



Mr Simone Mancini

Area of research

Physics-based Forecasting of Earthquake Sequences (Supervisor: Dr Max Werner)

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Summary

My research covers the development of testable short-term earthquake forecast models that describe the spatiotemporal evolution of seismic sequences. Earthquake forecasting is a trending topic of research both as a potential tool for more informed decision making during early post-disaster phases (e.g. for civil protection purposes) and as a testing ground for different hypotheses on which mechanisms drive earthquake triggering and cascading. I particularly focus on the improvement of physics-based and empirical forecasts performance, which I evaluate by means of standard statistical metrics in both pseudo-prospective and retrospective mode.

Biography

BSc in Geological Sciences from Roma Tre University, 2011

Msc in Geodynamics and Volcanology from Sapienza University of Rome, 2014

Civil Service at Presidency of the Council of Ministers – Italian Department of Civil Protection, 2015-2016

Research Fellowship at Istituto Nazionale di Geofisica e Vulcanologia (Rome) - National Earthquake Centre, 2016

Keywords

- Short-term earthquake forecasting
- Earthquake triggering
- Statistical seismology

Memberships

Organisations

[School of Earth Sciences](#)

Postgraduate students

- [Research students \(PhD and MScR\)](#)

Research groups

- [Geophysics](#)

Research themes

- [Crustal Magmatism, Volcanism and Geological Risk](#)

Recent publications

- Mancini, S, Segou, M, Werner, MJ & Cattania, C, 2019, '[Improving Physics-Based Aftershock Forecasts During the 2016–2017 Central Italy Earthquake Cascade](#)'. *Journal of Geophysical Research: Solid Earth*, vol 124., pp. 8626-8643
- Moretti, M, Pondrelli, S, Margheriti, L, Abruzzese, L, Anselmi, M, Arroucau, P, Baccheschi, P, Baptie, B, Bonadio, R, Bono, A, Bucci, A, Buttinelli, M, Capello, M, Cardinale, V, Castagnozzi, A, Cattaneo, M, Cecere, G, Chiarabba, C, Chiaraluca, L, Cimini, GB, Cogliano, R, Colasanti, G, Colasanti, M, Criscuoli, F, D'Alema, E, D'Alessandro, A, D'Ambrosio, C, Danecek, P, De Caro, M, De Gori, P, Delladio, A, De Luca, G, De Luca, G, Demartin, M, Di Nezza, M, Di Stefano, R, Falco, L, Fares, M, Frapiccini, M, Frepoli, A & others 2017, '[SISMIKO: emergency network deployment and data sharing for the 2016 central Italy seismic sequence](#)'. *Annals of Geophysics*, vol 59.

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