn.it)

<https://agenda.infn.it/event/32064/>

[2017]

- A TPC for MeV astrophysics (Ecole Polytechnique, Paris), "Cosmic-Rays and Supernova Remnants love story: the importance of MeV energies", **Cardillo M.**, Oral

CONTACT PERSON: Denis Bernard (denis.bernard@lir.in2p3.fr)

<https://indico.in2p3.fr/event/14279/timetable/#all>

[2014]

XLIV International Symposium on Multiparticle Dynamics (Bologna), "Cosmic-Ray world with gamma-ray astronomy: a wealth of information, an even more open issue.", **Cardillo M.**, Oral

CONTACT PERSON: Francesco Vissani (francesco.vissani@lngs.infn.it) e Maurizio Spurio (maurizio.spurio@bo.infn.it)

<https://agenda.infn.it/conferenceTimeTable.py?confId=7837#all.detailed>

[2012]

International school of Space Science (L'Aquila), "AGILE and CR acceleration from SNRs: W44 & W28", **Cardillo M.** on behalf of the AGILE collaboration, Oral

CONTACT PERSON: Prof. Umberto Villante
(umberto.villante@aquila.infn.it) http://www.cifs-iss.org/programme_september.asp#

Conferences

[2025]

- *Indo - Japan Workshop on Extreme Plasma Phenomena in Universe (ARIES Nainital)*, "PeVatron Fiction (Everything Everywhere All at PeV)", **Cardillo M.**, Oral

https://www.aries.res.in/sites/default/files/Indo_Japan_workshop.pdf

- *KMI2025 : The 6th KMI International Symposium" (Nagoja, Japan)*, "Gamma Ray Busters: the search of the lost PeVatrons", **Cardillo M.**, Oral

<https://indico.kmi.nagoya-u.ac.jp/event/10/overview>

[2024]

- ASTRI F2F Software Meeting:

<https://indico.ict.inaf.it/event/2825/>

- Remote "LST Analysis School"

<https://indico.cta-observatory.org/event/5272/>

[2023]

- Remote Workshop "Esseri Umani Nello Spazio"

<http://cht.unipv.it/it/eventi/event/workshop-essere-umani-nello-spazio/>

- TeVPa (Napoli, Archivio di Stato): "The LHAASO PeVatron bright sky: what we learned", **Cardillo, M.**, Oral

<https://agenda.infn.it/event/33457/>

- ICRC 2023 (Japan, from remote): "G106.3+2.7: a candidate PeVatron with ASTRI Mini-Array", **Cardillo M.**, poster

<https://www.icrc2023.org/>

- Public Engagement (Bologna - Osservatorio di Astrofisica e Scienza dello Spazio)

<https://indico.ict.inaf.it/event/2520/>

- AVENG meeting (Rome, Sala Convegni Cappuccini): "Gamma-ray Astronomy and the Search of the

lost PeVatrons”, **Cardillo, M.**, Oral

<https://indico.ict.inaf.it/event/2281/>

- Giornate INAF 2023 (INAF - OAC)

<https://indico.ict.inaf.it/event/2367/page/932-home>

- ASTRI and LHAASO workshop (INAF-IASF, Milano, Italy)

<https://indico.ict.inaf.it/event/2288/>

- WORKSHOP “IXPE: LA NUOVA FINESTRA OSSERVATIVA SUL COSMO AD ALTE ENERGIE” (ASI, Rome, Italy)

<https://www.asi.it/event/workshop-ixpe-la-nuova-finestra-osservativa-sul-cosmo-ad-alte-energie/>

[2022]

- HONEST (online meeting), “A bright (near) future in the PeVatron era with the ASTRI Mini-Array”, **Cardillo, M.**, Oral

<https://indico.desy.de/event/34265/>

- RSN4 INAF meeting (Osservatorio di Capodimonte, Napoli, Italy)

<https://indico.ict.inaf.it/event/2173/>

- Sharing AHEAD (Rome), “INAF and its ONE THOUSAND AND ONE STORIES”, **Cardillo M.**, Oral

<https://indico.ict.inaf.it/event/2111/>

- CNOC XII (Cefalù, Sicily), “Very high Energy Astrophysics and the search of the lost PeVatrons”, **Cardillo M.**, Oral

<http://www.ifc.inaf.it/cnoc12/>

- PASTO workshop (INAF-OAR, Monte Porzio Catone), LOC-SOC

<https://indico.ict.inaf.it/event/1785/>

- *Hands-on the Extreme Universe with High Energy Gamma-ray data (Sexten, Bolzano)*, “The fascinating Galactic Science to understand with future Cherenkov Telescopes”, **Cardillo M.**, Oral Invited
+ relator of the hands-on on ASTRI Mini Array data

<https://agenda.infn.it/event/32064/>

- *Gamma 2022 (Barcellona, Spain)*, “The ASTRI Mini-Array: in the search for hidden Pevatrons”, **Cardillo, M.**, Poster

<https://indico.icc.ub.edu/event/46/overview>

- Gammapy Workshop (Palermo, Italia), organizer and relator (hands-on on simulation and data spectral analysis with Gammapy)

<https://indico.ict.inaf.it/event/1867/>

[2021]

- Online ICRC2021, “The ASTRI Mini-Array: a breakthrough in the Cosmic Ray study”, **M. Cardillo**, Oral

<https://icrc2021.desy.de/>

[2020]

- Fermi Symposium, Johannesburg (South Africa), "The Important Role of Cosmic-Ray Re-Acceleration", **M. Cardillo, Oral**, (postponed to 2021 due Covid19)

<https://fermi.gsfc.nasa.gov/science/mtgs/symposia/2020/>

[2019]

- Texas Symposium 2019, Portsmouth (England), " The re-acceleration revenge: its role in the understanding of Cosmic-Rays", **M. Cardillo, Oral**

<https://texas2019.org/>

- CNOC 2019, Osservatorio Astrofisico di Arcetri (Firenze, Italy), " The re-acceleration revenge: its role in the understanding of Cosmic-Rays", **M. Cardillo, Oral**

<http://www.arcetri.astro.it/~cnoc11/>

- ICRC 2019, Madison (Wisconsin), "The role of the Re-Acceleration in the understanding of the CR direct and indirect data", **M. Cardillo, Oral**

<https://www.icrc2019.org/>

- *ASTRI SW mini-array Face to Face meeting (Bologna, Italy)*

<https://indico.ict.inaf.it/event/931/>

- *Young Research Meeting*, Rome (Italy), "CR and SNR love story and the re-acceleration between them", **M. Cardillo, Oral**

<http://www.iphysnet.com/wp/ym/events/10ym/?fbclid=IwAR0qjXCsaSGZn44cuAGORCJjpZuEBejTm69c9mUfovRILxa5xrCfH-kUIKo>

- *CTA Consortium Meeting*, Lugano (Switzerland), "ASTRI High-level data analysis", **M. Cardillo, Oral**

<https://indico.cta-observatory.org/event/1995/>

- Cosmic Explosion 2019, Cargese (Corsican), "CR and SNR love story and the re-acceleration between them", **M. Cardillo, Oral**

<https://indico.in2p3.fr/event/17572/overview>

- *CTA Symposium*, Bologna (Italy), "The importance of gamma-ray energy band in Galactic CR origin tricky issue", **M. Cardillo, Poster**

<https://www.cta-symposium.com/>

- *ACDC meeting*, Palermo (Italy)

<https://indico.ict.inaf.it/event/766/overview>

[2018]

- *Face to Face meeting ASTRI Science Tools*, Milano, I was the organizer

- *10th ASTRI General Meeting*, "ASTRI Science Tools", **M. Cardillo, oral**

<https://indico.ict.inaf.it/event/724/contributions/>

- *Cosmic Ray and the InterStellar Medium - CRISM (Grenoble, France)*, "The naked Orion: a mysterious gamma-ray emission maybe due to Cosmic Ray reacceleration", **M. Cardillo, oral**

<https://crism2018.sciencesconf.org/program>

- *Fast and AGILE: 11 years* (Rome, Italy).

<http://www.ssdsc.asi.it/16thagilemeeting/index.php>

[2017]

- *e-ASTROGAM workshop* (Padova, Italy), "Cosmic-rays and Supernova Remnants issue: the importance of energies below 200 MeV", **M.Cardillo**, Oral;

<https://agenda.infn.it/conferenceTimeTable.py?confId=12401#all.detailed>

- *15° AGILE workshop* (Roma, Italy), "The SNR W44: a reference source for understanding the CR origin", **M.Cardillo**, Oral;

<http://www.ssdsc.asi.it/15thagilemeeting/program.php>

- *CTA PHYS WG face-to-face meeting* (Heidelberg, Germany).

<https://indico.cta-observatory.org/event/1471/overview>

- *GW170817 - Italian contributions to the dawn of the multi-messenger astronomy* (L'Aquila, Italy)

<http://www.gssi.it/seminars/seminars-and-events-2017/item/2083-gw170817-italian-contributions-to-the-dawn-of-the-multi-messenger-astronomy>

- *Workshop onde gravitazionali* (Rome, Italy).

<https://www.asi.it/it/eventi/workshop/workshop-onde-gravitazionali-asi-4-dicembre>

- *A decade of AGILE (Rome, Italy)* , "Gamma-ray astronomy as a milestone in the Cosmic-Ray origin issue", **M.Cardillo**, poster

http://www.lincci.it/modules.php?name=Convegna&file=lista&func=Convegna_edit&Id=1456

[2016]

- *Supernova Remnants 2016* (Chania, Greece), "The middle-aged SNR W44: most likely reacceleration", **M.Cardillo**, E.Amato & P.Biasi, Oral

<http://snr2016.astro.noa.gr/homepage.php/program/>

- *14th AGILE workshop "AGILE on the wave"* (Rome);

<http://www.asdc.asi.it/14thagilemeeting/>

[2015]

- *SUGAR 2015* (Geneva), "On the CR spectrum released by a type II SNR expanding in the presupernova wind", **Cardillo M.**, Amato E., Biasi P., Oral

<https://indico.cern.ch/event/332221/contributions/>

- *13th AGILE workshop, "AGILE: 8 and counting"* (Rome), "Particles and Gamma-Rays Tell us about Cosmic-Ray Acceleration from Supernova Remnants", **Cardillo M.**, Oral

<http://www.asdc.asi.it/13thagilemeeting/program.php>

- *ICRC 2015* (The Hague), "On the cosmic ray spectrum from type II Supernovae expanding in their red giant presupernova wind", **M.Cardillo**, E.Amato & P.Biasi, Oral

<https://pos.sissa.it/236/1231/pdf>

- *CNOC 2015* (Rome), "Middle-aged SNRs W44 & IC443 and Cosmic-Rays: most likely

reacceleration", **M.Cardillo**, E.Amato & P.Biasi, Oral

http://www.brera.inaf.it/~campana/cnoc9/CNOC9/cnoc_program.pdf

- *Fermi Symposium 2015* (Arlington, VA), "Middle-aged SNRs W44 & IC443 and Cosmic-Rays: most likely reacceleration", **M.Cardillo**, E.Amato & P.Biasi, Oral

<https://fermi.gsfc.nasa.gov/science/mtgs/symposia/2015/program/#full>

[2014]

- *Cosmic-Ray origin - beyond the standard model* (San Vito di Cadore), "The Supernova Remnant W44: confirmations and challenges for cosmic-ray acceleration", **Cardillo M.**, Oral

http://mctp.mx/tibolla/SVito_CR_new2.html

- *Astroparticle Physics 2014* (Amsterdam), "On the CR spectrum released by a type II SNR expanding in the presupernova wind", **Cardillo M.**, Blasi P., Amato E., Oral

<https://indico.cern.ch/event/278032/contributions/>

- *Multiple Messengers and challenges in astroparticle* (L'Aquila), "On the CR spectrum released by a type II SNR expanding in the presupernova wind", **Cardillo M.**, Blasi P., Amato E., Oral

<http://gssi.it/communication/announcements/item/370>

- *Arcetri 2014 workshop on plasma astrophysics* (Florence), "On the CR spectrum released by a type II SNR expanding in the presupernova wind", **Cardillo M.**, Blasi P., Amato E., Oral

<http://www.physics.udel.edu/arcetri/arcetri2014/Program.html>

[2013]

- *11th AGILE Science Workshop, GAMMA-RAYS AND GALACTIC COSMIC RAYS*, "Data and modelling of the SNR W44", **Cardillo M.**, Oral

<http://www.asdc.asi.it/11thagilemeeting/program.php>

- *RICAP-13 Roma International Conference on Astroparticle Physics*, "Gamma-ray emission from the SNR W44: confirmations and challenges for cosmic-ray acceleration", **Cardillo M.**, Oral

<https://agenda.infn.it/conferenceOtherViews.py?view=standard&confId=5418>

[2012]

- *Young Researcher Meeting* (Roma), "Direct Proof of Cosmic-Ray acceleration by the SNR W44", **Cardillo M.**, Giuliani A., Tavani, M., Oral

<http://www.iphysnet.com/wp/yrm/events/3yrm/program/>

- *Maxwell Grossmann meeting* (Stockholm), "Highlights of the AGILE space mission", **Cardillo M.**, on behalf of the AGILE collaboration, Oral

<http://www.icra.it/mg/mg13/welcome.htm>

- *5th Gamma-Ray Symposium* (Heidelberg), "AGILE and SNRs: W28 & W44", **Cardillo M.**, on behalf of the AGILE collaboration, Oral

http://www.spaceagenda.com/events/detail/2012-07-09_5th-international-symposium-on-high-energy-gamma-ray-astronomy

- *COSPAR* (India), "AGILE detections of SNRs and CR production", **Cardillo M.** on behalf of the AGILE collaboration, Poster

<https://www.cospar-assembly.org/abstractcd/COSPAR-12/>

- *Exploring the Non-thermal Universe with Gamma Rays. On the occasion of the 60th birthday of Felix Aharonian (Barcellona)*, "AGILE and Cosmic-Ray origin from SNRs", **Cardillo M.** on behalf of the AGILE collaboration, Poster

<http://icc.ub.edu/congress/FAA60/index.php>

[2011]

- *IRAP Ph.D. Erasmus Mundus Workshop (Pescara)*, "The Supernova Remnant W44", **Cardillo, M.** on behalf of the AGILE team, Oral

<http://www.icranet.org/Report2011/Enclosure4.pdf>

- *CNOC (Bormio)*, "Direct Proof of Cosmic-Ray acceleration by the SNR W44", **Cardillo M.**, Giuliani A., Tavani, M., Oral

http://www.brera.inaf.it/utenti/campana/cnoc7/cnoc7/cnoc7_program_short.pdf

Seminars

[2023]

- INAF – IAPS (Italy), ""INAF and its ONE THOUSAND AND ONE STORIES""

[2021]

- INAF - Osservatorio Astronomico di Roma (Italy), "ASTRI Mini-Array and the search of the lost Pevatrons"

- INAF- Osservatorio Astronomico di Brera (Italy), "The search of the lost Pevatrons"

[2019]

- Agenzia Spaziale Italiana, Rome (Italy), "Cosmic Rays and Supernova Remnants: past, present and future of a long and tricky love story".

- IAPS-INAf, Rome (Italy), "Cosmic Rays and Supernova Remnants: past, present and future of a long and tricky love story".

[2017]

- INFN- Firenze, "Cosmic-Ray & Supernova Remnants: a tricky love story."

- INAF-IASF Milano, "Cosmic-Ray & Supernova Remnants: a tricky love story."

[2016]

- INAF-Osservatorio Astrofisico di Arcetri, "Cosmic-Ray & Supernova Remnants: a tricky love story."

[2013]

- INAF-IASF of Bologna, "Cosmic ray origin: new challenges after a breakthrough".

- Institute Cannizzaro of Colleferro, "Il fascino e le sorprese dell'universo alle alte energie: perché amare l'astrofisica."

Leadership

[2025]

PI of a one of the winners INAF Mini Grant proposal on Galactic candidates PeVatron analysis with gamma-ray and neutrinos study (IAPS members)

[2023]

PI of an INAF theory Grant proposal on Galactic candidates PeVatron analysis with gamma-ray and neutrinos study (IAPS members)

I'm the Spokesperson, together with my colleague Dr Andrea Giuliani, for the ASTRI Mini-Array and IceCube first Memorandum of Understanding

[2022]

PI of a proposal for a bilateral collaboration Italy-USA between INAF and Wisconsin IceCube Particle Astrophysics Center (WIPAC)

PI of the INAF Theory Grant PEACE dedicated to Particle Acceleration parallel study in Galactic and Extra-Galactic sources with IAPS and OAR members (not selected)

Deputy representative of INAF (First Representative Dr Fabio Pintore) in the VODF (Very-High-Energy (VHE) Open Data Format) project → <https://gamma-astro-data-formats.readthedocs.io/en/v0.3/index.html>

Member of the committee of an INAF-IAPS internal selection for a fixed term position

[2020]

Responsible of the Pillar "Origin of Cosmic Rays" in the scientific paper "ASTRI Mini-Array Core Science at Observatorio del Teide" for the ASTRI Mini-Array collaboration **(on-going)**.

Deputy coordinator of the working group "ASTRI Mini-Array Data Processing" for the ASTRI-MA collaboration **(on-going)**.

Deputy coordinator of the working group "ASTRI Mini-Array Science Analysis" for the ASTRI-MA collaboration **(on-going)**.

[2019]

Responsible of the Pevatron team in the ASTRI Science team that analyses the contribution of the ASTRI Mini Array to Pevatron search **(on-going)**.

[2017]

Responsible of the Science Tools working group for the ASTRI collaboration during the work on the CTA SST prototype ASTRI Horn in Sicily until 2020.

Memberships

[2023]

I became an associate member of the INFN (Istituto Nazionale di Fisica Nucleare).

[2022]

I'm involved in several activities within the PNRR (Italy) project CTA+: in particular, I'm directly involved in the collaboration IAPS-INFN/Tor Vergata University for the development of RPC detectors to be integrated in the current or future VHE instruments

[2021]

I became a member of the Gammapy team having the aim to propose Gammapy as unique science tool to be used in the CTA community respect with CTOOLS.

I was a member of the Time Allocation Committee (TAC) of MAGIC collaboration for the cycle 17.

I became a member of the LST (Large Size Telescope) Project within CTA collaboration and I was a LST shift operator for three weeks (August 26th, September 17th) at the Observatory of Roque de Los Muchachos (La Palma, Canarian Islands).

[2019]

I became an associate Scientist in the MAGIC team.

[2017]

I became a member of the monitoring AGILE team in the follow-up program in the context of gravitational waves.

I became a member "flare advocate" team of AGILE that analyses the daily data of the AGILE satellite.

I became a member of the ASTRI collaboration.

[2016]

I became a member of the "CTA" collaboration, contributing to the Galactic and Cosmic Ray working groups, making use of the CTOOLS for source simulations.

I became a member of the "e-ASTROGAM" collaboration, a little mission proposed to the ESA call M5 in 2016 but it was not selected already at the first stage.

[2015]

I became a member of the "XIPE" collaboration, a project selected for a two years study phase in the ESA Cosmic Vision competition M4 in 2015 but it was not selected for the final stage.

[2009]

I became a member of the AGILE team of the PI Marco Tavani.

Outreach activities

[Constant activities]

- Collaboration with "Rione Roma" association for Tour Guide events in Rome dedicated to Astronomy
- Collaboration with the "Daphne" project: Cultural and interdisciplinary events bringing together literature, music, fine arts, philosophy, and science.
<https://daphne.verne.app/>
- Several activities within INAF-IAPS:
 - project "Circuito Cinema"
 - project "Spazio Aperto", Scientific outreach program in Rebibbia prison
 - seminars at school
 - content organization of the "Macchine del Tempo" INAF exhibition at Rome in November
- In the "Gruppo Storie" (I'm a member from 2020) of INAF (<https://edu.inaf.it/gruppo-storie/>) I'm involved in several activities those will be kept in the future:
 - . "Martina-Tremenda" podcast
(<https://edu.inaf.it/approfondimenti/astrokids/martina-tremenda-podcast/>)
 - . "Briciole Spaziali": a scientific column for childrens (<14 years)
(<https://edu.inaf.it/briciole-spaziali/>)
 - development of a second Comics (Frammenti di cielo^2) project
 - development of the Comics "[Frammenti di Cielo](#)"
 - articles and festival participation
(<https://edu.inaf.it/approfondimenti/scoperte/messaggero-delle-stelle-teatro/>)
- I am a member of "Univers@II" the INAF team dedicated to inclusion and diversity
- I am co-responsible of Dr Anna Wolter (IASF Milano) for the Outreach in the ASTRI MA project
- Collaboration with "Astronomitaly" for outreach and observing-sky sessions:
<https://www.astronomitaly.com/>
- Collaboration with the online journal "Verbum Press" with my Column "Bolle Spaziali"

https://www.verbumlandiart.com/n-2/?fbclid=IwAR0Q1BDm40Q_JhVO-17oTtILVNH0GIJomOmXr8UiQJeJ_akZgEw6FIGHfM

- I have my column "A Spazio con Marty" in the radio program "Avanti Tutta" of the Radio Station "Radio Kaos Italy", speaking about Astrophysics:

<https://www.radiokaositaly.com/trasmissioni/dirette/avanti-tutta/>

- Youtube Channel dedicated to astrophysics and space outreach. My video are used in the Edu-INAF page:

<https://www.youtube.com/piùspaziopertutti>

<https://edu.inaf.it/pillole-martina-cardillo/>

- Astrophysical Outreach in Roman dialect poetry on facebook:

www.facebook.com/RomaCaputAstri

[2025]

- I was invited as speaker in the ADTRAN event at Villa MERini (October, 9th):

- I was invited as speaker at the event "" (October 2nd)

- I was invited as speaker in a conversation at the "Festival d'Arte, Scienza e Inclusione Sociale" of IncontroLuce association in Florence (September, 20):

- I was invited as speaker in a double interview at "Là Fuori Festival" (June, 21st):

<https://www.lafuorifestival.it/>

- I was invited to make a lesson in the Astronomy School of the Associazione Tuscolana di Astronomia (February 26):

<https://lnx.ataonweb.it/wp/2024/12/tutti-a-scuola-di-astronomia-a-gennaio-parte-il-corso-star-academy-2/>

[2024]

- I was invited to "Festival Orientamenti" (November 15th)

<https://festival.orientamenti.regione.liguria.it/programma/ma-che-ci-andate-a-fare-nello-spazio-con-tutti-i-problemi-che-abbiamo-qui-incontro-con-martina-cardillo>

- I was invited to a "Scientific Dinner" organized by the Associazione Tuscolana di Astronomia (May 30):

<https://lnx.ataonweb.it/wp/il-cenacolo-scientifico/>

- I was invited to a "Scientific Dinner" organized by The Zonta Club for Rom Parioli, very active in the issue of women presence in STEM disciplines (TBD):

<https://www.zontaromaparioli.org/>

- I organized the first "Open Day" of my institute INAF-IAPS, an event dedicated to University Students in order to show our active researches and their future possibilities in our institute:

<https://www.iaps.inaf.it/it/eventi/incontri-con-il-pubblico/open-day-iaps-2024>

- I held two seminars (one on Gamma-Rays and another one on the Importance of the Space and Astrophysical research in our life) during the Open Day of our Research Area CNR+INAF on the occasion of the "Festival della Bioeconomia"

<https://sites.google.com/view/openday-festivalbioeconomia/home-page>

- I was invited to hold a webinar about my work from the Regione Liguria on the occasion of "Giornata Internazionale della Donna"

<https://progettiamocilfuturo.it/2024/02/26/webinar-8-marzo-2024/>

- I held the "Spot Event: Lo Spazio fa bene all'umanità. Sempre." In the "Macchine del tempo" exhibition of INAF at Palazzo delle Esposizioni of Rome:

https://macchinedeltempo.inaf.it/index.php/prossimi-eventi/eventi_luna/

- I was invited from Dr Marco Casolino as a guest in one of his live events to speak about my scientific role and work:

<https://www.youtube.com/watch?v=TDJPKTwpquM>

- I was invited to hold a seminar to primary and secondary classes of the IC Via Casal Bianco for the "Giornata Internazionale per le Donne e le Ragazze nella Scienza"

- I was invited to perform some of my poems and monologues for the event "Creatività femminile e metodologia scientifica" organized by the "Rete per la parità" at the headquarters of CNR:

<https://www.youtube.com/watch?v=hg8C1cWvmxg>

[2023]

- I did an online Q&A session with a primary school in Cremona

- I was invited to hold the outreach seminar "Gamma-Ray Busters: a caccia di raggi gamma" at the "Pomeriggi di Scienza" of the INFN (Frascati):

<https://www.eventbrite.it/e/biglietti-gamma-ray-busters-a-caccia-di-raggi-gamma-martina-cardillo-inaf-768951443467>

<https://www.youtube.com/watch?v=5C21ZMSEPv0>

- I made an outreach video for the CTNA on the occasion of the "Giornata Internazionale dello Spazio":

<https://www.ctna.it/ctna-giornatanazionaledelospazio/>

- I had a occasional service contract with the "Specola Vaticana" as a guide

- I'm organizing the first Open Day (for University Students) of my Institute for March 2024

- I'm part of the INAF outreach project "Space Twinkle" with PI Andrea Longobardo: its aim is to realize a mini-series on the importance of Space technology in our daily life

- Presentation of the first comics editing INAF: "Frammenti di Cielo"

- "Lucca Comics&Games 2023" (November 4th)

- "PRISMA Day" (November 17th)

- Seminar and round table at the event at I.C Rita Levi Montalcini "Nate Sotto il Segno della Scienza" with my colleagues Edwige Pezzulli and Pia Astone

<https://sites.google.com/icmontalciniroma.edu.it/planetario/eventi-e-concorsi?authuser=0>

- Seminar in Rome for the "Daphne" association (October 10th): "I raggi gamma: facciamo luce sui resti di supernove e buchi neri con l'effetto Cherenkov"

<https://daphne.verne.app/event/?ekey=5o08y>

- "European Researcher Night" September 29th, 30:

- Organization of one of the INAF stands ("Astronomy frontiers")

- Seminar: "Lo spazio fa bene all'umanità. Sempre."

- Seminar: "Gamma-Ray Busters: a caccia di raggi gamma"

- Stand dedicated to gamma-ray astronomy and techniques (AGILE and ASTRI Mini-Array projects)

- Guide and Speaker at the "Astronomitaly" and "Rione Roma Tour" event: "L'immensità del Cielo di Roma" (August, 28th)

<https://www.comune.roma.it/web/it/evento.page?contentId=EVE1080925>

- Meeting with primary school Children in "Punto Luce – Save The Children" of Torre Maura (Roma) for the Scienza Insieme project (May 25th, 2023)

- I was one of the speakers at the "Pint of Science" Festival in Rome with the seminar "Gamma-ray

Busters: a caccia di Raggi Gamma" (May 23rd, 2023)

<https://pintofscience.it/event/gamma-ray-busters-alla-caccia-dei-raggi-gamma-provenienti-da-supernove-e-buchi-neri>

- I gave a seminar for the fifth high school students of ITC Lombardo Radice in Rome, named "L'Astrofisica: verso l'infinito e ritorno. Dalle sorgenti più energetiche alla nostra quotidianità"

- I gave an INAF seminar about "Gruppo Storie INAF" named "INAF and its ONE THOUSAND AND ONE STORIES"

https://www.youtube.com/watch?app=desktop&v=N4gg_IIToA

- Several activities within INAF-IAPS: project "Circuito Cinema", seminars at school, content organization of the "Macchine del Tempo" INAF exhibition at Rome in 2023 November

[2022]

- In the "Gruppo Storie" (I'm a member from 2020) of Edu-INAf (<https://edu.inaf.it/gruppo-storie/>) I'm involved in several activities those will be kept in the future:

. "Martina-Tremenda" podcast

(<https://edu.inaf.it/approfondimenti/astrokids/martina-tremenda-podcast/>)

. "Briciole Spaziali": a scientific column for childrens (<14 years)

(<https://edu.inaf.it/briciole-spaziali>)

- development of a Comics about PRISMA project (<http://www.prisma.inaf.it/>)

- articles and festival participation

(<https://edu.inaf.it/approfondimenti/scoperte/messaggero-delle-stelle-teatro/>)

- Several activities within INAF-IAPS: project "Circuito Cinema", seminars at school, content organization of the "Macchine del Tempo" INAF exhibition at Rome in 2023 October

- I became co-responsible of Dr Anna Wolter (IASF Milano) for the Outreach in the ASTRI MA project

[2021]

- "Festival della Scienza" (Genova): I talk about the ASTRI/CTA projects and the high-energy astrophysics

- "Researcher Night" September 24th: three different activities:

- Seminar: "Lo spazio fa bene all'umanità. Sempre."

- Laboratory: Planets in a Room

- Show: "Dove nessuno è mai giunto prima...ma gli scienziati SI!"

- "stARTrekking" (Rome), scientific outreach walking in Rome; event in the NET project, organized by INAF (several events during the year)

- Production of outreach and teaching material published online on EDU-INAf

(https://edu.inaf.it/autore_didattico/martina-cardillo/)

[2020]

- I became Co-coordinator of Dr Anna Wolter in the Italian ASTRI Mini-Array outreach team

- "Occhi sulla Luna" (Roma 3 University): IAPS-INAf project "Planets in a Room"

- Production of outreach and teaching material published online on EDU-INAf

- "Talenti per la Scienza" (Rome), one of the launch events for the "Notte Europea dei Ricercatori" in the NET project.

- "stARTrekking" (Rome), scientific outreach walking in Rome; event for the "Notte Europea dei Ricercatori" in the NET project, organized by INAF

- Two digital seminars during the Science week at the end of November:

• "Lo spazio fa bene all'umanità. Sempre."

<https://www.scienzainsieme.it/lo-spazio-fa-bene-allumanita-sempre/?fbclid=IwAR2ZHBwpl2Lmwg4xXlruB4IG-2CuGhVkJzWD30wQuo2fvJAAVUVSKaReshA>

- “L’astrofisica delle alte energie: verso l’infinito e oltre”

https://www.scienzainsieme.it/l-astrofisica-delle-alte-energie-verso-linfinito-e-ritorno/?fbclid=IwAR2w07LmWBj5zzD31aEUPiWY2-2SpoymsDKVkJXPR03zJRU8g_w6RxbkGqw

- I opened a Youtube Channel dedicated to astrophysics and space outreach. My video are used in the Edu-INAF page:

<https://www.youtube.com/piùspaziopertutti>

<https://edu.inaf.it/pillole-martina-cardillo/>

- Collaboration with several outreach social pages:

<https://www.astrospace.it/>

<https://www.missionescienza.it/>

- A column, “Bolle Spaziali”, in the web magazine “Verbum Press”:

https://www.verbumlandiart.com/n-2/?fbclid=IwAR0Q1BDm40Q_JhVO-17oTtILVNH0GIJomOmXr8UiQJeJ_akZgEw6FIGHfM

- I was a scientific guest in the program “Supernova Reloaded: Divulgazione e dintorni.” of the radio station “Border Radio”, speaking about Astrophysics and outreach

- I began a collaboration with the outreach company “Astronomitaly” with post, live videos and, when we could, as guide for the sky observation.

[2019]

- “Occhi su Marte” (Roma 3 University, Roma): IAPS-INAF project “Planets in a Room”
- “XX astronomy week”: teaching seminar at IAPS-INAF on the high energy astrophysics
- “Occhi sulla Luna” (Roma 3 University): IAPS-INAF project “Planets in a Room”
- “Researcher Night” (INAF-IAPS, Roma): telling about the satellites trajectory, and the gravitational field importance with a “Homemade Space-Time”, about the Solar System with the project “Planet in a Room” of Speak Science and about the High Energy Astrophysics with a seminar.
- “Maker Faire” (Fiera di Roma) as IAPS-INAF presenting the project “Planets in a Room” of Speak Science.
- “Isola della Sostenibilità” (ex Mattatoio, Roma) as IAPS-INAF: seminar “Lo spazio fa bene all’umanità. Sempre.”
- “Transito di Mercurio” (Tor Vergata University, Roma): seminar about solar system
- Beginning of my column, “A spazio con Marty”, in the radio program “Avanti Tutta” of the Radio Station “Radio Kaos Italy”, speaking about Astrophysics:
<https://www.radiokaositaly.com/trasmissioni/dirette/avanti-tutta/>
- I opened a Facebook page for Scientific Outreach with poems written in Roman
<https://www.facebook.com/RomaCaputAstri>
- I was a scientific guest in the program “Avanti Tutta” of the radio station “Radio Kaso Italy”, speaking about Astrophysics
- I spoke several times via telephone connection in the radio Station NSL program “Goodmorning Vietnam”, as “La Scienza Coatta” member, speaking about Science

[2018]

- “Researcher Night” at the INAF-IAPS of Rome telling about satellites trajectory and gravitational field importance

- I became an active member of writing and organizing group of “La Scienza Coatta”, an association that tells science ironically in roman dialect with intelligence, though the sociale media but also in live

events

[2017]

- I attended to the competition “STEM: femminile 26lural” with some girls of the Liceo Donatelli (Terni, Italy) and the teacher MariaGiovanni Fioretti.

- I was called by my high school professor Daniele Bulgarelli in order to talk about my work and my university experience in my old school Liceo Classico Statale Benedetto da Norcia

[2016]

- “Researcher Night” at the INAF-IAPS of Rome with an exhibition on Jupiter and the solar system
- Member of the Astronomy Olympics Italian committee.

[2014-2017]

- I was a guide for students and general public at the Osservatorio Astrofisico di Arcetri, within the sphere of Scientific education and communication activities

[2013]

- “Researcher Night” at the INAF-IAPS of Rome with a conference about AGILE satellite and high-energy astrophysics.

[2012]

- “Researcher Night” at the INAF-IAPS of Rome with a conference about high-energy astrophysics.

Other References

[2025]

Certified in First Aid and Automated External Defibrillator (AED) use – National and International Certification

[2024]

I’m the tutor of the PhD student Alan Sunny (2023-2026) with the PNRR fellowship “Particle Acceleration in our Galaxy in the new era of Cherenkov Telescopes”.

I referred two papers. One for “Advanced in Space Research” and another one for “Astronomy&Astrophysics”.

[2023]

- I’m a member of the SOC of the Meeting “AVENGe” located at Osservatorio Astronomico di Roma (INAF) in 29-31 May 2023: <https://indico.ict.inaf.it/event/2281/>

- I received one call for papers:

“Universe” for the Special Issue “Cosmic Rays and Dark Matter Detection”

[2022]

- I was a Co-I in the proposed Techno Grant INAF “INAF-SUP”, dedicated to creation of a common platform for data analysis and their reproducibility (PI: Francesco Visconti)

- I’m a member of the LOC and the SOC of the new Very High Energy Meeting “PASTO” located at Osservatorio Astronomico di Roma (INAF) in September 2022: <https://indico.ict.inaf.it/event/1785/>

- I received two Guest Editor Proposals:

- “Aerospace” for special issue “Aerospace Instrumentation”
- “Galaxies” for the Special issue “Observation Data Analytics under data-driven astronomy”

- I received two call for papers:

- "Applied Science" for the Special Issue "High_Energy_Multi-Messenger_Astrophysics_Latest_Research_and_Review"
- "Physics and Astronomy International Journal"

[2021]

- I was a shifter at the LST telescope at the Observatory of Roque de Los Muchachos (La Palma, Canarian Islands) between the end of August and half of September

- I received a proposal as Guest Editor for the open-access journal "Applied Sciences" for the Special Issue "Acceleration of Cosmic-Ray"

- I was a member of the TAC (Time Allocate Committee) of the MAGIC collaboration

[2020]

- I was designed for the "evaluation research portfolio" of a researcher

- I was the referee of several papers

- I received three Guest Editor Proposals:

- "Applied Science" for special issue "Astrophysics Geophysics Research and Applications"
- "Universe" for the Special issue "Dark Energy Accelerating Universe"
- "Universe" for the Special issue "Gamma-ray Astronomy"

[2019]

- Suitability at the public competition for a permanent position dedicated to young researchers at INAF

- I became an associated Scientist of the MAGIC collaboration

- I was the referee of several papers

[2018]

- Suitability with 75.5/90 at the public competition "Toward the SKA-CTA era: discovery, localization and physics of transient sources" at INAF-IAPS

- Collaboration with Dr. Andy Strong for a review work "Cosmic Rays around Supernova Remnants".

[2013]

- Collaboration with the team of Pasquale Blasi at the Arcetri Observatory (Florence)

[2012]

- I was at Dunsink Observatory (Dublin) in order to working with Felix Aharonian.

- I was the spokesperson of Science faculty of the Università di Roma Tor Vergata in a meeting about the idea of an European PhD, with the Italian Minister Profumo and with Luigi Berlinguer at the Europarlament in Bruxelles.

[2011]

- *Dublin Summer School on High Energy Astrophysics*, UCD (Dublin), Poster

[2009]

- Stage at the MPI-k in Heidelberg with Felix Aharonian team;

Communications and Telegrams

ASTRONOMER's TELEGRAMS (ATel)

(Visibili online sul sito www.astronomersteletgram.org)

GRB COORDINATES NETWORK (GCN)

(Visibili online sul sito <http://gcn.gsfc.nasa.gov>)

Luogo e data,
Roma,

Firma