

# Cristiano Fidani

## Contact Details

Ministero dell'Istruzione, dell'Università e della Ricerca  
Via Tusicum, 06019 Umbertide PG, Umbria, Italy, <http://www.campusdavinci.edu.it/>  
Tel: (+39) 075 941 3357, E-mail: [c.fidani@virgilio.it](mailto:c.fidani@virgilio.it)

## Teaching Experiences

2017/2020 Teaching experience at undergraduate schools in: *Mathematics and physics*  
2002/2003 Teacher at CEPU for graduate school students in: *Mathematical Analysis I and II*  
1997/1999 Teaching experience at undergraduate schools in: *Mechanics, Electro-Technique, Electronics, Digital Electronics*

## Professional Experience

2015/2017 SARA electronics, Perugia, Italy. *Theory, hardware, software and applications for seismology*  
2012/2015 Seismic Observatory "Andrea Bina" of Perugia, Italy. Project on: *A new type of meteorological instrument*  
2011/2012 Anglia Ruskin University, Cambridge, UK. Support for a PhD on: *Animal behaviour observed with earthquakes, experimental strategies*  
2010/2011 National Institute of Nuclear Physics, Perugia, Italy. *Correlation data analysis between cosmic ray bursts and geophysical effects*  
2009/2010 National Institute of Nuclear Physics, Perugia, Italy. *Correlation algorithm development to study NOAA data and seismic phenomena*  
2009/2009 SERMS, Terni, Italy. *Study of the seismic effect perception from the L'Aquila population*  
2008/2009 National Institute of Nuclear Physics, Perugia, Italy. *Sampex data analysis and correlations between cosmic ray particle bursts and geophysical effects*  
2007/2007 National Institute of Nuclear Physics, Perugia, Italy. *Algorithm development to study the Van Allen Belts stability*  
2006/2007 National Institute of Nuclear Physics, Perugia, Italy. *ASI-LUNA project to propose scientific experiments on the Moon*  
2006/2007 Agenzia Spaziale Italiana, Luna project, Perugia, Italy. *Simulation of a calorimeter for the cosmic rays on the moon*  
2005/2007 Italian Committee for Project Hessdalen, Bologna, Italy. *Scientific support for physical evaluation and hypotheses*  
2004/2005 National Institute of Geophysics and Vulcanology, L'Aquila, Italy. *Electromagnetic emissions linked to tectonic and volcanic activity*  
2003/2004 National Laboratory of Gran Sasso, L'Aquila, Italy. *Development of calculus methodologies in the seismological fields on the parallel calculator IBM pSeries 670*  
2002/2003 Camerino University, Camerino, Italy. *Study of the effects of lateral and radial non-homogeneity on co-seismic superficial deformations*  
2001 Camerino University, Camerino, Italy. *Penning Traps*  
2001 Camerino University and F.lli Guzzini Spa, Recanati, Italy. *Deposition of thin metal films on polymeric surfaces*

## Education

2002 Ph.D. in Physics, Camerino University, with final thesis entitled: *Error probability in non-linear dispersive optical fibres*  
1999 Hiking Guide  
1997 Military Service  
1996 Degree in Physics, Camerino University, with final thesis entitled: *Signal to noise ratio in non-linear optical fibres having third order susceptibilities*  
1989 Diploma in Electronics, ITIS Montani, Fermo, Italy

## Professional skills

Operating systems: UNIX, Ubuntu, Macintosh, Windows 9x, XP, VISTA, 7, 8, 10

Software: Word, Office, LaTeX, Excel, Origin, Mathematica, Matlab, Maple, Octave, Spectrumlab, Root, Word Press, Spice, Seismowin, QGis, Surfer, PicoScope

Programming: Monte Carlo simulations in Fortran and C, Okada direct model of co-seismic deformations from the fault geometry; Inversion algorithms on parallel calculator with Adaptive Simulated Annealing and Neighbourhood Algorithm; N-tuple data analysis in Fortran, HBOOK Cern libraries; Geomagnetic models in Fortran, IGRF12; Monte Carlo simulations in C++ with Geant4; Orbital motion and changes in the coordinates of the Earth, the Moon, Planets and their tidal effects; calculus of the Total Harmonic Distortion, ray propagation in a stratified media, pixel recognition, wave peaking, HVSR, fractal dimension and Hurst exponent in Basic and Visual Basic

Electronics: 1) component knowledge; 2) soldering; 3) servicing and testing electronic circuits; 4) electric field meter realisation; 5) magnetic induction meter realisation; 6) electronic project building; 7) printed circuit board realisation; 8) radio receiver and transmitter realisation; 9) GPS rx adaptation; 10) serial, parallel and USB ports I/O; 11) power supply realisation; 12) digital electronics experiences; 13) computer hardware; 14) recycling of electronics

Theory of electromagnetic interaction with matter: electric and magnetic constants in linear and non-linear medium as well as electromagnetic waves in solids, gasses and liquids; quantum theory of the electromagnetic field; quantum theory of atom-photon interaction; charged particles in the electromagnetic field; Van Allen Belts; ionospheric processes; atmospheric electric circuit, waves

in the crust, ellipticity curves in a stratified medium with dissipation

Database: NOAA and SAMPEX satellite statistical data analysis and verify of the correlation between particle bursts and seismic activity obtained in previous works

Test beam: participation at the Frascati National Laboratory to test the feasibility of the AIGLON particle detector dedicated to the study of earthquakes from satellites

### Professional Projects

2019 - present Extension of the Central Italy Electromagnetic Network to monitor ULF and ELF magnetic fields in six station and realization of a mu metal core magnetometer

2013 - 2016 Project financed by the Umbria Region on a meteorological instrument patented as ELECTRODYNAMIC PLUVIOMETER; the prototype development and experimentation were carried out at the "A. Bina" Observatory in Perugia

2011 Collaborative Project LOTHAR, FP7-ENV-2012-two-stage, proposes a focused effort on continuous monitoring of processes at the ground-to-air and ground-to-water interfaces around active seismic zones combined with concomitant monitoring of the seismic activity as well as electromagnetic and related phenomena

2008 - present An analysis is being performed on the CIEN data to compare them to earthquakes, meteorology, atmospheric transient luminous phenomena and ionospheric phenomena

2007 - present NOAA satellite statistical data analysis in adiabatic coordinates to search a correlation between particle bursts and seismic activity, a result was obtained which was in agreement with previous works

2006 - 2016 Constitution of the CIEN to study ELF and VLF electric field in a seismic area, with 16 operative stations in 2015

2006 - 2008 A recording system for CIEN data was realised by personal computer

2003 - 2007 Realisation of CIEN instruments and their further enhancement through experimentation

2000 - 2005 Historic-bibliographical research to determine the best type of electromagnetic monitoring system in ULF, ELF, VLF and LF bands in order to fully record and carry out spectrum analyses and compare geophysical phenomena

### Patents

*Electrodynamic Pluviometer* No. 102016000077834; deposited on July 25, 2016; approved on January 31, 2019. A large range of rainfall levels evaporations free are now measurable through this invention which realise the measurements with resolutions of seconds and by no-mechanical parts. This small pluviometer as compared as the currently used, is a full solid state device.

### Referred Publications

C. Fidani, Probability, Causality and False Alarms Using *Correlations Between Strong Earthquakes and NOAA High Energy Electron Bursts*, Annals of Geophysics, Vol. 62, No. 1, 1-14, 2019.

C. Fidani, *Improving Earthquake Forecasting by Correlations Between Strong Earthquakes and NOAA Electron Bursts*, TAO, Vol. 29, No. 2, 117-130, 2018.

C. Fidani, W. Balderer and F. Leuenberger, *The Possible Influences of the 2012 Modena Earthquakes on the Fluorescence Spectra of Bottled Mineral Water*, Hydrology Current Research, 8:4, 288, 2017.

C. Fidani and D. Marcelli, *Ten Years of the Central Italy Electromagnetic Network (CIEN) Continuous Monitoring*, Open Journal of Earthquake Research, 6, p. 73-88, 2017

C. Fidani, *Particle precipitation prior to large earthquakes of both the Sumatra and Philippine Regions: a statistical analysis*, Journal of Asian Earth Science, 114, p. 384-392, 2015

C. Fidani and G. Martinelli, *A Possible Explanation for Electric Perturbations Recorded by the Italian CIEN Stations Before the 2012 Emilia Earthquakes*, Bollettino di Geofisica Teorica Applicata, 56, n. 2, p. 211-226, June 2015

C. Fidani and M. de Crescenzi, *Morphology Analysis of Cu Film Fractures in Sandwiched Methylmethacrylate Plates*, Materials Science, 21(2), p. 220-225, 2015

G. de Liso and C. Fidani, *Electrical Charges Associated with Sky Darkening and the Turin Shroud*, International Journal of Scientific Research, 4(12), p. 2790-2793, 2014

C. Fidani, F. Freund and R. Grant, *Cows Come Down from the Mountains before the (Mw = 6.1) Earthquake Colfiorito in September 1997; a Single Case Study*, Animals, 4, p. 292-312, 2014

G. de Liso, C. Fidani and A. Viotto, *Multi-parametric monitoring system of associated seismic phenomenology and unusual animal behaviour in Western Piedmont*, Advances in Research, 2(6), p. 303-319, 2014

G. de Liso and C. Fidani, *Seismic Precursory Phenomenology in Unusual Animal Behaviour in Val Pellice, Western Piedmont, in Comparison with Anomalies of some physical Parameters*, Open Journal of Earthquake Research, 3, p. 30-42, 2014

G. de Liso, C. Fidani and A. Viotto, *Unusual animal behaviour before earthquakes and multiple parameter monitoring in Western Piedmont*, Earth Science, 3(1), p. 14-25, 2014

- C. Fidani, *Biological Anomalies around the 2009 L'Aquila Earthquake*, *Animals*, 3, p. 693-721, 2013
- X. Zhang, C. Fidani, J. Huang, X. Shen, Z. Zeren and J. Qian, *Burst increases of precipitating electrons recorded by the DEMETER satellite before strong earthquakes*, *NHESS*, n. 13, p. 197-209, 2013
- C. Fidani, *The Raffaele Bendandi earthquake warnings based on planetary positions*, *New Concepts in Global Tectonics Newsletter*, n. 65, p. 47-54, December, 2012
- C. Fidani, R. Battiston, W. Burger and L. Conti, *A study of NOAA particle flux sensitivity to solar activity and strategies to search for correlations among satellite data and earthquake phenomena*, *Int. J. Rem. Sensing*, 33, n. 15, p. 4796-4814, 10 August 2012
- C. Fidani, *Statistical and spectral properties of the L'Aquila EQL in 2009*, *Bollettino di Geofisica Teorica Applicata*, 53, n. 1, p. 135-146, March 2012
- C. Fidani, *The Central Italy Electromagnetic Network and the 2009 L'Aquila earthquake: observed electric activity*, *geosciences*, 1, p. 3-25, December 2011
- G. Ambrosi, R. Battiston, W. J. Burger, C. Fidani, M. Ionica, G. Castellini, C. Guandalini, G. Laurenti and S. Lucidi, *Aiglon: A Magnetic Spectrometer for Geophysics*, *Astroparticle, Particle, Space Physics, Radiation Interaction, Detectors and Medical Physics Applications*, Vol. 7, 13th ICATPP Conference, ISBN 978-981-4405-06-5, World Scientific Publishing, October 2011
- C. Fidani, R. Battiston and W. Burger, *Searching a correlation between earthquakes and NOAA satellite energetic particle bursts*, *Remote Sensing*, vol. 2, p. 2170-2184, 2010
- C. Fidani, *The EQLs of the L'Aquila earthquake, April 6, 2009*, *NHESS*, vol. 10, p. 967-978, 2010
- R. Battiston, M. T. Brunetti, F. Cervelli, C. Fidani and M. Menichelli, *A Moon-borne electromagnetic calorimeter*, *Astrophys. Space Sci.*, Vol. 323, p. 357-366, 2009
- C. Fidani and R. Battiston, *Analysis of NOAA particle data and correlations with seismic activity*, *NHESS*, vol. 8, p. 1277-1291, 2008
- A. Amoroso, L. Crescentini and C. Fidani, *Effects of crustal layering on source parameter inversion from co-seismic geodetic data*, *Geophys. Jour. Int.*, Vol.159, p. 353-364, 2004
- C. Fidani and P. Tombesi, *Decreasing Error Probability in Optical Transmission Line*, *Physical Review A* 65, 033815, 2002
- Conference Proceedings**
- C. Fidani and M. Orsini, *The magnetic network of CIEN detecting ELF pulses*, 38<sup>th</sup> GNGTS, Roma. 1-4 Nov. 12-14, 2019
- C. Fidani, *Air ions associated to the electric oscillations recorded by CIEN*, 38<sup>th</sup> GNGTS, Roma. 9-12 Nov. 12-14, 2019
- C. Fidani, *Oscillating charged clouds revealed by the Central Italy Electromagnetic Network as a common atmospheric phenomena*, 105<sup>th</sup> CONGRESSO NAZIONALE SOCIETA' ITALIANA DI FISICA, L'Aquila, p. 56, Sep. 23-27, 2019
- C. Fidani, *From the Bayes theorem to a model of the geomagnetic interaction between strong earthquakes in the Indonesian archipelagoes and particle data detected by NOAA satellites*, 105<sup>th</sup> CONGRESSO NAZIONALE SOCIETA' ITALIANA DI FISICA, L'Aquila, p. 167, Sep. 23-27, 2019
- C. Fidani, *An electric cloud model verify for the electric oscillations recorded by CIEN during intense seismic swarms*, 37<sup>th</sup> GNGTS, Bologna. 64-67, Nov. 19-21, 2018
- C. Fidani and M. Orsini, *A ground distributed electric current to model magnetic pulses recorded by CIEN during strong seismic activity*, 37<sup>th</sup> GNGTS, Bologna. 67-69 Nov. 19-21, 2018
- C. Fidani, *Forecasting probability and false alarms for strong earthquakes by a causal model of high energy electron disturbances into the ionosphere*, 37<sup>th</sup> GNGTS, Bologna. 70-73 Nov. 19-21, 2018
- D. Marcelli and C. Fidani, *Risultati e proposte della Rete Elettromagnetica dell'Italia Centrale*, 1° CONVEGNO NAZIONALE "PRECURSORI SISMICI ED ELETTROMAGNETICI", Portici - Napoli, September 21, 2018
- C. Fidani, *Charged oscillating clouds revealed by electric sensors during strong seismic and meteorological activities*, 104<sup>th</sup> CONGRESSO NAZIONALE SOCIETA' ITALIANA DI FISICA, Arcavacata di Rende - Cosenza, 179-180, Sep. 17-21, 2018
- C. Fidani, *Correlations between VAB electron loss detected by NOAA and strong seismic activity used to improve forecasting of  $M \geq 6$  earthquakes*, EMSEV2018, Potenza. 124-127, Sep. 17-21, 2018

- M. Orsini and C. Fidani, *Modelling magnetic pulse swarms that anticipated the 2016 Norcia, and 2017 Capitignano, Central Italy earthquakes*, EMSEV2018, Potenza. 87-89, Sep. 17-21, 2018
- C. Fidani, *An electric cloud model for the signals recorded in Central Italy during intense seismic swarms*, EMSEV2018, Potenza. 68-71, Sep. 17-21, 2018
- C. Fidani, *Probability and strong earthquakes from low earth orbit satellites*, 36<sup>th</sup> GNGTS, Trieste. 311-314, Nov. 14-16, 2017
- C. Fidani, *Electricity perturbations observed around the October 30, 2016 Norcia earthquake,  $M = 6.5$* , 36<sup>th</sup> GNGTS, Trieste. 314-316, Nov. 14-16, 2017
- M. Orsini and C. Fidani, *Magnetic perturbations observed around the October 30, 2016 Norcia earthquake,  $M = 6.5$* , 36<sup>th</sup> GNGTS, Trieste. 316-318 Nov. 14-16, 2017
- A. Brucolini, C. Fidani, L. Sdei, N. Frontini, A. Bertucci, D. Santoni, *Geophysical related monitoring at GEA Observatory*, 36<sup>th</sup> GNGTS, Trieste. 319-321, Nov. 14-16, 2017
- W. Balderer, C. Fidani, F. Leuenberger, C. Roques, *Possible influence of the  $M 6.2$  near Arquata, Accumuli and the  $M 6.5$  near Norcia, Central Italy earthquakes (24.8.2016 and 30.10.2016) on the fluorescence spectra of bottled mineral water*, 2<sup>nd</sup> International Multidisciplinary Conference on Mineral Waters, Vila de Luso, Portugal, March 26-31, 2017
- C. Fidani, *Further developments on correlations between strong earthquakes and NOAA electron bursts from space*, 35<sup>th</sup> GNGTS, Lecce, p. 286-289, Nov. 22-24, 2016
- C. Fidani, *The Central Italy Electromagnetic Network (CIEN) ten years after the beginning of continuous monitoring*, 35<sup>th</sup> GNGTS, Lecce, p. 289-293, Nov. 22-24, 2016
- C. Fidani, *Strong Earthquakes in Indonesia and Philippines warned in advance from Space*, ESC2016, Trieste, Italy, September 4-11, 2016
- C. Fidani, *Ten years of electromagnetic recordings by the Central Italy Electromagnetic Network (CIEN)*, ESC2016, Trieste, Italy, September 4-11, 2016
- C. Fidani, *Forecasting Strong Earthquakes in Indonesia and Philippines from Space*, BSS16, Trieste, Italy, June 27-July 1, 2016
- C. Fidani, *A Statistical Correlation Between Low L-shell Electrons Measured by NOAA Satellites and Strong Earthquakes*, AGU, San Francisco, California, NH21C-1843, December 14-18, 2015
- C. Fidani, *Probability of earthquake occurrence from electric anomalies recorded by CIEN*, 34<sup>th</sup> GNGTS, Trieste, p. 11-15, Nov. 17-19, 2015
- W. Balderer, C. Fidani, F. Leuenberger, *Possible influence of the Modena  $M 6.0$  May 20, 2012 earthquake on the fluorescence spectra of Bottled Mineral Water*, 42<sup>th</sup> IAH Congress, AQUA 2015, Rome, September 13 - 18, 2015
- W. Balderer, C. Fidani, F. Leuenberger, *Comparison of results of synchronous scanning fluorescence measurements of bottled mineral water in the area of the Modena earthquake of May 20, 2012 with data of occurring earthquakes*, 4<sup>th</sup> Bi-Annual International Geo-Hazards Research Symposium, NASA Ames Research Park, Mountain View, CA, December 10 - 12, 2014
- C. Fidani, *Positive Correlation between Strong Indonesian and Philippine Region Earthquakes and NOAA Satellite Low L-shell Electron Bursts*, 33<sup>th</sup> GNGTS, Bologna, p. 27-34, Nov. 25-27, 2014
- P. M. Siciliani, C. Fidani, D. Marcelli, M. Arcaleni, S. Tardioli, *Electrical oscillations recorded by CIEN stations at time of two seismic swarms in the Umbria Region, Central Italy, in 2013-2014*, 33<sup>th</sup> GNGTS, Bologna, p. 87-92, Nov. 25-27, 2014
- G. de Liso, C. Fidani, R. Brillante, *Sky darkening during strong earthquakes as a hypothesis of the earth's crust emission in Holy Shroud image study*, ATSI 2014, Bari, p.113-118, September 4-5, 2014
- C. Fidani, *I fenomeni elettrici di origine sismica e meteorologica, indicazioni sulla pericolosità dei fenomeni naturali*, Festival della Complessità, Chieti, p.46, July 4-6, 2014
- C. Fidani, *La Rete Elettromagnetica dell'Italia Centrale*, Atti del convegno su Sismicità, gas Radon, elettromagnetismo, radioattività, reti di monitoraggio ufficiali e amatoriali, stato dell'arte nella ricerca dei segnali possibili precursori sismici, Pozzuolo del Friuli, p. 51-61, April 24-26, 2014

- C. Fidani, *Animal behaviour and the economy before earthquakes*, 32<sup>th</sup> GNGTS, Trieste, p. 70-75, Nov. 19-21, 2013
- P. M. Siciliani, C. Fidani, F. Stoppa, G. Iezzi, M. Arcaleni, S. Tardioli, D. Marcelli, *Electromagnetic perturbations associated with  $M = 5$ , July 21, 2013, Ancona, Italy earthquake observed by CIEN*, 32<sup>th</sup> GNGTS, Trieste, p. 66-70, Nov. 19-21, 2013
- G. de Liso, C. Fidani, A. Viotto, *Multiple parameter monitoring and seismic precursory phenomenology in unusual animal behaviour in western Piedmont*, 32<sup>th</sup> GNGTS, Trieste, p. 60-66, Nov. 19-21, 2013
- C. Fidani, F. Freund and R. Grant, *Unusual Behaviour of cows prior to a large earthquake*, EGU, Vol. 15, EGU2013-13865, 2013
- C. Fidani, *ELF signals from the Central Italy Electromagnetic Network (CIEN) at the time of the 2012 Emilia-Romagna earthquakes*, EGU, Vol. 15, EGU2013-680, 2013
- C. Fidani, D. Albarello, M. Arcaleni, G. Martinelli, P. M. Siciliani, S. Tardioli, A. Vannucchi, *Emilia earthquake: VLF transmitters and ELF signal from the Central Italy Electromagnetic Network (CIEN)*, 31<sup>th</sup> GNGTS, Potenza, p. 415-420, Nov. 20-22, 2012
- X. Zhang, C. Fidani, *Particle bursts and strong earthquakes from the DEMETER satellite*, 31<sup>th</sup> GNGTS, Potenza, p. 409-415, Nov. 20-22, 2012
- X. Zhang, C. Fidani, J. Huang, X. Shen, *Precipitation of high energy particles recorded by DEMETER satellite before strong earthquakes*, AGU, San Francisco, California, NH23A-1549, December 5-9, 2011
- F. Stoppa, G. Iezzi, C. Fidani, M. Orsini, V. S. Brobovlsky, G. Giuliani, M. Morrone, *Deterministic Earthquake assessment by electromagnetic signals*, 30<sup>th</sup> GNGTS, Trieste, p. 402-405, Nov. 14-17, 2011
- C. Fidani, *Central Italy Electromagnetic Network (CIEN)*, 30<sup>th</sup> GNGTS, Trieste, p. 365-368, Nov. 14-17, 2011
- G. Ambrosi, R. Battiston, W. J. Burger, G. Castellini, C. Fidani, C. Guandalini, M. Ionica, G. Laurenti and S. Lucidi, *Aiglon: A Magnetic Spectrometer for Geophysics, Astroparticle, Particle, Space Physics, Radiation Interaction, Detectors and Medical Physics Applications*, 13<sup>th</sup> ICATPP Conference, October 3-7, 2011
- C. Fidani, R. Battiston and W. J. Burger, *Correlations between NOAA satellite particle bursts and strong earthquakes*, 29<sup>th</sup> GNGTS, Prato, p. 179-182, Oct. 28-30, 2010
- C. Fidani, *ELF signals by Central Italy electromagnetic network in 2008-2010*, 29<sup>th</sup> GNGTS, Prato, p. 175-179, Oct. 28-30, 2010
- C. Fidani, *ELF signals and EQLs in Central Italy in 2009*, EGU, Vol. 12, EGU2010-9167, 2010
- R. Battiston and C. Fidani, *Correlations between NOAA satellite particle bursts and strong earthquakes*, EGU, Vol. 12, EGU2010-9093, 2010
- C. Fidani, *Luminous and other non-seismic phenomena associated to the April 6, 2009, L'Aquila earthquake*, 28<sup>th</sup> GNGTS, Trieste, p. 373-375, Nov. 16-19, 2009
- C. Fidani, *Electromagnetic signals recorded by Perugia and S. Procolo (Fermo) stations before the L'Aquila earthquakes*, 28<sup>th</sup> GNGTS, Trieste, p. 370-373, Nov. 16-19, 2009
- C. Fidani, *Le previsioni di Raffaele Bendandi ispirate dal grande terremoto*, Miscellanea INGV for 100 years from the Messina earthquake, Reggio Calabria, Vol.3, p. 60-61, December 2008
- R. Battiston and C. Fidani, *Searching for correlation between NOAA particle data and seismic activity*, EGU, Vol.10, EGU2008-A-11194, 2008
- C. Fidani and R. Battiston, *A lunar spectrometer for Radon emanations linked to seismic activity*, EGU, Vol.10, EGU2008-A-11324, 2008
- C. Fidani, *Tlp versus moonquakes to understand earthquake associated phenomena*, EGU, Vol.10, EGU2008-A-11236, 2008
- M. T. Brunetti, R. Battiston, F. Cervelli, C. Fidani and M. Menichelli, *A Moon Calorimeter For The Detection Of Very High Energy Gamma Rays*, ICEUM9/ILC2007, Sorrento, ID 53, 22-26 Oct. 2007
- R. Battiston and C. Fidani, *Particle Detection Using Moon Seismology*, ICEUM9/ILC2007, Sorrento, ID 57, 22-26 Oct. 2007
- C. Fidani, *TLP Versus Moonquakes to Understand Earthquake Associated Phenomena*, ICEUM9/ILC2007, ID 86, Sorrento, 22-26 Oct. 2007
- R. Battiston and C. Fidani, *Particle detection using Moon seismology*, Italian Vision for Moon Exploration, p. 50, 22 Dec. 2006
- C. Fidani, *On Electromagnetic Precursors of Earthquakes: Models and Instruments*, IPHW Conference, 17 June, Medicina, Bologna, p. 25-41, 2006

A. Amoruso, L. Crescentini and C. Fidani, *3D investigation of relevance of crustal layering on the inversion of source parameters from co-seismic displacement*, EGU04-A-02091, 2004

A. Amoruso, L. Crescentini and C. Fidani, *Effects of crustal layering on source parameter inversion from co-seismic displacement data*, AGU, December 5-12, San Francisco, California, S42E-0220, 2003

C. Fidani and P. Tombesi, *The Error Probability in Optical Transmission Line*, NLGW, March 25-28, Clearwater, Florida, p. 312-314, 2001

### **Published Books**

C. Fidani, in Italian, Previsioni e Conferme in *Raffaele Bendandi, Ombre sul Sole*, of Paola Lagorio with EDIT Faenza, ISBN 978-88-8152-188-3, p. 117-135, February 2011

C. Fidani curator of Raffaele Bendandi's book in Italian, *Le stelle soli dell'infinito*, ISBN: 88-8152-144-X, EDIT Faenza, 271 pp., May 2006

C. Fidani, in Italian, *Ipotesi sulle anomalie elettromagnetiche associate ai terremoti*, ISBN: 88-87182-08-6, L'Aquila, Libreria Universitaria Benedetti Ed., 300 pp., July 2005

### **Popular Publications**

C. Fidani, *Gruppo ARI Precursori Sismici Elettromagnetici*, I progetti in cui crediamo, Radio Rivista, p.1-2, aprile 2018

C. Fidani, *Progetto "Precursori Elettromagnetici"*, I progetti in cui crediamo, Radio Rivista, p.45-47, febbraio 2017

C. Fidani, Alcune conferme alle previsioni dei terremoti di Raffaele Bendandi, CIPH - Comitato Italiano per il Progetto Hessdalen – ICPH, at [http://www.itacomm.net/EQL/2011\\_Fidani.pdf](http://www.itacomm.net/EQL/2011_Fidani.pdf), 2011

C. Fidani, *EQL e altre luminosità a L'Aquila nel 2009*, CIPH - Comitato Italiano per il Progetto Hessdalen – ICPH, at [http://www.itacomm.net/EQL/2010\\_2\\_Fidani.pdf](http://www.itacomm.net/EQL/2010_2_Fidani.pdf), 2010

C. Fidani, *Obiettivi scientifici raggiungibili dalle osservazioni dei fenomeni luminosi in atmosfera*, CIPH - Comitato Italiano per il Progetto Hessdalen – ICPH, at [http://www.itacomm.net/EQL/2010\\_FIDANI.pdf](http://www.itacomm.net/EQL/2010_FIDANI.pdf), 2010

C. Fidani, *Alcune considerazioni sui fenomeni luminosi del terremoto dell'Aquila*, CIPH - Comitato Italiano per il Progetto Hessdalen – ICPH, at [http://www.itacomm.net/EQL/2009\\_FIDANI\\_.pdf](http://www.itacomm.net/EQL/2009_FIDANI_.pdf), 2009

C. Fidani, *Le luci del terremoto* - Focus n. 200, p. 140-147, June 2009

C. Fidani, *The Raffaele Bendandi forecasting inspired by the great earthquake*, CIPH - Comitato Italiano per il Progetto Hessdalen – ICPH, at <http://www.itacomm.net/EQL/engbent1908.pdf>, 2009

C. Fidani, *Earthquake lights in Reggio Calabria and Messina, Italy, one hundred years after the December 28, 1908 quake*, CIPH - Comitato Italiano per il Progetto Hessdalen – ICPH, at [http://www.itacomm.net/EQL/2009\\_Fidani-n-e.pdf](http://www.itacomm.net/EQL/2009_Fidani-n-e.pdf), 2009

C. Fidani, *L'effetto Aharonov-Bohm e il potenziale quantistico*, Biblioteca Ulisse, Saggio, Divulgazione e Informazione, <http://ulisse.sissa.it/biblioteca/saggio/2007/Ubib070622s001>, June 22, 2007

C. Fidani, *A possible contribution made by Science of Global Information*, Cifa News, Supplemento a Ricerca Aerospaziale, Anno XXII, p. 14-16, [http://www.cifafondation.org/CIFA\\_News/CIFA\\_News\\_39.pdf](http://www.cifafondation.org/CIFA_News/CIFA_News_39.pdf), December 2006

C. Fidani, Six reports for the local council of Faenza on the activity of Raffaele Bendandi: which contains 142 forecasts of earthquakes, 2004

C. Fidani and M. de Crescenzi, *Analysis of Core Cu Fractures in Sandwiched Methylmethacrylate Plates*, report for Guzzini spa, 2002

### **Schools, Meetings and Conferences**

38<sup>th</sup> GNGTS, November 12-14, 2019, CNR Roma, with a presentation and a poster

105<sup>th</sup> CONGRESSO NAZIONALE SOCIETA' ITALIANA DI FISICA, September 23-27, 2019, L'Aquila, with two presentation

37<sup>th</sup> GNGTS, November 19-21, 2018, Bologna, with two presentations and a poster

104<sup>th</sup> CONGRESSO NAZIONALE SOCIETA' ITALIANA DI FISICA, September 17-21, 2018, Arcavacata di Rende, with a presentation

EMSEV2018, September 17-21, 2018, Potenza, with a presentation and two posters

1° CONVEGNO NAZIONALE “ PRECURSORI SISMICI ED ELETTROMAGNETICI”, September 21, 2018, Portici, with a presentation

36<sup>th</sup> GNGTS, November 14-16, 2017, Trieste, with a presentation and three posters

Meeting organizer: *Lo studio dei terremoti recenti a venti anni dall'evento di Colfiorito*, with a contribution entitled: *Dalle luci sismiche di Colfiorito alle osservazioni della rete elettromagnetica dell'Italia Centrale*, Colfiorito, August 19, 2017

*Il terremoto dal punto di vista elettromagnetico*, in *Terremoto: sicurezza, prevenzione e precursori sismici*, Castello Orsini Colonna, Avezzano, May 6, 2017, invited

Lezioni per il sostegno nelle scuole medie superiori, Aula Magna, Pascal, Perugia, February 13 and 27, 2017

35<sup>th</sup> GNGTS, November 22-24, 2016, Lecce, with two presentations

Tavola Rotonda sul Terremoto, evoluzione, monitoraggio e prevenzione dei sismi, Hotel “Lieta Sosta”, Colfiorito, Perugia, November 1, 2016, invited

Meeting, *LUCI ANOMALE, Testimonianze, strategie ed investigazioni scientifiche per svelarne il mistero*, Teatro "G.Verdi" di Saludecio (RN), October 16, 2016, with an invited presentation

35<sup>th</sup> General Assembly of the European Seismological Commission ESC2016, Trieste, Italy, September 4-11, 2016, with a presentation and a poster

BSS16, *Forecasting Strong Earthquakes in Indonesia and Philippines from Space*, Trieste, Italy, June 27-July 1, 2016, with an invited poster

EXPOEMERGENZE, *Segnali che precedono il terremoto*, Umbriafiere, Bastia Umbra, Perugia, June 3-5, 2016, with a presentation

AGU 2015 Fall Meeting, San Francisco, December 14-18, 2015, with a poster presentation

34<sup>th</sup> GNGTS, November 17-19, 2015, Trieste, with a presentation and a poster

Corso di formazione per lavoratori, sicurezza negli ambienti di lavoro, pericoli speciali, art. 37 (1,2,3) del Dlgs 9 aprile 2008 n.81, CNA Perugia Srl, Perugia, July 14, 2015

Corso APC ORGMARCHE: *Acquisizione e analisi dati sismici per studi di geotecnica e microzonazione sismica*, Facoltà di Geologia dell'Università di Camerino, June 18-19, 2015

Corso di formazione per lavoratori, sicurezza negli ambienti di lavoro art. 37 (1,2,3) del Dlgs 9 aprile 2008 n.81, CNA Perugia Srl, Perugia, February 12, 2015

33<sup>th</sup> GNGTS, November 25-27, 2014, Bologna, with two presentations

Workshop, *L'importanza delle anomalie biologiche osservate durante i forti terremoti*, in *La terra modenese e la natura violenta: gli eventi estremi degli ultimi anni*, Medolla, Modena, October 25, 2014, with an invited presentation

Workshop, *Advances in Turin Shroud Investigations*, ATSI 2014, Bari, Italy, September 4-5, 2014, with a presentation

Forum internazionale di Protezione Civile, *Protezione Civile in Europa e Protezione Ambientale, Difesa del Territorio*, Abbazia di Colle Medio, Perugia, September 2, 2014, with an invited presentation

Workshop, *E' possibile prevedere gli eventi estremi e i terremoti?*, Abbazia di Colle Medio, Perugia, June 21-22, 2014, with an invited presentation

Meeting, *Sismicità, gas Radon, elettromagnetismo, radioattività, reti di monitoraggio ufficiali e amatoriali, stato dell'arte nella ricerca dei segnali possibili precursori sismici*, Pozzuolo del Friuli, April 25, 2014, with an invited presentation

EXPOEMERGENZE, the CIEN Project was selected Esposizione Nazionale Biennale Sicurezza ed Emergenza, Umbriafiere, Bastia Umbra, Perugia, April 10-13, 2014, with an invited presentation

Workshop, *Dal Progetto alla Risposta Sismica Locale, attraverso la Modellazione Specifica di Sito*, Osservatorio Bina Perugia, December 19, 2013, with an invited seminar

Workshop, *La geofisica nella professione del geologo*, Ordine dei Geologi della Regione Umbria, Park Hotel, Ponte San Giovanni, Perugia, November 29, 2013, with an invited seminar

32<sup>th</sup> GNGTS, November 19-21, 2013, Trieste, with a presentation and a poster

Workshop W4, *Hydrogeochemical precursors of seismic activity*, GEOITALIA, Pisa, September 12, 2013, with two invited presentations

Meeting, *Le salse ed i terremoti attuali e passati*, Riserva Salse di Nirano, Modena, June 9, 2013, with an invited presentation

EGU General Assembly, *Natural Hazards and Seismology*, Vienna – Austria, April 7-12, 2013, with a presentation and a poster

31<sup>th</sup> GNGTS, November 20-22, 2012, Potenza, with two presentations

EGU General Assembly, *Natural Hazards*, Vienna – Austria, April 23-27, 2012, with a presentation

30<sup>th</sup> GNGTS, Trieste, November 14-17, 2011, with a presentation and a poster

Il Programma “Idee” (ERC) del 7PQ di RST: *come partecipare e quali opportunità per la “ricerca di frontiera” a tematica libera*, training course, Perugia, October 24, 2011

Ottobre all'Abbazia - Natura - *Bufo Bufo tra Favola e Scienza*, Abbazia dei Santi Ruffino e Vitale, Amandola (FM), October 8, 2011, with a presentation

IONONTREMO, *Mostra e convegni sul rischio sismico liberi di conoscere e convivere con il terremoto*, Rimini, May 7-21, 2011, with two invited presentations

CSES - Teleconference Meeting, *CSES Italy-China, Working meeting for the CSES payloads development*, March 21-22, 2011

Meeting, *Prevenzione e Previsione Sismica*, November 19, 2010, Teramo, with an invited presentation

First Meeting of SAGA-4-EPR SATellite seafloor Ground data Analyses for Earthquake Pattern Recognition, *Particle precipitation-earthquake correlations and the Central Italy electromagnetic network*, Roma, October 29, 2010, with an invited presentation

29<sup>th</sup> GNGTS, Prato, October 28-30, 2010, with two presentations

CSES Meeting, Italy-China, Beijing, September 6-11, 2010, with two presentations

CSES Meeting, Italy-China, Roma, August, 15-18, 2010, with a presentation

CSES Meeting, Italy group, Padova, July 1-2, 2010

EGU General Assembly 2010, *Natural Hazards*, Vienna – Austria, May 2-7, 2010, with a presentation and a poster

Meeting, *Osservazioni elettromagnetiche e gravimetriche relative al sisma del 6 Aprile 2009 a L'Aquila*, L'Aquila, 26-28 Aprile 2010, with a presentation and a poster

Technical Interchange Meeting (TIM) on the CSES satellite: *instrumentation and orbital requirements*, Perugia, February 5-7, 2010, with a presentation

28<sup>th</sup> GNGTS, November 16-19, 2009, Trieste, with two presentations

Conference, *100 anni dal terremoto Calabro-messinese*, Reggio Calabria, Dec. 10-12, 2008, with a poster presentation

EGU General Assembly 2008, *Natural Hazards*, Vienna – Austria, April 13-18, 2008, with three presentations and three posters

Technical Interchange Meeting (TIM) on the CSES satellite: *instrumentation and working sessions*, Perugia, February 16-21, 2008, with a presentation

9<sup>th</sup> ILEGW, International Conference on *Exploration and Utilization of the Moon*, Sorrento, October 22-26, 2007, with two presentations and a poster

IUGG XXIV, IASPEI on Progress in *EM studies on earthquakes and volcanoes – Seismo EM study using space technology*, Perugia, July 2-13, 2007

1<sup>st</sup> Workshop on *Photon Detection*, Hotel Giò, Perugia, June 13-14, 2007

PRIN05 Progress meeting, *Geomagnetic Space Mission Project*, LNF INFN, Frascati, May 18, 2007



Meeting, *Observation of the Universe from the Moon*, LNF INFN, Frascati May 7, 2007

Meeting, *Italian Vision for Moon Exploration, Studio Osservazione dell'Universo dalla Luna*, I Riunione Avanzamento, CNR Bologna, December 14, 2006

PRIN05 Progress meeting, *Geomagnetic Space Mission Project*, Terni, November 30, 2006

Italian Project Hessdalen Workshop, Bologna, June 17, 2006, with an invited presentation

Meeting, COHERENCE, Rome, April 21, 2006, with a tribute to Raffaele Bendandi

Meeting, *Monitoraggio elettromagnetico ambientale nelle bande ULF – ELF – VLF (0.001Hz - 100kHz)*, Progetto MEM, L'Aquila, January 22, 2005

Meeting, *Settecento abruzzese. Eventi sismici, mutamenti economico-sociali e ricerca storiografica*, L'Aquila, October 29-31, 2004

AGU 2003 Fall Meeting, San Francisco, December 5-12, 2003, with a poster presentation

21<sup>th</sup> National Conference GNGTS and 2<sup>nd</sup> Convegno Nazionale Sezione Italiana EAGE-SEG, Roma, November 19-21, 2002

Conference *2001 Nonlinear Guided Waves and Their Applications Topical Meeting*, Clearwater - Florida, March 26-28, 2001, with a poster presentation

5<sup>th</sup> international conference in *Quantum Communication Measurements & Computing*, Capri - Italy, July 3 - 8, 2000

Summer school *Nonlinear Optics*, Dipartimento di Fisica "A.Volta", University of Pavia, June 25 - July 8, 1999

## **Seminars**

*I terremoti nella Ionosfera*, IIS Campus Leonardo da Vinci, Umbertide, January 8, 2020

*Terremoti e onde radio in ELF e VLF*, ARI Perugia, Ponte San Giovanni, February 1, 2018

*Sicurezza in montagna in relazione ai fenomeni meteorologici – corso avanzato*, Sez. CAI "G. Bellucci", Perugia, April 21, 2017

*Seminari sulle precauzioni da seguire in occasione dei forti terremoti*, for students, Aula Magna IIS G. Bruno, Perugia, February 13,15,16, 20-24, 27, 2017

*Seminario sulle precauzioni da seguire in occasione dei forti terremoti*, for professors, Aula Magna IIS G. Bruno, Perugia, February 15, 2017

*Le luci sismiche, una possibile interpretazione dalle osservazioni recenti della Rete Elettromagnetica dell'Italia Centrale*, Teatro "G.Verdi" di Saludecio (RN), October 16, 2016

*Sicurezza in montagna in relazione ai fenomeni meteorologici*, Sede CAI sez. "G. Bellucci", Perugia, May 20, 2016

*Il terremoto del '97 a Colfiorito la "percezione" animale e la rivelazione strumentale*, Sede del Parco di Colfiorito Area Ex-Casermette, Comune di Foligno (PG), October 17, 2015

*Statistical correlation between electric perturbations recorded by a station of the Central Italy Electromagnetic Network and moderate seismic activity in Umbria Region*, Università di Chieti G. D'Annunzio, July 13, 2015

*I fenomeni elettrici di origine sismica e meteorologica, indicazioni sulla pericolosità dei fenomeni naturali*, Università di Chieti G. D'Annunzio, July 5, 2014

*Monitoraggio elettromagnetico in relazione ai fenomeni geofisici*, Sede ARI, sezione Città di Castello, February 11, 2014

*Electromagnetic monitoring in relation to geophysical phenomena*, School of Science and Technology Physics Division, Camerino University, Camerino, January 23, 2014

*The Central Italy Electromagnetic Network, a multidisciplinary monitoring to study the effects of geophysical fluids into the atmosphere*, Workshop W4, GEOITALIA, Pisa, September 12, 2013

*Statistical aspects of NOAA particles and global strong earthquakes data analysis*, Workshop W4, GEOITALIA, Pisa, September 12, 2013

*Fenomeni elettrici e di migrazione dei fluidi prima, durante e dopo i forti terremoti*, Aula Magna della Facoltà di Agraria, Perugia, June 5, 2013

*I Vulcanelli di Fango, punti di contatto con l'universo sotterraneo. Dai terremoti alla nascita della vita*, Centro di Educazione Ambientale, Monteleone di Fermo, April 14, 2012

*L'osservazione della natura nei periodi sismici: dal terremoto dell'Italia Centrale del 1873 al terremoto abruzzese del 2009*, Abbazia dei Santi Ruffino e Vitale, Amandola (FM), October 8, 2011

*Precipitazione di particelle misurate dai satelliti NOAA in occasione di forti terremoti*, Dalla sismologia al terremoto raccontato dai Vangeli. Nuove prospettive per la sindonologia. Educatorio della Provvidenza, Torino, July 16, 2011

*Le previsioni di Raffaele Bendandi*, IONONTREMO, Teatro degli Atti di Rimini, May 20, 2011

*Le luci sismiche. Una costante nella storia dei grandi terremoti*, IONONTREMO, Teatro Corte di Coriano (RI), May 19, 2011

*Correlations between NOAA satellite particle bursts and strong earthquakes*, Phys. Department Perugia University, May 18, 2011

*Segnali elettromagnetici e terremoti*, Geology Department, Gabriele D'Annunzio University, Chieti, January 14, 2011

*Fenomeni Elettromagnetici e Terremoti*, Prevenzione e Previsione Sismica, Teramo, November 19, 2010

*Correlations between NOAA satellite particle bursts and strong earthquakes*, INFN sez. of Perugia University, November 11, 2010

*ELF electromagnetic signals in Central Italy*, CEA Department, Beijing, September 10, 2010

*Earthquake lights of the April 6, 2009, L'Aquila earthquake*, Perugia, February 15, 2010

*Correlations between strong earthquakes and NOAA satellite energetic particle bursts*, Phys. Department Perugia University, January 22, 2010

*Dal terremoto di Norcia-L'Aquila del 1703 a quello del 6 aprile 2009*, Perugia, May 28, 2009

Week of Scientific and Technological Culture, IX "faentina" edition, presentation of the work: *Le previsioni di Raffaele Bendandi*, Faenza, April 3, 2009

*NOAA particle data and correlations to seismic activity*, CNR Perugia, Oct 16, 2008

Week of Scientific and Technological Culture, VII "faentina" edition, presentation of the work: *Raffaele Bendandi e il vento solare*, Faenza, March 30, 2007

Week of Scientific and Technological Culture, VI "faentina" edition, presentation of the Raffaele Bendandi's work: *Le stelle soli dell'infinito*, Faenza, May 9, 2006

*Relation status: electromagnetic emissions linked to tectonic and seismic activity*, INGV L'Aquila, Forte Spagnolo, December 22, 2004

*On the principles and paradoxes of quantum mechanics*, Physics Department of Camerino University, May 22, 2002

*Wholeness as a new aspect of quantum theory*, Physics Department of Camerino University, May 8, 2002

*On the causal interpretation of quantum mechanics*, Physics Department of Camerino University, May 2001