Camilla Scolini | Curriculum Vitae

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Personal Information

Name and surname: Camilla Scolini
Birthdate: 26 September 1991
Nationality: Italian

Work address (teleworking from home):
Naamsesteenweg 61 01/01
B-3001 Leuven, Belgium

Academic experience

NASA Jack Eddy postdoctoral fellow — **Durham, NH, USA**
Institute for the Study of Earth, Oceans, and Space — *09/2020 – present*
University of New Hampshire

Postdoctoral researcher — **Leuven, Belgium**
Department of Mathematics, KU Leuven — *06/2020 – 09/2020*

University education

PhD in Mathematics — **Leuven, Belgium**
Department of Mathematics, KU Leuven — *10/2016 – 05/2020*
PhD thesis: *"Magnetised Coronal Mass Ejections: evolution from the Sun to 1 AU and geo-effectiveness"*
Supervisor: Prof. Stefaan Poedts, Co-Supervisor: Dr. Luciano Rodriguez
FWO Strategic Base Research PhD Fellowship (grant No. 1S42817N)

MSc in Physics (with honors) — **Trieste, Italy**
Department of Physics, University of Trieste — *10/2014 – 10/2016*
MSc thesis: *"Geo-effective Solar Events: Building Physical Scenarios from Triggering to Impact"*
Supervisor: Prof. Mauro Messerotti

BSc in Physics — **Trieste, Italy**
Department of Physics, University of Trieste — *10/2010 – 03/2014*
BSc thesis: *"Low-Energy Spectral Analysis of Solar Flares observed by the Fermi satellite"*
Supervisor: Prof. Francesco Longo, Co-Supervisor: Dr. Rachele Desiante

Awards and Honors

- Jack Eddy Postdoctoral Fellowship (2020 – 2022, award No. NNX16AK22G), awarded by the NASA Living With a Star program, Sep. 2020.
- Outstanding student poster award at the *2nd China–Europe Solar Physics Meeting*, May 2019.
- Strategic Base Research PhD Fellowship (2017 – 2020, award No. 1S42817N), awarded by the Research Foundation – Flanders (FWO), Jan. 2017.
- Outstanding university student progress prize, awarded by Fondazione Filantropica Ananian, Sep. 2016.

- Tier-1 (BrENIAC) Supercomputing Grant (1915 node days), Vlaams Supercomputer Centrum,

Jun. 2020.
- Travel grant for participation to *AGU Fall Meeting 2019*, Research Foundation - Flanders (FWO), Dec. 2019.
- Travel grant for participation to *16th European Space Weather Week*, ESWW LOC, Nov. 2019.
- Travel grant for participation to *SHINE Workshop 2019*, SHINE, Aug. 2019.
- Travel grant for participation to *SHINE Workshop 2019*, Research Foundation - Flanders (FWO), Aug. 2019.
- Travel grant for participation to *EGU General Assembly 2019*, European Geosciences Union, Apr. 2019.
- Tier-1 (BrENIAC) Supercomputing Grant (2303 node days), Vlaams Supercomputer Centrum, Mar. 2019.
- Travel grant for participation to *ISEST Workshop 2018*, COSTEP-VarSiti, Sep. 2018.
- Travel grant for participation to *Heliophysics Summer School 2018*, NASA Living With a Star program, Aug. 2018.
- Travel grant for participation to *13th International Conference on Substorms*, University of New Hampshire, Sep. 2017.
- Travel grant for participation to *IAU Symposium 335*, International Astronomical Union, Jul. 2017.
- Tier-1 (BrENIAC) Supercomputing Grant (665 node days), Vlaams Supercomputer Centrum, Jun. 2017.
- Travel grant for participation to the *International School on Space Science 2015*, Consorzio Interuniversitario per la Fisica Spaziale, Sep. 2015.

Peer-reviewed publications

1. S. Poedts, A. Lani, **C. Scolini**, C. Verbeke, N. Wijsen, G. Lapenta, E. Chané, R. Van der Linden, L. Rodriguez, P. Vanlommel, R. Vainio, A. Afanasiev, E. Kilpua, J. Pomoell, A. Aran, E. Clarke, A. Thomson, A. Rouillard, R. Pinto, A. Marchaudon, B. Heber, A. Kochanov, J. Raeder, J. Depauw (2020): *"EUropean Heliospheric FORecasting Information Asset 2.0"*. In: *Journal of Space Weather and Space Climate* (in press). DOI: 10.1051/swsc/2020055.
2. L. Rodriguez, **C. Scolini**, M. Mierla, A. N. Zhukov, M. J. West (2020): *"Space weather monitor at the L5 point: a case study of a CME observed with STEREO B"*. In: *Space Weather*, 18, 10. DOI: 10.1029/2020SW002533.
3. I. C. Jebaraj, J. Magdalenić, T. Podladchikova, **C. Scolini**, J. Pomoell, A. Veronig, K. Dissauer, V. Krupar, E. K. J. Kilpua, S. Poedts (2020): *"Can radio triangulation help us understand the origin of two subsequent type II radio bursts?"*. In: *Astronomy & Astrophysics*, 639, A56. DOI: 10.1051/0004-6361/201937273.
4. S. Poedts, A. Kochanov, A. Lani, **C. Scolini**, C. Verbeke, S. Hosteaux, E. Chané, H. Deconinck, N. Mihalache, F. Diet, D. Heynderickx, J. De Keyser, E. De Donder, N. B. Crosby, M. Echim, L. Rodriguez, R. Vansintjan, F. Verstringe, B. Mampaey, R. Horne, S. Glauert, P. Jiggens, R. Keil, A. Glover, G. Deprez, J.-P. Luntama (2020): *"The Virtual Space Weather Modelling Centre"*. In: *Journal of Space Weather and Space Climate*, 10, 14. DOI: 10.1051/swsc/2020012.
5. **C. Scolini**, E. Chané, J. Pomoell, L. Rodriguez, S. Poedts (2020): *"Improving predictions of high-latitude Coronal Mass Ejections throughout the heliosphere"*. In: *Space Weather*, 18, 3. DOI: 10.1029/2019SW002246.
6. **C. Scolini**, E. Chané, M. Temmer, E. K. J. Kilpua, K. Dissauer, A. M. Veronig, E. Palmerio, J. Pomoell, M. Dumbović, J. Guo, L. Rodriguez, S. Poedts (2020): *"CME–CME Interactions as Sources of CME Geoeffectiveness: the Formation of the Complex Ejecta and Intense Geomagnetic*

Storm in 2017 Early September". In: *The Astrophysical Journal Supplement Series*, 247, 1. DOI: 10.3847/1538-4365/ab6216.

7. J. Hinterreiter, J. Magdalenić, M. Temmer, C. Verbeke, I. C. Jebaraj, E. Samara, E. Asvestari, S. Poedts, J. Pomoell, E. K. J. Kilpua, L. Rodriguez, **C. Scolini**, A. Isavnin (2019): *"Testing the background solar wind modelled by EUHFORIA"*. In: *Solar Physics*, 294, 170. DOI: 10.1007/s11207-019-1558-8.
8. **C. Scolini**, L. Rodriguez, M. Mierla, J. Pomoell, S. Poedts (2019): *"Observation-based modelling of geo-effective Coronal Mass Ejections with EUHFORIA"*. In: *Astronomy & Astrophysics*, 626, A122. DOI: 10.1051/0004-6361/201935053.
9. E. Palmerio, **C. Scolini**, D. Barnes, J. Magdalenić, M. J. West, A. N. Zhukov, L. Rodriguez, M. Mierla, S. W. Good, D. E. Morosan, E. K. J. Kilpua, J. Pomoell, S. Poedts (2019): *"Multipoint Study of Successive Coronal Mass Ejections Driving Moderate Disturbances at 1 AU"*. In: *The Astrophysical Journal*, 878, 1. DOI: 10.3847/1538-4357/ab1850.
10. **C. Scolini**, C. Verbeke, S. Poedts, E. Chané, J. Pomoell, F. P. Zuccarello (2018): *"Effect of the initial shape of coronal mass ejections on 3-D MHD simulations and geoeffectiveness predictions"*. In: *Space Weather*, 16. DOI: 10.1029/2018SW001806.
11. **C. Scolini**, M. Messerotti, S. Poedts, L. Rodriguez (2018): *"Halo Coronal Mass Ejections during Solar Cycle 24: reconstruction of the global scenario and geo-effectiveness"*. In: *Journal of Space Weather and Space Climate*, 8, A09. DOI: 10.1051/swsc/2017046.

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Papers under review/in preparation

1. R. M. Winslow, **C. Scolini**, N. Lugaz, A. B. Galvin (2020): *"The effect of stream interaction regions on ICME structures observed in longitudinal conjunction"*. Submitted to: *The Astrophysical Journal*.
2. E. Samara, R. Pinto, J. Magdalenić, V. Jerčić, **C. Scolini**, N. Wijsen, L. Rodriguez, S. Poedts (2020): *"Implementing the MULTI-VP coronal model in EUHFORIA: results and comparisons with the WSA coronal model"*. Submitted to: *Astronomy & Astrophysics*.
3. M. Temmer, L. Holzknecht, M. Dumbović, B. Vršnak, N. Sachdeva, S. G. Heinemann, K. Dissauer, **C. Scolini**, E. Asvestari, A. M. Veronig, S. J. Hofmeister (2020): *"Deriving CME density from remote sensing data and comparison to in-situ measurements"*. Submitted to: *Journal of Geophysical Research: Space Physics*.
4. **C. Scolini**, S. Dasso, L. Rodriguez, A. N. Zhukov, S. Poedts (2020): *"Exploring the radial evolution of interplanetary Coronal Mass Ejections using EUHFORIA"*. To be submitted to: *Astronomy & Astrophysics*.

Invited Talks (as First Author)

1. **Invited talk** at *43rd COSPAR Scientific Assembly*, Sydney, Australia, Jan. 2021 (*upcoming*).
2. **Invited seminar** at Università della Calabria, Arcavacata di Rende, Italy, Jan. 2021 (*upcoming*).
3. **Invited seminar** at the *Student Day of the 62nd Annual Meeting of the APS Division of Plasma Physics*, held online, Nov. 2020 (*upcoming*).
4. **Invited seminar** at the University of New Hampshire, Durham, NH, USA, Oct. 2020.
5. **Invited talk** at *EGU General Assembly 2020*, Vienna, Austria, May 2020 (*held online due to*

COVID-19).
6. **Invited talk** at *China-Belgium Symposium on Solar Physics*, Leuven, Belgium, Feb. 2020 (*meeting cancelled due to COVID-19*).
7. **Invited seminar** at Royal Observatory of Belgium, Brussels, Belgium, Jan. 2020.
8. **Invited seminar** at University of Graz, Graz, Austria, Sep. 2019.
9. **Scene setting talk** at *SHINE workshop 2019*, Boulder, CO, USA, Aug. 2019.
10. **Invited seminar** at NASA Goddard Space Flight Center, Greenbelt, MD, USA, Aug. 2019.
11. **Invited seminar** at Johns Hopkins University Applied Physics Laboratory, Laurel, MD, USA, Jul. 2019.
12. **Invited seminar** at Centre for mathematical Plasma Astrophysics, KU Leuven, Leuven, Belgium, Jan. 2019.
13. **Invited talk** at *15th European Space Weather Week*, Leuven, Belgium, Nov. 2018.
14. **Invited seminar** at Royal Observatory of Belgium, Brussels, Belgium, Nov. 2018.
15. **Invited talk** at *ISEST 2018 Workshop*, Hvar, Croatia, Sep. 2018.
16. **Invited seminar** at Royal Observatory of Belgium, Brussels, Belgium, Mar. 2017.

Contributed Talks and Posters (as First Author)

1. **Poster** at *AGU Fall Meeting 2020*, held online, Dec. 2020.
2. **Poster** at *European Space Weather Symposium 2020*, held online, Nov. 2020.
3. **Poster** at *AGU Fall Meeting 2019*, San Francisco, CA, Dec. 2019.
4. **Talk** at *16th European Space Weather Week*, Liège, Belgium, Nov. 2019.
5. **Poster** at *16th European Space Weather Week*, Liège, Belgium, Nov. 2019.
6. **Poster** at *SHINE workshop 2019*, Boulder, CO, USA, Aug. 2019.
7. **Poster** at *2nd China-Europe Solar Physics Meeting*, Hvar, Croatia, May 2019.
8. **Talk** at *EGU General Assembly 2019*, Vienna, Austria, Apr. 2019.
9. **Poster** at *AGU Fall Meeting 2018*, Washington DC, USA, Dec. 2018.
10. **Talk** at *15th European Space Weather Week*, Leuven, Belgium, Nov. 2018.
11. **Talk** at *15th International Solar Wind Conference*, Brussels, Belgium, Jun. 2018.
12. **Talk** at *Triennial Earth-Sun Summit 2018*, Leesburg, VA, USA, May 2018.
13. **Poster** at *EGU General Assembly 2018*, Vienna, Austria, Apr. 2018.
14. **Poster** at *AGU Fall Meeting 2017*, New Orleans, LA, USA, Dec. 2017.
15. **Poster** at *14th European Space Weather Week*, Ostende, Belgium, Dec. 2017.
16. **Poster** at *25th International Conference on Numerical Simulation of Plasmas*, Leuven, Belgium, Sep. 2017.
17. **Poster** at *13th International Conference on Substorms*, Portsmouth, NH, USA, Sep. 2017.
18. **Poster** at *IAU Symposium 335 - Space Weather of the Heliosphere*, Exeter, UK, Jul. 2017.
19. **Poster** at *13th European Space Weather Week*, Ostende, Belgium, Nov. 2016.

Teaching and Mentoring

- Teaching Assistant in the course I0O64A *"Calculus and Analysis"*, KU Leuven (academic years 2016 – 2017, 2017 – 2018, 2018 – 2019, 2019 – 2020).
- Teaching Assistant in the course G0B28A *"Plasma Physics of the Sun"*, KU Leuven (academic year 2018 – 2019).
- Co-supervisor of bachelor internship project of A. Maharana (visiting from IISER Pune, India), KU Leuven (Jun. – Jul. 2018).

Programming Skills

Programming languages: Python, Fortran, Bash scripting
Data visualisation tools: Visit, Tecplot
Image processing: IDL, SolarSoft, SunPy
HPC experience: extensive experience with massively parallel numerical simulations on Tier-1 (BrENIAC) and Tier-2 (ThinKing and Genius) super-clusters at KU Leuven, and on the Trillian supercomputer (University of New Hampshire) – using the EUHFORIA and OpenGGCM models.

Other Professional Activities

- Reviewer of research articles for several international journals, including: *The Astrophysical Journal Letters*, *Journal of Geophysical Research: Space Physics*, *Journal of Space Weather and Space Climate* (2019 –)
- International Space Science Institute (ISSI), Early Career Scientist team member, International Team #479: *"Magnetic open flux and solar wind structuring of interplanetary space"* (2019 –)
- International Space Science Institute (ISSI), Early Career Scientist team member, International Team #480: *"Understanding Our Capabilities In Observing And Modeling Coronal Mass Ejections"* (2019 –)
- Deputy manager of the EU H2020-SPACE-2019 (SU-SPACE-22-SEC-2019 – Space Weather) *"EUHFORIA 2.0"* project (Project No. 870405), involving a consortium of 11 EU institutions (Dec. 2019 – Sep. 2020)
- Co-convener of the *"Interplanetary CMEs & Solar Particle Events"* session at the *European Space Weather Symposium 2020*, Nov. 2020
- Co-moderator of the *International Space Weather Action Teams (ISWAT)* Cluster *H1: Heliospheric magnetic field and solar wind* (2019 –)
- Co-organizer of the *COSPAR ISWAT Inaugural Working Meeting*, held in Port Canaveral, FL, USA, Feb. 2020

Languages and hobbies

Languages: Italian (native), English (full professional proficiency), French (B1)
Hobbies: Orienteering

Contacts for Academic References

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Prof. Réka M. Winslow
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Leuven, Belgium
November 4, 2020