

# Curriculum Vitae

## Dr. STEFANO MINARDI



**Date and place of birth:** 5 January 1974, Como, Italy  
**Nationality:** Italian/German  
**Status:** Married, two children  
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### Research Interests

**Astrophotonics:** astronomical interferometry sensors, adaptive optics, coronagraphy.  
**Nonlinear science:** optical solitons, high intensity laser physics, photonics,  
**Scientific imaging:** intensity and phase spatiotemporal imaging, phase retrieval algorithms.

### Scientific production

Peer review journals	52 publications with more than 950 citations, among them: 10 Physical Review Letters 15 Optics Letters
Book chapters	1
Oral presentations	56 at international conferences (of which 11 invited)
Posters	33 at international conferences
Proceedings	20
Hirsch h-index	19

### Employment record

<i>Jan 2016-Dec 2016</i>	<b>Scientific collaborator at the Astrophysical Institute Potsdam –</b> Development of applications of integrated optics to astronomical instrumentation.
<i>Jan 2015-Oct 2015</i>	<b>Scientific collaborator at the Fraunhofer Institute Jena –</b> Design and simulation of an adaptive optical system for the European Space Agency.
<i>Feb 2010-Jun 2017</i>	<b>Scientific collaborator with teaching duties at the Abbe School of Photonics</b> <i>Faculty of Astronomy and Physics – Friedrich Schiller University Jena, Germany -</i> Experimental activities in nonlinear optics and astrophotonics. Teaching of graduate and undergraduate students.
<i>Feb 2008-Feb 2010</i>	<b>Marie Curie Transfer of Knowledge fellowship</b> <i>Faculty of Astronomy and Physics – Friedrich Schiller University Jena, Germany -</i> Design and realization of a fibre interferometer for the European Southern Observatory, Experimental activities in nonlinear optics. Teaching of graduate and undergraduate students.
<i>Mar2007-Jan2008</i>	<b>Assistant Professor</b> <i>Technological Educational Institute of Crete, Greece -</i> Experimental activities in plasma physics and nonlinear optics. Teaching undergraduate

students.  
 Mar2005-Feb2007 **Marie Curie Transfer of Knowledge fellowship**  
*Technological Educational Institute of Crete, Greece*  
 Experimental activities in plasma physics. Teaching of undergraduate students.  
 Jan 2003-2005 **Post-doctoral fellow**  
*ICFO – Institute of Photonic Sciences - Barcelona - Spain*  
 Experimental activities in nonlinear and quantum optics. Teaching of graduate students

## Education

1999-2002 **Ph.D.** in Physics, Milano University (1999-2002)  
**Title of the dissertation:** “*Generation, control and characterization of spatial solitons excited by short light pulses in quadratic nonlinear media*”  
**Final mark:** Excellent  
 1993-1998 **Degree in Physics**, Insubria University, Como (1993-1998)  
**Title of the dissertation:** “*Observation of optical vortices and Bessel  $J_0$  beams in parametric amplification of quantum noise*”(in Italian).  
**Final mark:** 110/110 cum laude.  
 1988-1993 State Technical Highschool “P.Carcano”, Como - Diploma in Textile Chemistry,  
**Final mark:** 60/60.

## Training

2-4 Dec 2009 **Workshop:** 'Quantum of quasars' – Grenoble, France  
 18-20 Nov 2009 **Workshop:** 'Ultrafast Nanooptics' – Lauterbad, Germany  
 2-13 Jun 2008 **Summer School:** “Astrometry and imaging with the Very Large Telescope Interferometer”, Keszthely, Hungary  
 12-18 Sep 2004 **Summer School:** “Quantum and nonlinear optics”, Lyngby, Denmark  
 Sep-Dec 2001 **Erasmus/Socrates** students’ exchange program.  
 Visit at the Department of Quantum Electronics, Vilnius University  
 25 Jun/25 Jul 2001 **Summer school:** “European School for Training in Experiments with Lasers and Laser Applications” - Vilnius, Lithuania  
 2-13 Oct 2000 **Summer school:** “Plasma Physics and Ultrafast Optics” – Capri, Italy

## Projects

**From:** 01.07.2014  
**to:** 30.06.2017  
**Title of the project:** ALSI – Advanced Laser-writing for Stellar Interferometry  
**Funding institution:** Bundes Ministerium Bildung und Forschung  
**Local project leader:** Dr. Stefano Minardi  
**Budget:** 400000 Euro  
**From:** 01.05.2012  
**to:** 01.05.2015  
**Title of the project:** Ph.D. Fellowship on astrophotonic applications  
**Funding institution:** Abbe School of Photonics, Jena  
**Project leader:** Dr. Stefano Minardi/Prof. Neuhäuser  
**Budget:** 86000 Euro  
**From:** 30.09.2011  
**to:** 14.10.2011  
**Title of the project:** Time-resolved spectroscopic characterization of laser-plasma  
**Funding institution:** LASERLAB EUROPE  
**Project leader:** Dr. S. Minardi  
**From:** 20.07.2009  
**to:** 20.03.2010  
**Title of the project:** MAMMUT: Mirror vibrAtion Metrology systeM for the Unit Telescope  
**Funding institution:** European Southern Observatory  
**Project leader:** Dr. Stefano Minardi/Prof. Neuhäuser  
**Budget:** 111000 Euro  
**From:** 01.03.2008  
**to:** 20.04.2008  
**Title of the project:** Time-resolved plasma dynamics in laser-plasma filaments  
**Funding institution:** LASERLAB EUROPE  
**Project leader:** Dr. A. Gopal  
**From:** 12.03.2007  
**to:** 24.03.2007  
**Title of the project:** Time-resolved plasma dynamics in laser-plasma filaments  
**Funding institution:** LASERLAB EUROPE  
**Project leader:** Dr. S. Minardi  
**From:** 2006  
**to:** 2008  
**Title of the project:** Summer School on Optoelectronics Lasers and Applications  
**Funding institution:** EU Socrates/Erasmus Intensive Program  
**Budget:** 75000 Euro

## Teaching

Dec 1998-present

Extensive experience in giving lectures of theoretical and experimental physics in Italy, Spain, Greece and Germany. Supervision of undergraduate and Ph.D. students. Currently teaching a course on Astrophotonics (30 hours lecture + 15 hours exercise)

## Science popularization

1990-present

Involved in science popularization at the local amateur astronomical association of Como. Authored the chapter on star evolution in "Osservare il Cielo – corso di astronomia pratica" - Ed. De Vecchi, 1994 – a practical guide to the observation of the sky. Organization and presentation in local language of science exhibits in Italy, Spain, Germany.

## Management skills

- Project leader of the BMBF-funded ALSI project.
- ESO-funded project for the development of a large scale fiber interferometer for the Very Large Telescope Interferometer.
- Currently coordinating the work of 1 Ph.D. student.
- Lead successfully a two weeks experiment at the LASERLAB Europe Facility Laser Center Vilnius from 12.03.2007 to 24.03.2007.
- Concept and organization of two editions (2006 and 2007) of the Summer School on Optoelectronics, Lasers and Applications - TEI Crete - Greece.

## Areas of expertise

### Astronomical instrumentation

interferometry, coronagraphy, adaptive optics

### General physics

### Linear and nonlinear optics

theory, photonics (integrated optics, fiber optics, lasers etc.)

### Plasma physics

### Laser sources

theory, technology

### Light detection

CCD and infrared cameras, single photon counting detector

### UV-VIS+IR spectroscopy

### Scientific/Technical Programming

Simulation with Matlab and C++ (hydrodynamics/optical design/nonlinear propagation), LabView, Rsoft

### Optical metrology:

space-time diagnostic for ultrashort pulses, digital holography, interferometry, wavefront sensor design

## Languages

	<i>Written</i>	<i>Spoken</i>	<i>Reading</i>
<b>English</b>	Very good	Very good	Very good
<b>Italian</b>	Native	Native	Native
<b>French</b>	Good	Satisfactory	Very good
<b>Spanish</b>	Good	Very good	Very good
<b>Catalan</b>	Fair	Good	Very good
<b>German</b>	Good	Good	Very Good
<b>Greek</b>	Fair	Fair	Fair
<b>Lithuanian</b>	Basic	Basic	Basic

## Personal interests

Travels, books, painting, photography, mountain trekking, sailing, learning languages

