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## CURRICULUM VITAE

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### LIVIO CONTI

e-mail: livio.conti@uninettunouniversity.net

Current position: Adjunct Professor/Researcher of Physics - FIS/01 (permanent position),  
Professor of: Physics (since 2011),  
Fundamentals of applied mechanics (since 2011),  
Geochemistry and volcanology (since 2016),  
Electromagnetic Fields I (since 2019),  
Electromagnetic Fields II (since 2019).

Work address: Faculty of Engineering  
UNINETTUNO University,  
Corso Vittorio Emanuele II 39, 00186 Rome, Italia

### Education:

2011-2014  
Title of the Ph.D. Thesis | Ph.D. in ASTRONOMY at the “Tor Vergata” University of Rome, Italy,  
“*Automatic recognition of whistlers for the CSES satellite and simulation of meteors for the JEM-EUSO telescope*”.  
Supervisor: Prof. Roberta Sparvoli

1996-1999  
Title of the Ph.D. Thesis | Ph.D. in PHYSICS at the “Tor Vergata” University of Rome, Italy  
“*Study of the top quark decay: radiative correction to the  $t \rightarrow b W$  decay and finite width effect in the  $t \rightarrow b W Z$  decay*”.  
Supervisors: Prof. Guido Altarelli, Prof. Vittorio Lubicz

1996  
Research subject: | Winner of a fellowship for Theoretical Physics of the Italian National Institute of Nuclear Physics (INFN).  
“*Non-perturbative calculation of the  $f^B$  decay constant, study of the  $\Delta I=1/2$  rule in the non-leptonic  $K$  decay, evaluation of the  $B$ -parameters for the complete basis of 4-fermion operators with  $\Delta S=2$* ”.  
Supervisors: Prof. G. Martinelli, Prof. A. Vladikas.

1995-1996 | Master in Physics at “La Sapienza” University of Rome

1995  
Title of the Laurea degree Thesis | Laurea degree in Physics (*Laurea, cum laude*) at “La Sapienza” Rome University.  
“*Study of the quasi-temporal gauge on the lattice and non-perturbative calculation of the renormalization constant of the axial current*”.  
Supervisor: Prof. Silvano Petrarca.

High school | Liceo Classico. Marks: 60/60.

### **Post-doc:**

<u>Post-doc:</u> (2002-2006)	Postdoctoral Research assistant at Roma Tre University, Department of Physics, assigned to work on the ESPERIA project
Research project:	“ <i>ESPERIA project</i> ”. Supervisor: Prof. Vittorio Sgrigna.
<u>Post-doc:</u> (2006-2007)	Postdoctoral Research assistant at Roma Tor Vergata University, Department of Physics
Research project:	“ <i>Development of instrumentation to detect electric and magnetic fields in the top-side ionosphere</i> ”. Supervisor: Prof. Piergiorgio Picozza.
<u>Post-doc:</u> (2007-2008)	Research Contract with the INFN, Sezione di Perugia
Research project:	“ <i>Study of the experimental configuration of electric and magnetic field detectors for space applications</i> ” Supervisor: Prof. R. Battiston.
<u>Post-doc:</u> (2009-2011)	Research Contract with the INGV, Sezione di Roma.
Research project:	“ <i>Interseismic numerical modelling from SAR and optical data - SIGRIS Project</i> ”. (Project financed by ASI - Italian Space Agency). Supervisor: Dr. Stefano Salvi, Dr. Salvatore Barba.

### **Contracts & collaborations:**

<u>European Space Agency (ESA)</u> (February-May 2000)	Research Contract with the ULISSE consortium (“Tor Vergata” University) for the analysis of particles data observed by SAMPEX/PET (NASA) satellite. Supervisor: Prof. A. Salsano.
<u>Laben Spa</u> (2000)	Research Contract at the “Tor Vergata” University. Grant funded by LABEN Spa (a FINMECCANICA company) prime contractor for the ESPERIA payload. Supervisor: Prof. P. Picozza
<u>Italian Space Agency (ASI) and Roma Tre University</u> (March-August 2001)	Research Contract with the Roma Tre University to develop the Phase A Study of the ESPERIA project. Supervisor: Prof. V. Sgrigna
<u>L’Aquila University</u> (Nov.2001-Apr. 2002)	Research Contract to study earthquake precursors with satellite data Supervisor: Prof. R. Scrimaglio.
<u>Adimedia srl, Unicity (Roma)</u> (Nov.2000-Mar. 2001)	Contract to develop Internet web sites and database management with SQL and Transact-SQL
<u>Tor Vergata University</u>	Research Contract for the project “ <i>Innovative devices for electric and magnetic field measurements and data acquisition equipment for space</i> ”

(March-July 2006) *missions*”  
 Supervisor: Prof. P.Picozza

**Teaching activity:**

Roma Tre University Teaching Assistant and Tutor for courses of basic mechanics, thermodynamics and electromagnetism, and laboratories of mechanics, Dep. of Physics & optics and electronics:  
 Dep. of Mathematics

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|---------------|---|
| A.Y.1999-2000 | - Teaching Assistant, 1 <sup>st</sup> year mathematics course: mechanics, electricity, magnetism.   |
| A.Y.2000-2001 | - Teaching Assistant, 2 <sup>nd</sup> year mathematics course: electromagnetism<br>- Tutor for 1 <sup>st</sup> year physics course: mechanics laboratory.                   |
| A.Y.2001-2002 | - Teaching Assistant, 1 <sup>st</sup> year mathematics course: mechanics, electricity, magnetism.<br>- Tutor for 1 <sup>st</sup> year physics course: mechanics laboratory. |
| A.Y.2002-2003 | • Tutor for 1 <sup>st</sup> year physics course: mechanics  |
| A.Y.2003-2004 | • Tutor for 1 <sup>st</sup> year physics course: mechanics  |
| A.Y.2004-2005 | - Teaching Assistant, 1 <sup>st</sup> year physics course: mechanics  |
| A.Y.2008-2009 | - Teaching Assistant, 2 <sup>nd</sup> year physics course: electronics laboratory.<br>- Teaching Assistant, 1 <sup>st</sup> year optics course: optics laboratory           |

Doctorate School, A.Y.2003-2004	Lectures for the Ph.D. in Physics (“XIX Ciclo”): “ <i>Physics of the wave-particle interactions in the iono-magnetospheric region</i> ”
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Dep. of Physics, A.Y.2004-2005	Lectures for the advanced course of <i>Physics of the Ionosphere</i>
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Dept. of Biology, A.Y.2009-2010 A.Y.2010-2011	Adjunct Professor of "Laboratory of Informatics, statistics and experimental data analysis – Module of informatics – II Module"
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Doctorate School, A.Y.2003-2004	Lectures for the Ph.D. in Physics (“XIX Ciclo”): “ <i>Physics of the wave-particle interactions in the iono-magnetospheric region</i> ”
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Uninettuno University Faculty of Engineering

Since 2011	Professor of: Physics (since 2011), Fundamentals of applied mechanics (since 2011), Geochemistry and volcanology (since 2016), Electromagnetic Fields I (since 2019), Electromagnetic Fields I (since 2019).
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**Supervisor of several degree Theses**

“La Sapienza” University of Rome (2003)	Supervisor of the Degree Thesis in Physics: “ <u><i>Preseismic electromagnetic emissions and magnetospheric perturbations</i></u> ” by Aurora Buzzi.
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Roma Tre University (2004)	Supervisor of the Degree Thesis in Physics: “ <u><i>Generation and propagation of electromagnetic preseismic emissions</i></u> ” by Antonella Cirella.
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- Roma Tre University (2004) Supervisor of the Bachelor Thesis in Physics:  
 “Data analysis of electromagnetic differential strainmeter”  
 by Emiliano Mancini.
- “La Sapienza”  
University of Rome (2005) Supervisor of the Degree Thesis in Physics:  
 “The EGLE experiment on board of the International Space Station”  
 by Carlo Stagni.
- Roma Tre University (2006) Supervisor of the Degree Thesis in Physics:  
 “Study of the propagation of seismo-electromagnetic emissions into the atmosphere and magnetosphere” by Sara Ronchetti.

### **Scientific & research activity:**

- Edinburgh (1995) The study of the quasi-temporal gauge (started within the “APE Group” in Rome) has been developed on the lattices of the UKQCD collaboration with Prof. C. Parrinello and Dr.D.S.Henty at the Physics Department of the Edinburgh University.
- “La Sapienza”:  
University of Rome (1995-1997) Non-perturbative calculation of the  $f^B$  decay constant, study of the  $\Delta I=1/2$  rule in the non-leptonic K decay, evaluation of the B-parameters for the complete basis of 4-fermion operators with  $\Delta S=2$ .  
 Supervisors: Prof. G.Martinelli and Prof. A. Vladikas
- Roma Tre University: (1996-2000) Collaboration with Prof. Altarelli and Prof. Vittorio Lubicz to study the rate of the top decay process:  $t \rightarrow b W Z$ . This channel is on threshold and is allowed for  $m_{top} \approx 176$  GeV. The research has allowed to correct previous estimations (published in literature) of the branching ratio: the decay probability at the threshold level is strongly controlled by the effects of W and Z finite widths.
- ESPERIA satellite project: (2000) Study of the temporal correlation between electromagnetic emissions due to seismic activity and the precipitation of particle from the inner Van Allen radiation belts.  
 These phenomena can be investigated by particle detectors, Langmuir probes and EM field sensors installed on board of satellite. On this subject there is a fruitful collaboration between the Roma Tre University (Prof. V.Sgrigna), the “Tor Vergata” University of Rome (Prof. P.Picozza), the INFN (Italy), the MePhI of Moscow (Russian Federation) (Prof. Galper), the Georgian Academy of Science (Tbilisi, Rep. of Georgia) (Prof. D.Zilpimiani). In this framework, the Italian Space Agency (ASI) has supported the Phase A Study of the ESPERIA (Earthquake investigations by Satellite and Physics of the Environment Related to the Ionosphere and Atmosphere) satellite project dedicated to measure seismo-electromagnetic emissions. In the Phase A Study, Livio Conti:
- has participated to the mission design and planning;
  - has analysed the data collected by the SAMPEX satellite to define the ESPERIA orbital requirements;
  - has been responsible of the particle detector analyser (PDA) and of the MAFA magnetometers on board of the satellite.
- On the same subject, Livio Conti has collaborated to design the particle detector of the ARINA experiment (ROSAVIKOSMOS, & INFN) in orbit since 2006 within the PAMELA experiment.

“TELLUS”  
monitoring Network  
(since 2001)

Within the studies of the lithospheric deformations, Livio Conti is co-investigator of the tiltmeters TELLUS Network installed in Central Apennines (at the LNGS INFN Laboratory, in a L’Aquila cave, and in the Stiffe caves) to measure the “tilt” deformations of crustal blocks. The TELLUS network is continuously monitoring the area. Data registered in occasion of the Umbria seismic crisis (1997) have allowed observing important results of a seismic creep in the preparation focal area.

“Electromagnetic  
differential  
strainmeter” (First  
Patent of Roma Tre  
University)  
(2002-2003)

The ESPERIA team has developed an “electromagnetic differential strainmeter” (First Patent of Roma Tre University). This equipment can measure deformation near the seismic faults, but also the stability of buildings and landslides. A prototype of the instrument has been installed at Valmalenco for the monitoring of the Spriana (Sondrio) landslide. For this project Livio Conti has built the remote control system and the data acquisition and signal conditioning units. The project has been supported by the Lombardia Region.

“DEMETER”  
satellite  
(Since 2004)

The ESPERIA team is *Guest Investigator* of the DEMETER French satellite mission (Principal Investigator: Prof. M.Parrot, CNRS/LPCE). The mission is devoted to study seismic, anthropogenic and natural electromagnetic emissions. In this framework Livio Conti is analysing data of electric and magnetic field (IMSC and ICE experiments) and of particle (IDP experiment) measured on board of the DEMETER satellite. The study is dedicated to research electromagnetic emission induced by the seismic activity in the low magnetosphere.

“LAZIO-SIRAD-  
EGLE” experiment  
(2002-2006)

Within the LAZIO-SIRAD-EGLE mission on the International Space Station, Livio Conti:

- has been co-investigator of the EGLE experiment, constituted by a search-coil uniaxial magnetometer to measure low frequency geomagnetic fluctuations;
- has coordinated the EGLE data analysis
- has been responsible of the on board pc architecture.

The LAZIO-SIRAD-EGLE experiment (within the framework of the PRIN2002 program of the MIUR (Italian Education Minister)) is a collaboration between the Universities of Roma Tre, Perugia and “Tor Vergata”, INFN, MEPHI, FILAS-Regione Lazio). Aim of the experiment is to study the ionizing radiations (particle detector LAZIO-SIRAD, R.Battiston & P.Picozza) and the electromagnetic emissions (EGLE magnetometer, V.Sgrigna and L.Conti) on the topside ionosphere. The experiment has been carried out by the Italian astronaut R. Vittori, within the ENEIDE mission (April 2005) on board of the International Space Station. This study has been designed to monitor particle and electromagnetic ISS environment and to detect electromagnetic pre-seismic emissions and precipitation of particle bursts from the inner Van Allen radiation belts.

Triaxial magnetometer and electrometer  
(2006- 2007)

In collaboration with D. Zilpimiani (Georgian Academy of Science) and V.Sgrigna (Roma Tre University), L.C. has contribute to develop a triaxial magnetometer and an electrometer, in the framework of the project “Development of an innovative instrument for space born simultaneous measurement of perturbations of the electric/magnetic field and of high energy trapped particles in the Van Allen belts and their correlation with geophysical phenomena”, PRIN 2005, P.I. Prof. R.Battiston.

Model of propagation of seismo-electromagnetic signals  
(Since 2003)

Livio Conti is studying the propagation of electromagnetic waves through layered media with several conductivity profiles. Aim of the research is to model the seismo-electromagnetic source as a multipoles electric and magnetic expansion and to study the propagation of SEM from the hypocentral zone, to the Earth surface up to the ionosphere to evaluate the strength of the EM fields for satellite observations.

AUSONIA project  
(2007)

The candidate has worked in the group, led by Prof. V.Sgrigna, that has developed the satellite project AUSONIA for a call for proposal of the Italian Space Agency. Aim of the project is:

- to study the temporal stability of the flow of Van Allen particles and emissions of X-rays and gamma of terrestrial origin;
- mapping of the geomagnetic field;
- the ionospheric monitoring and the tomography of the plasmasphere;
- to study optical and UV emissions of tropospheric origin.

The project, developed in collaboration with Carlo Gavazzi Space SpA, the INFN and the INGV, involves more than 10 Universities and Research institutes. Livio Conti is involved in the development of X and gamma ray detector and is responsible of the MAGIA (search-coil magnetometer) experiment on board of AUSONIA.

Data Acquisition Systems  
(2008-2009)

The candidate is involved to develop techniques and electronic devices suitable for continuous and high efficiency spectral analysis and waveform reconstruction of analog signals. Aim of this research is to develop devices to optimize the dynamic range of the analog-digital conversion. These devices can find useful application in explorative studies of signals with unknown spectrum and temporal variability and for which a continuous calibration of the amplifier gain in each frequency band is needed. These systems are suitable in laboratory applications, in ground based and space based observations to study every kind of analog signals for devices requiring reduced form factor, modularity, and low power consumption.

LIMADOU – CSES satellite collaboration  
(since 2005)

L.C. participates to the LIMADOU collaboration between Italy and China to develop the CSES satellite, aimed at studying the electromagnetic environment of the Earth and monitoring the natural disasters, in particular, earthquakes. The satellite, launched on February 2<sup>nd</sup>, 2018 carries several instruments (such as fluxgate and search-coil magnetometers, high-energy particle detectors, LP-RPA and ion drift meter), all of them designed to jointly detect perturbations of different parameters and physical quantities. The CSES mission is a second generation satellite, after the French satellite DEMETER, conceived to collect a substantial amount of data in the monitoring: electric and magnetic fields (in a broad range of frequencies), electron temperature and ion density plasma, as well as fluxes of Van Allen trapped particles. In this context, L.C. leads the "Uninettuno - Earth" research group that is

involved in: theoretical modelling of the propagation of electromagnetic signals in stratified media (lithosphere - ionosphere - magnetosphere), analysis of satellite data and design of the CSES instruments. In particular, the "Uninettuno - Earth" research group is developing the CSES electromagnetic field sensor (EFD sensor). The EFD is an instrument of high sensitivity that will be installed on four expandable booms deployed away from the body of the satellite to make measurements as much as possible free from EM interference originating from the satellite spacecraft.

JEM-EUSO program  
(since 2011)

L.C. is working within the JEM-EUSO collaboration to develop the so-called Jem-Euso UV telescope, to be installed on board the International Space Station. The experiment aims at studying the fluorescence light emitted by high-energy cosmic rays hitting the Earth's atmosphere. In this context, he is developing the software to reconstruct the EAS events and to trigger the events detection for the Jem-Euso "pathfinder" experiments such as EUSO-TA (at the Telescope Array, Utah, USA); EUSO-Ballon (a balloon flight on August 25, 2014, for a test campaign with an UV laser projected from Earth and to study the UV background of the planet); EUSO-SPB (NASA balloon launched on April 24th 2017 from Wanaka (New Zealand) and landed on the South Pacific Ocean on May 7th.), Mini-EUSO (experiment installed on board of the ISS on 2019).

“Uninettuno-  
EARTH”  
Research group  
(since 2013)

L.C.s is the coordinator of the research group called "Uninettuno Earth" at the Faculty of Engineering of the University Uninettuno, Rector Decree 59/2013, devoted to study the Sun-Earth interactions and the near-earth space physics. A specific line of research concerns the study of seismo-electromagnetic precursors detectable on the ground and by satellite. In this context, the group collaborate to develop the project Italian-Chinese satellite CSES (China Seismo - Electromagnetic Satellite).

“Uninettuno-High-  
Energy”  
Research group  
(since 2013)

L.C. is the coordinator of the research group called "Uninettuno High-Energy", established at the Faculty of Engineering of the University Uninettuno, Rector Decree 60/2013, to study astrophysics and physics of fundamental interactions, and, in particular, cosmic rays through the JEM-EUSO experiment.

*Advances in Space  
Research*

Since 2004, Livio Conti is reviewer for the “*Advances in Space Research*” journal.

### Conferences – Meetings – Schools:

<u>Edinburgh (UK), February-March 1995:</u>	Collaboration with Prof. C.Parrinello e Dr. D.S.Henty on the quasi-temporal gauge. Grant given by the INFN.
<u>Cortona (Italy), June 1995:</u>	“Convegno annuale dei fisici teorici italiani” meeting. Title of the talk: “ <i>Study of the quasi temporal gauge on the lattice</i> ”
<u>Parma (Italy), September 1996:</u>	“V Seminario Nazionale di Fisica Teorica”, University of Parma (Italy), 2-15 September 1996.
<u>Otranto (Italy), September 1996:</u>	“IX Seminario Nazionale di Fisica Nucleare e Subnucleare”, Serra degli Alimini, Otranto (LE), Italy, 23-28 September 1996.
<u>Edinburgh (UK), July 1997:</u>	15th International Symposium on Lattice Field Theory (Lattice 1997): Edinburgh, UK, July 22-26, 1997. Title of the talk: “ <i>A High Statistics Lattice Calculation of Heavy-Light Meson Decay Constants</i> ”.
<u>Boulder, (Colorado,USA), July 1998:</u>	16th International Symposium On Lattice Field Theory, Boulder, Usa, July 13-18, 1998. Title of the talk: “ <i>B-parameters for <math>\Delta S = 2</math> SUSY Operators</i> ”.
<u>Corfù (Greece), September 1998:</u>	“ <i>Summer Institute of Corfù on the elementary Particle Physics</i> ”, 6-20 September 1998, Kerkyra, Greece.
<u>Moscow (Russian Fed.), June 2000:</u>	Russian-Italian meeting at the MePhI of Moscow, on the ARINA experiment and the ESPERIA mission
<u>Nice (France), April 2002:</u>	Conference: EGS- European Geophysical Society, 27th Annual Meeting, Nice, France, 21-26 April, 2002 Title of the contribution “ <i>Natural and anthropogenic emissions from the earth's surface and their effects in the near earth space</i> ”.
<u>Nice (France), April 2003:</u>	EGS-AGU-EUG Joint Assembly: Nice, France, 06-11 April 2003.
<u>Toulouse (France), September 2003:</u>	“ISEC2003 Radiation Belt Science” conference, September 2-5, Toulouse (France). Title of the talk: “ <i>A Possible Correlation between Seismic Events and Trapped Particles precipitation</i> ”, by A.Buzzi, L.Conti, A.M.Galper, S.V.Koldashov, V.Malvezzi, A.Murashov, P.Picozza, R.Scrimaglio, V.Sgrigna, and L.Stagni, P19, Abstract p. 45.
<u>Nice (France), April 2004:</u>	Conference: European Geophysical Union - EGU 1st General Assembly, Nice, France, 25–30 April 2004
<u>Corte (Corsica, France) July 2004:</u>	“ <i>NATO Advanced Study Institute on Sprites, Elves and Intense Lightning Discharges</i> ”, Corte in Corsica, July 24-31, 2004. Poster: “ <i>Seismo-electromagnetic emissions</i> ” by A Buzzi, L Conti, AM Galper, SV Koldashov, V Malvezzi, AM Murashov, P Picozza, R Scrimaglio, V Sgrigna, L Stagni.
<u>Moscow (Russian Fed.), January 2005:</u>	Participation to the <i>Acceptance Test 2</i> of the LAZIO-Sirad-EGLE experiment at the ENERGIA Centre of Moscow.



<u>Moscow,(Russian Fed.), February 2005:</u>	Head of the training for the astronauts (R.Vittori (Italy) and B.Thirsk (Canada)) about the EGGLE magnetometer working procedure for the ISS-ENEIDE mission. ( “ <i>Juri Gagarin</i> ” Center (Star City), Moscow, Russia)
<u>Frascati (Italy), February 2005</u>	Meeting “INFN-SPAZIO / 2”, Laboratori Nazionali di Frascati, 16 February 2005, Frascati (Italia)
<u>La Antigua (Guatemala), April 2005</u>	Conference: “ <i>Incontro Italo-CentroAmericano sulla prevenzione e mitigazione dei rischi naturali</i> ” organized by IILA, at La Antigua, (Guatemala), April 20-25, 2005. Title of the talk “ <i>Un método de estudio satelitar de precursoros sísmicos</i> ”.
<u>Toulouse (France), July 2005</u>	“IAGA 2005” conference ( <i>Toulouse, France, 18 - 29 July</i> ), talks : <ul style="list-style-type: none"> <li>• “<i>The EGGLE experiment</i>”, by L. Conti, A. Buzzi, V. Sgrigna, C. Stagni, et al. (The EGGLE experiment Team), IAGA2005-A-01522.</li> <li>• “<i>Influence of the seismic activity on the inner Van Allen radiation belt</i>”, by Conti L., Buzzi A., Galper A.M., Koldashov S.V., Murashov A.M., Picozza P, Scrimaglio R., Sgrigna, V. and Stagni L, IAGA2005-A-01518.</li> </ul>
<u>Milan (Italia), October 2005</u>	“ <i>I percorsi dell’Innovazione</i> ” exhibition (Il Sole 24 Ore & Camera di Commercio di Milano), “ <i>Filas per lo Spazio: la missione Eneide</i> ”, Smau 2005, Milano, Italia, October 19-23 2005.
<u>Perugia (Italia), December 2005</u>	1 <sup>st</sup> Italy-China meeting on “Observations and analysis of seismo-electromagnetic precursors on ground and from space”, (organized by INFN and CEA (Chinese Earthquake Administration)). Title of the talks: <ul style="list-style-type: none"> <li>• “<i>The EGGLE magnetometer</i>“, by L. Conti et al.;</li> <li>• “<i>Overview of the existing literature evidence of seismo-electromagnetic precursors: space based observations</i>”, by L. Conti;</li> <li>• “<i>Correlations between earthquakes and anomalous particle bursts from SAMPEX/PET satellite observations</i>”, Conti L., Buzzi A., Galper A.M., Koldashov S.V., Murashov A.M., Picozza P, Scrimaglio R., Sgrigna, V. and Stagni L..</li> </ul>
<u>Tolosa (Francia), June 2006</u>	“Symposium International Déméter” ( <i>Toulouse, France, 14-16 June 2006</i> ). Title of the talk: “ <i>Seismo induced electromagnetic and particle perturbations in space</i> ” by <u>Conti L.</u> , A.Buzzi, P.Picozza, S.Ronchetti, V.Sgrigna, C.Stagni, D. Zilpimiani.
<u>Noordwijk, (The Netherlands), July 2006</u>	“LAZIO experiment Acceptance Test”: ASTROLAB Mission on board of the International Space Station during Increment 14. European Space Research and Technology Centre (ESTEC), Noordwijk, (The Netherlands).
<u>Orleans (Francia), November 2006</u>	Meeting “LPCE - Gruppo Esperia”, within the “DEMETER Guest investigator programme”, at Laboratoire de Physique et Chimie de, l’Environnement (LPCE), Orleans, France.
<u>ESTEC (Olanda), February 2007</u>	Final Review meeting on the ASTROLAB Mission on board of the International Space Station during Increment 14. Title of the talk: <i>The LAZIO experiment during the Increment 14</i> .
<u>Roma (Italy), May 2007</u>	Meeting: “ACTEL Radiation tolerant FPGAs for satellites and high-energy physics”, Dip. di Fisica, Università Roma Tre, Rome, Italy.
<u>Perugia (Italy), July 2007</u>	“IUGG, XXIV General Assembly”, (Perugia, 2-13 July 2007). Talk: <i>Possible influence of seismic activity on the propagation of anomalous</i>

	<p><i>whistlers recorded in space</i>, by: L.Conti, A. Buzzi, M. Parrot, J.L.Pinçon, V.Sgrigna and D.Zilpimiani, IAGA-IASPEI-IAVCEI Joint Section “JSS010: Progress in electromagnetic studies on earthquakes and volcanoes - Seismo-electromagnetic studies using space technology”, Abstr. 10093, (Oral Presentation n.2072).</p> <p>Poster: <i>Statistical study of anomalous fluctuations of whistler data recorded by DEMETER</i>, by A. Buzzi, L.Conti, M. Parrot, J.L.Pinçon, V.Sgrigna and D. Zilpimiani, IAGA-IASPEI-IAVCEI Joint Section "JSS010: Progress in electromagnetic studies on earthquakes and volcanoes - Seismo-electromagnetic studies using space technology", Abstr. 10032, (Poster presentation n.2090).</p>
<u>Jakarta (Indonesia), July 2007</u>	<p>“International Workshop on Early Warning and Monitoring Earthquake by Using Electromagnetism Detecting Satellite” (25 – 27 July 2007, Jakarta, Indonesia) organized by Secretariat of Asia Pacific Multilateral Cooperation in Space Technology and Applications (AP-MCSTA), Indonesian National Institute of Aeronautics and Space (LAPAN), and China National Space Administration (CNSA).</p> <p>Talk: “<i>Experience on the Magnetic and Electric Detectors of the EGGLE-LAZIO Technology Demonstrator</i>”, by: L. Conti and V. Sgrigna.</p>
<u>Rome (Italy), December 2007</u>	Meeting: “Corso di programmazione di FPGA: Radiation tolerant FPGAs for satellites and high-energy physics”, Dept. of Physics, Roma Tre University.
<u>Perugia (Italy) February 2008</u>	<p>2<sup>nd</sup> Italy-China meeting on “Observations and analysis of seismo-electromagnetic precursors on ground and from space”, (organized by INFN and CEA (Chinese Earthquake Administration)). Talks:</p> <ul style="list-style-type: none"> <li>• “<i>The electromagnetic detectors for satellite observations: from the EGGLE experiment to the three-axial search-coil magnetometer</i>”</li> <li>• “<i>Seismo electromagnetic precursors: the Sampex data analysis</i>”</li> </ul>
<u>Rome (Italy) April 2009</u>	<p>DPC (Dipartimento della Protezione Civile) workshops:</p> <ul style="list-style-type: none"> <li>• SIGRIS project “<i>Sistema di osservazione spaziale per la Gestione del Rischio Sismico</i>” (ASI-INGV) (P.I. S. Salvi)</li> <li>• S1 project “<i>Determinazione del potenziale sismogenetico in Italia per il calcolo della pericolosità sismica</i>” (P.I. S.Barba)</li> </ul>
<u>Rome (Italy) October 2009</u>	<p>“<i>Convegno annuale dei progetti sismologici, Convenzione-Quadro tra DPC e INGV, Triennio 2007-09</i>”. Poster:</p> <ul style="list-style-type: none"> <li>▪ “<i>Uncertainty of geologic and geodetic observables computed via FEM simulation of Italy</i>” for S1 project.</li> </ul>
<u>Rome (Italy) June-July 2010</u>	“Final Meeting of the Seismological Projects”, <i>Convenzione-Quadro tra DPC e INGV, Triennio 2007-09</i> . Poster title “ <i>Analysis of the numeric uncertainty on the FEM estimations of geologic and geodetic observables for the Italian region</i> ”.
<u>Beijing (China) August 2011</u>	<p>“<i>Italian-Chinese meeting for the CSES satellite: the EFD experiment</i>”: Talks:</p> <ul style="list-style-type: none"> <li>• “<i>Electric Field Detector scientific objectives</i>”,</li> <li>• “<i>Seismo-electromagnetic phenomena from space &amp; on ground</i>”.</li> </ul>
<u>Beijing (China) September 2011</u>	<p>“APSCO (Asia-Pacific Space Cooperation Organization) 3rd international conference”. Talk:</p> <ul style="list-style-type: none"> <li>• “<i>Italian participation to the CSES project</i>”</li> </ul>

<u>Erice (Italy)</u> <u>October 2012</u>	“HIGHLY SPECIALIZED SEMINARS «EUGENE P. WIGNER», 11th Seminar: EARTHQUAKES EARLY WARNING FROM SPACE”, Talk: “ <i>Instrumentation and analysis strategies to search for particle precipitation from space</i> ”, Erice, Italy, 21-24 October 2012.
<u>Tenerife (Spain)</u> <u>June 2013</u>	“XIII International Meeting of the JEM-EUSO Collaboration” Tenerife, Spain, June 17-21 2013.
<u>Gaeta (Italy)</u> <u>September 2013</u>	INAF PhD School of Astrophysics “Francesco Lucchin”, September 15-20, 2013, Istituto Nautico Guardia di Finanza, Castello Aragonese, Gaeta (Latina), Italy.
<u>Lanzhou (China)</u> <u>December 2013</u>	“China-Euro Academic Seminar on Space Electric Field Exploration (CEAS-SEFE). Lanzhou, China, December 3-6 2013. Talk: “ <i>A review of electromagnetic and iono-magnetospheric phenomena associated with the seismic activity.</i> ”
<u>Palermo (Italy)</u> <u>June 2014</u>	15th International JEM-EUSO Meeting, June 9-13, 2014, Palermo, Italy.
<u>Beijing (China)</u> <u>November 2014</u>	1st CSES Satellite Workshop, November 14-16, 2014, Beijing, China. Talk: <i>Algorithms for CSES mission data analysis</i> Authors: L. Conti & P.M. Innocenzi for the LIMADOU-CSES Collaboration
<u>Moscow (Russia)</u> <u>December 2014</u>	16th JEM-EUSO International Meeting December 1 <sup>st</sup> – 5 <sup>th</sup> , 2014, Moscow State University, Moscow, Russia
<u>Monte Porzio (Italy)</u> <u>June 2014</u>	Meeting: 10 years of Pamela, June 15 <sup>th</sup> , 2014, Monte Porzio, Italy.
<u>Turin (Italy)</u> <u>January 2015</u>	Euso-balloon meeting, January 22-23, 2015, Turin, Italy.
<u>Paris (France)</u> <u>June 2016</u>	19th JEM-EUSO International Meeting, June 20-24, 2016, Paris, APC, University Paris Diderot, Paris, France
<u>Beijing (China)</u> <u>August 2016</u>	2nd CSES Satellite Workshop, Beijing, China, August 23-25, 2016
<u>Lanzhou (China)</u> <u>August 2016</u>	19th Meeting of IASPEI/IAGA/IAVCEI Inter-Association Working Group on “Electromagnetic Studies of Earthquakes and Volcanoes” (EMSEV), Lanzhou, China, August 25-29, 2016. Livio Conti has participated as EMSEV correspondence member.
<u>Madrid (Spain)</u> <u>May 2016</u>	ESA meeting: “Call for new science ideas in ESA's science programme”, at ESAC (European Space Astronomy Centre), Madrid, Spain, May 31st, 2016.
<u>Rome (Italy)</u> <u>October 2016</u>	Conference OOFHEC2016 - The Online, Open and Flexible Higher Education Conference, Enhancing European Higher Education; “Opportunities and impact of new modes of teaching. EADTU conference, hosted by UNINETTUNO University, October 19-21, 2016, Rome, Italy. Title of the talk: “Beyond remote and virtual labs: mobile laboratories for physics and engineering in e-learning and traditional teaching”
<u>Vienna (Austria)</u>	European Geophysical Union - EGU General Assembly 2017, 23–28 April

<u>April 2017</u>	2017, Vien (Austria) <ul style="list-style-type: none"> <li>Title of the talk: <i>Neural network-based recognition of whistlers on spectrograms detected by satellite</i>. Authors: Livio Conti and the CSES-LIMADOU Collaboration</li> <li>Poster: <i>The Italian contribution to the CSES satellite</i>. Authors: Livio Conti and the CSES-LIMADOU Collaboration.</li> <li>Poster: <i>The High Energy Particle Detector (HEPD) for the CSES Satellite</i>. Authors: R. Sparvoli &amp; the CSES-LIMADOU Collaboration</li> <li>Poster: <i>The high-performance electric field detector EFD for space-based measurements</i>. Authors: D. Badoni and the CSES-LIMADOU Collaboration</li> </ul>
<u>Banff, Alberta (Canada)</u> <u>March 2017</u>	Fourth Swarm Science Meeting & Geodetic Missions Workshop, 20-24 March 2017, Banff, Alberta (Canada) Talk: <i>The Contribution of CSES Mission to Study Lithosphere-Atmosphere-Ionosphere Coupling Phenomena Through the Analysis of Combined Missions Data and Ground Measurements</i>
<u>Turin (Italy)</u> <u>October 2017</u>	Meeting on JEM-EUSO program. Physics Department, University of Torino, October 16 - 20, 2017, Turin, Italy.
<u>Rome (Italy)</u> <u>February 2018</u>	Convegno Nazionale IAGA: Dal sole all'interno della Terra, 21-22 Febbraio 2018, INGV, Roma. Talk: The CSES satellite: a mission for investigating the near-Earth electromagnetic, plasma and particle environment, by Livio Conti on behalf of the LIMADOU-CSES Collaboration.
<u>Vienna (Austria)</u> <u>April 2018</u>	European Geophysical Union - EGU 2018 meeting, 8–13 April 2018, Vienna, Austria. Session NH4.5/EMRP4.27/SM3.03 – Short-term Earthquakes Forecast (StEF) and multi-parametric time-Dependent Assessment of Seismic Hazard (t-DASH) <ul style="list-style-type: none"> <li>Talk: Study of the correlations between precipitating Van-Allen particles and seismic events: the methodology and the HEPD particle detector of CSES satellite,</li> <li>by Livio Conti et al., EGU2018-17098-5,</li> <li>Poster: High-performance electric field detector for space-based measurements, by D. Badoni et al., EGU2018-19718</li> </ul>
<u>Chengdu, (China)</u> <u>May 2018</u>	International Conference for Decade Memory of the Great Wenchuan Earthquake with 4th International Conference on Continental Earthquakes, May 12-14, 2018, Chengdu, China. <ul style="list-style-type: none"> <li>Invited talk in Session S2-4-3 Multi-parameters observations of pre-earthquake signals and their potential for prediction:  "Analysis of the correlation between earthquakes and disturbances of the van Allen particles detected by SAMPEX, Demeter and CSES satellites" by L. Conti et al.</li> <li>Talk in the Session S2-3-4 Development of geophysical field detecting satellite mission:  "An advanced electric field detector optimized for revealing seismo-associated perturbations in space" by L. Conti et al.</li> <li>Talk: "The Italian participation in the CSES Mission", by R. Iuppa et al.</li> </ul>

<u>Pasadena CA (USA)</u> <u>July 2018</u>	42nd scientific assembly of the Committee On Space Research (COSPAR), July 14 - 22, 2018, Pasadena, California (USA) <ul style="list-style-type: none"> <li>• L. Conti is Member of the Scientific Organizing Committee of the COSPAR-18-S.1 SPECIAL EVENT: “CSES preliminary results on ionospheric variability and its connection with seismic activity and solar forcing”</li> <li>• Talks in the session COSPAR-18-S.1 <ul style="list-style-type: none"> <li>– Looking for seismo-induced perturbations of the inner Van Allen belts with the LIMADOU-HEPD particle detector of the CSES mission, by Livio Conti et al.</li> <li>– The High Energy Particle Detector (HEPD) on-board CSES, by Cristian De Santis et al.</li> <li>– A high-performance electric field detector for space-borne measurements, by D. Badoni, E. Fiorenza, G. Masciantonio, G. Vannaroni, L. Conti, C. De Santis, P. Diego</li> </ul> </li> <li>• Poster in the session COSPAR-18-S.1 <ul style="list-style-type: none"> <li>– In flight performance of the electronics of the High Energy Particle Detector onboard CSES by V. Scotti and G. Osteria for the CSES-Limadou Collaboration</li> </ul> </li> </ul>
<u>Potenza (Italy)</u> <u>September 2018</u>	Member of the Organizing Committee of the conference “EMSEV 2018”, 20th International meeting of the “Electromagnetic Studies of Earthquakes and Volcanoes” Inter-Association Working Group of ASPEI/IAGA/IAVCEI, Potenza, Italy, 17-21 September 2018. <ul style="list-style-type: none"> <li>• Title of the talk: HEPD: the instrument, the first data and the analysis method for investigating seismo-associated perturbations. Authors: L. Conti et al. and the CSES-LIMADOU Collaboration.</li> <li>• Poster: The Italian electric field detector for space observations. Authors: L. Conti and the CSES-LIMADOU Collaboration.</li> <li>• Poster: The Italian contribution to the CSES satellite missions. Authors: L. Conti et al. and the CSES-LIMADOU Collaboration.</li> </ul>
<u>Frascati (Italy)</u> <u>October 2018</u>	8th Swarm Data Quality Workshop (SDQW), ESA Centre for Earth Observation (ESRIN), Frascati, Italy, 8 - 12 October 2018.
<u>Beijing (China)</u> <u>November 2018</u>	3 <sup>rd</sup> International workshop of China Seismo-Electromagnetic Satellite (CSES) mission, Institute of Crustal Dynamics, China earthquake Administration (ICD-CEA), Beijing, China, 15-19 November 2018. Title of the talks: <ul style="list-style-type: none"> <li>• Preliminary analyses of CSES high-energy particle data for studying seismo-electromagnetic perturbations of the inner Van Allen belts. Authors: L. Conti et al. on behalf of the CSES- LIMADOU Collaboration.</li> <li>• A high-performance electric field detector for space-borne measurements. Authors: D. Badoni et al. for the CSES-Limadou Collaboration.</li> <li>• The HEPD detector on board CSES: status and preliminary analysis, Authors: A. Sotgiu and the CSES-Limadou collaboration.</li> </ul>
<u>Washington, DC (USA)</u> <u>December 2018</u>	American Geophysical Union - AGU 2018 Fall Meeting, Washington, DC, USA, 10-14 December 2018. Title of the talks: <ul style="list-style-type: none"> <li>• CSES-01 Mission: Preliminary Results (Invited talk). Authors: L.</li> </ul>

	<p>Conti et al. on behalf of the CSES- LIMADOU Collaboration. Session: “Pre-Earthquake Processes: A Multidisciplinary Approach to Earthquake Prediction Studies”. Abstract ID#: 404157.</p> <ul style="list-style-type: none"> <li>• Earth observation in the ultraviolet: the Mini-Euso telescope. Authors: L. Conti and al. Session: “Ultraviolet Observing of Solar System Targets”. Abstract ID#: 430799.</li> </ul>
<p><u>Trento (Italy)</u> <u>January 2019</u></p>	<p>LIMADOU General Meeting, TIFPA-INFN, Trento Italy, Jan. 31st –Feb. 1st, 2019.</p> <p>Title of the talk: HEPP data analysis and comparison with HEPD. Authors: L. Conti et al. and the CSES-Limadou collaboration.</p>
<p><u>Vienna (Austria)</u> <u>April 2019</u></p>	<p>European Geophysical Union – EGU 2019 meeting, 7–12 April 2019, Vienna, Austria.</p> <p>L. Conti has been Co-Convener of the session “Satellite observations for space weather and geo-hazards” together with M. Piersanti, R. Floberghagen, M. Parrot and S. Xuhui.</p> <p>Title of the talks:</p> <ul style="list-style-type: none"> <li>• Preliminary analysis of HEPD data looking for seismo-associated perturbation of the Van Allen belts. Authors: L. Conti et al. and the CSES-Limadou Collaboration, Abstract ID EGU2019-8386-3. Session: NH4.3/AS4.62/EMRP2.40/ESSI1.7/GI2.13/SM3.9, Short-term Earthquakes Forecast (StEF) and multi-parametric time-Dependent Assessment of Seismic Hazard (t-DASH).</li> <li>• The influence of VLF transmitters on the magnetospheric particles detected by the HEPD experiment. Authors: C. Fornaro et al. and the CSES-Limadou Collaboration, Abstract ID EGU2019-8760-4. Session: NH6.9/AS4.57/EMRP2.10/ESSI1.9/GI3.14/NP9.3/SM5.4/ST4.10, Satellite observations for space weather and geo-hazards.</li> <li>• CSES observations of the Ring Current variations during the geomagnetic storm of Aug 25th, 2018. Authors: A. Parmentier et al. and the CSES-Limadou Collaboration. Session: NH6.9/AS4.57/EMRP2.10/ESSI1.9/GI3.14/NP9.3/SM5.4/ST4.10, Satellite observations for space weather and geo-hazards.</li> </ul>
<p><u>San Francisco (USA)</u> <u>December 2019</u></p>	<p>American Geophysical Union - AGU 2019 Fall Meeting, San Francisco, USA, 09-13 December 2019.</p> <p>L.Conti is co-convener of the Session “NH029 - Multi-sensor observations of pre- earthquake signals, geohazards, and space weather from space and ground observations”. The session has been accepted and officially confirmed on August 19th, 2019 by including both oral and poster exhibitions.</p>

**Software expertise:**

- OS: UNIX, Linux and WINDOWS.
- Data acquisition and remote control
- Digital Signal Processor (DSP) programming
- FORTRAN, C , CVI, etc.
- Internet: HTML, ASP JavaScript, JScript, VBScript.
- Database: SQL, Transact-SQL, Access.
- MATHEMATICA, MATLAB.

**Data processing:**

- Office, LaTeX, Origin
- Statistical data Analysis
- Signal Analysis (IDL , SWAN, Code Composer Studio)
- Management of satellite database and monitoring networks
- Orbital analysis, satellite flight simulation (STK)
- Numerical simulations and Montecarlo techniques

## Publications:

1. **Testing the Quasi-temporal Gauge on the Lattice**  
L. Conti, C. Parrinello, S. Petrarca and A. Vladikas.  
*Physics Letters B* 373 (1996), p.164-170.
2. **Full QCD with dynamical Wilson fermions on a  $24^3 \times 40$ -lattice – a feasibility study,**  
T $\chi$ L-Collaboration: L. Conti, N. Eicker, L. Giusti, U. Glassner, S. Gusken, H. Hoerber, Th. Lippert, G. Martinelli, F. Rapuano, G. Ritzenhofer, K. Schilling, G. Siegert, A. Spitz, and J. Viehoff, *Nucl. Phys. B (Proc. Suppl.)* 53 (1997) 222.
3. **A High Statistics Lattice Calculation of Heavy-Light Meson Decay Constants**  
C. R. Allton, L. Conti, M. Crisafulli, L. Giusti, G. Martinelli, F. Rapuano.  
*Phys.Lett. B* 405 (1997) 133.
4. **Non-perturbative Renormalization of the Complete Basis of Four-fermion Operators and B-parameters**  
L. Conti, A. Donini, V. Gimenez, G. Martinelli, M. Talevi, A. Vladikas.  
*Nucl.Phys.B (Proc.Suppl.)*. 63 (1998) 880.
5. **Heavy-Light Meson Decay Constants on the Lattice**  
L. Conti *Nucl.Phys. Proc.Suppl.* 63 (1998) 359.
6. **Lattice B-parameters for  $\Delta S = 2$  and  $\Delta I = 3/2$  Operators**  
L. Conti, A. Donini, V. Gimenez, G. Martinelli, M. Talevi, A. Vladikas.  
*Phys.Lett. B* 421 (1998) 273.
7. **B-parameters for  $\Delta S = 2$  Supersymmetric Operators**  
C. R. Allton, L. Conti, A. Donini, V. Gimenez, L. Giusti, G. Martinelli, M. Talevi, A. Vladikas.  
*Phys.Lett.B* 453 (1999) 30.
8.  **$\Delta M_k$  and  $\epsilon_k$  in SUSY at the next-to-leading order**  
M. Ciuchini, L. Conti, A. Donini, E. Franco, V. Gimenez, L. Giusti, V. Lubicz, G. Martinelli, A. Masiero, I. Scimemi, L. Silvestrini, M. Talevi, A. Vladikas  
*Journal of High Energy Phys.* 9810 (1998) 008.
9. **B-parameters for  $\Delta S = 2$  Supersymmetric Operators**  
C. R. Allton, L. Conti, A. Donini, V. Gimenez, L. Giusti, G. Martinelli, M. Talevi, A. Vladikas.  
*Nucl.Phys.B Proc.Suppl.* 73 (1999) 315.
10. **The  $t \rightarrow b W Z$  decay in the Standard Model: a critical reanalysis**  
G. Altarelli, L. Conti and V. Lubicz, *Phys.Lett. B* 502 (2001) 125.
11. **Ionospheric perturbations possibly caused by preseismic electromagnetic Emissions,**  
V. Sgrigna, L. Conti, M. Corsi, A. Galper, V. Malvezzi, P. Picozza, R. Scrimaglio, L. Stagni and D. Zilpimiani. *Eos.Trans.AGU*, 82(20), *Spring Meet.Suppl.*, S52A-14, S272, 1330h Poster (2001).
12. **TELLUS. Ground deformations and their effects on the near-Earth space,**  
Sgrigna, V., Conti, L., Malvezzi, V.,  
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13. **ESPERIA Phase A Report**  
(*ESPERIA Collaboration*) V.Sgrigna, L. Conti, V.Malvezzi, M. Parisi , L.Stagni, P.Picozza, M. Casolino, M.P. De Pascale, G. Furano, F.Mariani, A.Salsano, M. Caputo, P.Dominici, P. Spillantini, R. Scrimaglio, N.Finetti, L.Carota, R.Console, A.Lisi A.M. Lombardi, M.Parrot, A.M. Galper, S.V. Koldashov, A.M. Murashov, I. Shirokov, V. Nikolaev, D. Zilpimiani , Z. Chelidre, T.B. Yanovskaya, V.N. Troyan, K. Eftaxias, V. Hadjcontis, R. Bruno, A. Di Lillis, M. Bini, A. Ignesti, V. Piuri.  
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14. **TELLUS** Sgrigna, V., Conti, L., Malvezzi, V.,  
*LNGS Annual Report 2002, INFN, LNGS/EXP-07/03, 2003, pp. 217-232.*
15. **Natural and anthropogenic emissions from the earth's surface and their effects in the near-earth space.** V.Sgrigna, R.Console, L.Conti, A.M.Galper, V.Malvezzi, M.Parrot, P.Picozza, R.Scrimaglio, P.Spillantini and D.Zilpimiani.  
*EGS-02-A-05730;ST16-1FR5P-068; ST068, Nice, France, April 2002, p. 250.*
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17. **The ESPERIA Mission,**  
V.Sgrigna R. Console, L. Conti, A. Galper, V. Malvezzi, M. Parrot, P. Picozza, R. Scrimaglio, P. Spillantini, D. Zilpimiani, "Ground and Space Methods for Monitoring EM Pre-earthquake Phenomena", *EOS Trans., AGU, vol. 84, T52D, n.46, F1462, 2003.*
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19. **Pre-earthquake electromagnetic waves propagation from the underground seismic source to the Earth's surface,** Malvezzi V., A. Cirella, L. Conti, V. Sgrigna, 2003.  
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20. **The ESPERIA space project: a mission for monitoring preseismic emissions and anthropogenic effects in the near-Earth space, and for defining the near-Earth magnetic environment,** Sgrigna V., R. Console, L. Conti, A.M. Galper, V. Malvezzi, M. Parrot, P.Picozza, R. Scrimaglio, P. Spillantini, D. Zilpimiani, 2003., *2nd CHAMP Science Meeting*, September 1-4, 2003, GeoForschungsZentrum, Potsdam, Germany.  
[http://www.gfz-potsdam.de/pb1/CSM2/csm2\\_abstracts\\_magnetics.pdf](http://www.gfz-potsdam.de/pb1/CSM2/csm2_abstracts_magnetics.pdf) , p.20.
21. **A Model for the Propagation of Preseismic Electromagnetic Fields through Lithospheric and Atmospheric Media**  
L. Conti, A. Cirella, V. Malvezzi, and V. Sgrigna, *Proc.1<sup>st</sup> General Assembly, European Geosciences Union, Nice, France, 25-30 April 2004, NH4.02-1FR4P-0430, p. 337, 2004.*  
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23. **The ESPERIA Project: a Mission to Investigate the near-Earth Space,** Sgrigna, V., R. Console, L. Conti , A.M. Galper, V. Malvezzi, M. Parrot, P. Picozza, R. Scrimaglio, P. Spillantini, D. Zilpimiani, 2004, in: *Earth Observation with CHAMP, Results from Three*

- Years in Orbit*, C.Reigberg, (Editor), Potsdam, 2004, Springer *Geosciences Series*, Berlin, pp.407-412. ISBN-10: 3540228047. ISBN-13: 978-3540228042.
24. **ESPERIA: an equatorial magnetic, plasma and particle mission for monitoring perturbations in the topside ionosphere and for defining the near-Earth magnetic environment**, Sgrigna, V., Console, R., Buzzi, A., Conti, L., Galper, A.M., Malvezzi, V., Parrot, M., Picozza, P., Scrimaglio, R., Spillantini, P., Zilpimiani, D., *EOS Trans., AGU, vol. 85, GP13A-03, n.17, JA162, 2004.*
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  26. **TELLUS. Ground Deformations and their Effects in the near-Earth Space** V. Sgrigna, A. Buzzi, L. Conti, C. Stagni, D. Zilpimiani *LNGS Annual Report 2004, INFN, LNGS/EXP-01/05, 2005, 189-200.*
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  31. **Correlations between earthquakes and anomalous particle bursts from SAMPEX/PET satellite observations**, V. Sgrigna, L. Carota, L. Conti, M. Corsi, A.M. Galper, S.V. Koldashov, A.M. Murashov, P. Picozza, R. Scrimaglio and L. Stagni, *J. Atm. Solar-Terrestrial Phys., Vol. 67 n. 15, 2005, p.1448-1462*
  32. **Un método de estudio satelitar de precursores sísmicos** L.Conti, in proceedings of “*Encuentro Italo-Centroamericano sobre Prevención y Mitigación de Riesgos Naturales*”, La Antigua, (Guatemala), 20-22 Aprile 2005. Ed. IILA, *Cuadernos IILA, Nueva Serie Técnico-Científica n.3*, © IILA, 2006.
  33. **TELLUS. Ground deformations and their effects on the near-Earth space** V. Sgrigna, A. Buzzi, L. Conti, C. Stagni, D.Zilpimiani,

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