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Publication list

All manuscripts are available on the webpage

https://homepages.cwi.nl/~camporea/publications.html

Published or Accepted for publication

1. Pezzi, O., Cozzani, G., Califano, F., Valentini, F., Guarrasi, M., **Camporeale, E**., & Veltri, P. (2019). ViDA: a Vlasov-DArwin solver for plasma physics at electron scales.
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2. **Camporeale, E.** (2019). The challenge of machine learning in space weather nowcasting and forecasting. *Reviews of Geophysics*, *Grand Challenges in the Earth and Space Sciences*
   https://doi.org/10.1029/2018SW002061

3. **Camporeale, E.**, Chu, X., Agapitov, O. V., & Bortnik, J. (2019). On the generation of probabilistic forecasts from deterministic models.
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4. Pezzi, O., Valentini, F., Servidio, S., **Camporeale, E.**, & Veltri, P. (2019) Fourier–Hermite decomposition of the collisional Vlasov–Maxwell system: implications for the velocity-space cascade. *Plasma Physics and Controlled Fusion*, 61(5), 054005.
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5. M. Gruet, M. Chandorkar, A. Sicard, **E. Camporeale** (2018)
   Multiple hours ahead forecast of the Dst index using a combination of Long Short-Term Memory neural network and Gaussian Process
   Space Weather, 16, 11 (1882-1896)
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6. J. Johnson, S. Wing, **E. Camporeale** (2018)
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7. **E. Camporeale**, L. Sorriso-Valvo, F. Califano, A. Retinò (2018)
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8. **E. Camporeale**, A. Carè, J. Borovsky (2017)
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   J. Geophys. Res. 122, 10,910–10,920
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9. M. Chandorkar, **E. Camporeale**, S. Wing (2017)
   Probabilistic Forecasting of the Disturbance Storm Time Index: An Autoregressive Gaussian Process approach
   Space Weather, 15, 1004
   http://onlinelibrary.wiley.com/doi/10.1002/2017SW001627

10. **E. Camporeale**, A. Agnihotri, C. Rutjes (2017)
    Adaptive selection of sampling points for uncertainty quantification,
    Int. J. Uncertainty Quant., 7, 4
    https://doi.org/10.1615/Int.J.UncertaintyQuantification/2017020027

11. **E. Camporeale** and C. Tronci (2017)
    Electron inertia and quasi-neutrality in the Weibel instability
    J. Plasma Phys., 83
    https://doi.org/10.1017/S0022377817000381

12. **E. Camporeale** and D. Burgess (2017)
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13. **E. Camporeale**, Y. Shprits, M. Chandorkar, A. Drozdov, S. Wing (2016)
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    *Phys. Plasma*s. 23, 022103 – **Featured article in the February 2016 Issue**
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17. **E. Camporeale**, G.L. Delzanno, B.K Bergen, J.D. Moulton (2016)
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18. **E. Camporeale** and G. Zimbardo (2015)
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23. C. L. Vasconez, F. Valentini, **E. Camporeale,** and P. Veltri (2014)
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Hybrid Vlasov-MHD models: Hamiltonian vs. non-Hamiltonian
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28. **E. Camporeale**, S. Zaharia, G.L. Delzanno, J. Koller (2013)
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33. **E. Camporeale** (2012)
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34. **E. Camporeale** and D. Burgess (2011)
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35. **E. Camporeale**, T. Passot, and D. Burgess (2010) Implications of a non-modal linear theory to the marginal stability and the dissipation of fluctuations in the solar wind *Astrophys. J.,* 715, 260 http://iopscience.iop.org/0004-637X/715/1/260

36. **E. Camporeale** and D. Burgess (2010)
    Electron temperature anisotropy in an expanding plasma: Particle-in-Cell simulations *Astrophys. J.,* 710, 1848-1856
    http://iopscience.iop.org/0004-637X/710/2/1848

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    Transient growth in stable collisionless plasma
    Phys. Plasmas. 16, 030703
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    Electron Firehose Instability: kinetic linear theory and 2D Particle-In-Cell simulations
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40. **E. Camporeale** and G. Lapenta (2005) Model of bifurcated current sheets in the Earth's magnetotail: equilibrium and stability *J. Geophys. Res*., 110, A07206 http://www.agu.org/pubs/crossref/2005.../2004JA010779.shtml

Chapters in books or conference proceedings (refereed)

41. A. Carè and **E. Camporeale** (2018)
    Regression, *in Machine Learning Techniques for Space Weather (eds. Camporeale, Wing, Johnson)*
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42. S. Wing, J. Johnson, **E. Camporeale**, and G. Reeves (2018)
    Untangling the solar wind drivers of radiation belt: an information theoretical approach, *in Machine Learning Techniques for Space Weather (eds. Camporeale, Wing, Johnson)*
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43. M. Chandorkar and **E. Camporeale** (2018)
    Probabilistic Forecasting of Geomagnetic Indices using Gaussian Process Models, *in Machine Learning Techniques for Space Weather (eds. Camporeale, Wing, Johnson)*
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44. S. Wing, J. Johnson, **E. Camporeale** (2017)
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45. S. Markidis, **E. Camporeale**, D. Burgess, Rizwan-uddin, G. Lapenta (2009) Parsek2D: An Implicit Parallel Particle-in-Cell Code *Numerical Modeling of Space Plasma Flows: ASTRONUM – 2008* http://adsabs.harvard.edu/full/2009ASPC..406..237M

Books edited

1. **E. Camporeale,** S. Wing, J. Johnson (2018)
   Machine Learning techniques for Space Weather, *Elsevier*
   https://www.elsevier.com/books/machine-learning-techniques-for-space-weather/camporeale/978-0-12-811788-0

Meeting Reports

1. **E. Camporeale**, S. Wing, J. Johnson, C. Jackman, R. McGranaghan (2018)
   Space Weather in the Machine Learning era: a multi-disciplinary approach
   Space Weather, doi: 10.1002/2017SW001775
   http://onlinelibrary.wiley.com/doi/10.1002/2017SW001775/abstract
2. **E. Camporeale**, S. Wing, J. Johnson (2018)
   Space Weather in the Machine Learning era
   Eos, 99, https://doi.org/10.1029/2018EO101897

Under review or in preparation

1. **E. Camporeale,** Accurate and Calibrated Parametric Model for Variance Estimation, *under review* https://homepages.cwi.nl/~camporea/papers/camporeale_nips_2018.pdf
2. R. Sharma, A. Care, **E. Camporeale**, A robust adaptive sampling strategy for multi-dimensional uncertainty quantification, *in preparation*

Publication statistics (updated July 2018)

45 papers published (23 as first author)
More than 40 co-authors
List of journals:

- *Space Weather, Journal of Geophysical Research, Review of Geophysics, Astrophysical Journal, Geophysical Research Letter, Space Science Review, Annales Geophysicae;*
- *Physical Review Letter, Physics of Plasmas, Plasma Physics and Controlled Fusion, Plasma Sources Science and Technology, Journal of Plasma Physics, IEEE Transactions on Plasma Science;*
- *Computer Physics Communication, Journal of Computational Physics, Geoscience Model Development;*
- *International Journal of Uncertainty Quantification.*