NICOLA SCAFETTA

Ph.D. in Physics (complex systems, 2001), University of North Texas. Associate Professor at the Department of Earth Sciences of the University of Naples Federico II, in S.S.D. GEO / 12 (Meteorology, Climatology and Oceanography). I am associated to the Meteorological Observatory of San Marcellino of the University of Naples Federico II.

I have studied and worked as researcher and as visiting professor at at the physics departments of the University of North Texas, Duke University, University of North Carolina at Chapel Hill, University of North Carolina at Greensboro, and at Elon University. Member of the Active Cavity Radiometer Irradiance Monitor (ACRIM, JPL-NASA, California, USA) that studies the total solar irradiance.

I have authored 107 international scientific publications including two books and 88 peer reviewed articles. I have served as a reviewer for about 50 international journals in physics and geophysics, including Nature Communications, Physical Review Letters, Earth-Science Reviews, Climate Change, Climate Dynamics, and Journal of Atmospheric and Solar-Terrestrial Physics.

I worked in the field of complex systems and statistical physics with applications mostly in the field of climatology and of the environment. My studies have investigated the following issues: interpretation and predictive models concerning climate change, climatic influences due to astronomical and solar forcings, solar variability and celestial mechanics, climatic zonation of regions and cities (e.g. Naples), interpretation and predictive models of extreme weather events linked to floods, droughts, urban smog crises, etc., climatological and meteorological effects on global and local seismic and volcanic activity (e.g. Mt. Vesuvius), fractal analysis and non-linear systems.

H index. (Scopus) = 28;
H index (ISIWEB) = 25;
H index (Google Scholar) = 33

Personal Web-site: https://www.docenti.unina.it/NICOLA.SCAFETTA
Meteorological Observatory: http://www.meteo.unina.it/
Publications (Research Gate): https://www.researchgate.net/profile/Nicola_Scafetta
Research Topics: http://www.meteo.unina.it/tematiche-di-ricerca

Publication examples:

Scafetta, N., 2010. Empirical evidence for a celestial origin of the climate oscillations and its implications. Journal of Atmospheric and Solar-Terrestrial Physics 72, 951-970. DOI: 10.1016/j.jastp.2010.04.015

Scafetta, N., 2013. Discussion on climate oscillations: CMIP5 general circulation models versus a semiempirical harmonic model based on astronomical cycles. Earth-Science Reviews 126, 321-357. DOI: 10.1016/j.earscirev.2013.08.008

Scafetta, N., 2014. Multi-scale dynamical analysis (MSDA) of sea level records versus PDO, AMO, and NAO indexes. Climate Dynamics 43, 175-192. DOI: 10.1007/s00382-013-1771-3

Scafetta, N., Milani, F., Bianchini, A., Ortolani, S.: 2016. On the astronomical origin of the Hallstatt oscillation found in radiocarbon and climate records throughout the Holocene. Earth-Science Reviews 162, 24–43. DOI: 10.1016/j.earscirev.2016.09.004

Fortelli, A., Scafetta, N., Mazzarella, A.: 2016. Influence of synoptic and local atmospheric patterns on PM10 air pollution levels: a model application to Naples (Italy). Atmospheric Environment 143, 218-228. DOI: 10.1016/j.atmosenv.2016.08.050

Main research lines currently underway:

1) Characterization and prediction of climate change on global, local and urban scales.
2) Interpretation and modeling of extreme meteorological phenomena, atmospheric pollution and floods.