

CURRICULUM VITAE

Nome e cognome

Francesca Soramel

Ente di appartenenza

Università degli Studi di Padova

Ruolo attuale

Professoressa di prima fascia

Indirizzo e-mail

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Breve biografia

06/1981: laurea in Fisica – Università di Padova, tesi svolta presso l'Institute für KernPhysik (IKP) – Kernforschungsanlage (KFA), Jülich, Germania da 06/1980 a 06/1981 con borsa di studio per laureandi del KFA.

06/1981 – 06/1982: postdoc IKP-KFA, Jülich, Germania

06/1982 – 04/1983: interruzione per maternità

05/1983 – 12/1983: postdoc Centre de Spectrométrie Nucléaire et de Spectrométrie de Masse (C.S.N.S.M.), Orsay, Francia

09/1983 – 10/1992: ricercatrice – Facoltà di Scienze MM.FF.NN – Università di Padova (due congedi parentali: 01/1988 – 08/1988, 12/1990 – 07/1991)

09/1991 – 09/1992: **guest scientist** – Argonne National Laboratory, Argonne, Illinois, USA

11/1992 – 02/2005: professoressa di II fascia – Facoltà di Ingegneria – Università di Udine

10/2003 – 09/2008: membro della Giunta esecutiva – Facoltà di Ingegneria – Università di Udine, come rappresentante dell'area Fisica.

02/2004 – 09/2006: **responsabile delle attività di Orientamento e Tutorato** – Facoltà di Ingegneria – Università di Udine

02/2005 – 09/2008: professoressa di I fascia – Facoltà di Ingegneria – Università di Udine

10/2006 – 09/2008: **vice Presidente** – Facoltà di Ingegneria – Università di Udine. **Delega a seguire il processo di riordino dei corsi di studio a seguito della L 270/04. Contributo importante a livello nazionale per la formulazione dei Descrittori di Dublino per i corsi di area Ingegneria**

Da 10/2008: professoressa di I fascia – Università di Padova

11/2008 – 12/2011: **presidente della commissione didattica** – Dipartimento di Fisica – Università di Padova

12/2009 a 12/2011: **vice Direttrice** – Dipartimento di Fisica – Università di Padova

01/2012 – 09/2019: **Direttrice** – Dipartimento di Fisica e Astronomia – Università di Padova (due mandati)

2013 – 2015: **CEV per ANVUR** (dimissioni per incompatibilità come membro del Senato Accademico)

01/2014 – 01/2015: **membro del Nucleo di Valutazione (NdV)** – Università di Udine (dimissioni per incompatibilità come membro del Senato Accademico)

10/2014 – 09/2019: **membro del Senato Accademico** – Università di Padova

Da 01/2014: **membro del Consiglio Direttivo di con.Sienze** (conferenza Nazionale Italiana delle Scuole e dei Dipartimenti di Area Scienze) come rappresentante dell'area Fisica (due rappresentanti)

01/2018 – 12/2022: **PI del progetto "Physics of the Universe"** – Dipartimento di Fisica e Astronomia – Università di Padova. Finanziamento di 9.3 M€ a seguito del bando MUR "Dipartimenti di Eccellenza"

Da 01/2019: membro del Collegio docenti – Dottorato di ricerca in Physics – Dipartimento di Fisica e Astronomia – Università di Padova

11/2020 – 11/2024: **Coordinatore NdV** della SISSA (due mandati, il secondo appena iniziato)

12/2020 – 12/2022: **membro della Commissione per il Presidio della Qualità della Didattica (CPQD)** – Università di Padova come rappresentante della Scuola di Scienze.

12/2020 – 12/2023: **Coordinatore Scientifico del progetto SPES** presso i Laboratori Nazionali di Legnaro (LNL) dell'Istituto Nazionale di Fisica Nucleare (INFN), Legnaro (PD).

Curriculum vitae

Prof. Francesca Soramel

Education

June 1980 - June 1981

Fellowship for Master degree students at Institute für KernPhysik (IKP), Kernforschungsanlage (KFA), Jülich, Germany

18th June 1981

Italian Master degree in Physics at Mathematical, Physical and Natural Sciences Faculty, University of Padua. Thesis "Spectroscopy of the $^{150}_{63}\text{Eu}^{87}$. Isomeric decays studies". Tutors: Prof. O.W.B Schult and Prof. C. Signorini

Work Experience, Responsibility and Management Roles

July 1981 - June 1982

Post-doctoral position at IKP-KFA, Jülich, GERMANY

May 1983 - December 1983

Fellowship at Centre de Spectrométrie Nucléaire et de Spectrométrie de Masse (C.S.N.S.M.), Orsay, FRANCE

September 1983 - October 1992

Assistant Professor at the Mathematical, Physical and Natural Sciences Faculty, University of Padua, ITALY

September 1991 - September 1992

Guest scientist at Argonne National Laboratory, Argonne, Illinois, USA

November 1992 - February 2005

Associate Professor of General Physics at the Engineering Faculty, University of Udine, ITALY

October 2003 - September 2008

Member of the Executive Board of the Engineering Faculty, University of Udine, ITALY

February 2004 - September 2006

In charge for the Orienteering and Tutoring programs of the Engineering Faculty, University of Udine, ITALY

February 28th 2005 - September 2008

Full Professor of Experimental Physics at the Engineering Faculty, University of Udine, ITALY

October 2006 - September 2008

Deputy Director of the Engineering Faculty, University of Udine, ITALY

October 2008 - ongoing

Full Professor of Experimental Physics, University of Padua, ITALY

November 2008 - December 2011

President of the Teaching Committee - Physics Department, University of Padua, ITALY

December 2009 - December 2011

Deputy Director of the Physics Department, University of Padua, ITALY

January 2012 - September 2019

Head of the Physics and Astronomy Department - University of Padua

2013 - 2015

CEV (Evaluation expert) for ANVUR (Italian National Agency for the Evaluation of Universities and Research Institutes)

January 2014 - January 2015

Member of the Independent Evaluation Unit (Nucleo di Valutazione) of the University of Udine

October 2014 - September 2019

Member of the Senato Accademico of the University of Padua

January 2017 - ongoing

Member of the Executive Board of con.Scienze (Italian National Conference of Science Faculties) as one of the two delegates of Physics Department Directors

January 2018 - December 2022

PI of the project "Physics of the Universe" - national call "Dipartimenti di eccellenza" based at the Physics and Astronomy Department, University of Padua, ITALY

January 2019 - ongoing

Member of the Faculty Board of the PhD in Physics, University of Padua, ITALY

November 2020 - October 2022

Coordinator of the Independent Evaluation Unit (Nucleo di Valutazione) of SISSA, ITALY

December 2020 – December 2023

Member of the Commission for the Supervision of Teaching Quality (CPQD), one of the three entities forming the University Quality Committee, University of Padua, ITALY

December 2020 - December 2023

Scientific Coordinator of SPES project at Laboratori Nazionali di Legnaro (LNL), INFN, Legnaro (Padua), ITALY

Description of Research, teaching and managing activity

My research activity has been carried out in the framework of the projects funded by the National Institute for Nuclear Physics (INFN), the Italian Agency for Nuclear and Subnuclear Physics; in particular, I've been involved in fundamental nuclear physics research programs.

Initially, my main field has been the in-beam gamma spectroscopy of nuclei in the rare earth region, then I moved towards studies of the nuclear reaction mechanism between two interacting nuclei at energies close to the Coulomb barrier.

In both fields I've been primarily involved in nuclear structure studies performed using a mass spectrometer to identify proton emitting nuclei and to study the nuclear reaction mechanism involving radioactive beams with halo structure.

The wide variety of the research activity I've been involved in, together with the experience acquired during the long term appointments at foreign laboratories, has allowed me to acquire a deep knowledge of the scientific and technical problems of low energy nuclear physics, in particular I've developed a specific knowledge of the experiments performed with mass spectrometers like the Recoil Mass Spectrometer of the

Legnaro National Laboratories (LNL-INFN-ITALY) or the Fragment Mass Analyzer (FMA) of the Argonne National Laboratory (ANL-USA).

I've been national spokesperson for the INFN experiment IRIS (1996-2000) devoted to the study of proton emitting nuclei.

In most recent years I moved part of my activity towards relativistic energy nuclear physics, collaborating to the CERN experiments NA57 and ALICE. Both experiments aim to study the Quark Gluon Plasma (QGP) state of the matter. My contribution to NA57 experiment has been mainly concentrated in the data collection during the runs and in the pre-analysis of the data.

For what concerns ALICE (A Large Ion Collider Experiment), I've been involved in the construction of the most inner part of the Inner Tracking System (ITS), i.e. the Silicon Pixel Detector (SPD). In particular I've been involved in the determination of the assembly procedure of the detector and I've tutored three Master Degree and one PhD thesis for the study of the mechanical and thermal stresses that the SPD may undergo.

I've been PI of the "Dipartimenti di eccellenza" project named Physics of the Universe, based at the Physics and Astronomy Department of the University of Padua. The five year project has 9.35 M€ budget and has been assigned to five Physics Departments all over Italy following a national call.

Since December 2020 I'm Scientific Coordinator of the SPES project at LNL-INFN. SPES is a new accelerator that will deliver radioactive beams devoted to fundamental and applied nuclear physics research. First beams are foreseen in 2023. The accelerator complex will be available to the international community.

I've been member of several Organizing Committees of international Conferences and Workshops and, in some cases, editor of the Proceedings.

I spent quite a bit of time (3.5 years) working in foreign Laboratories (Germany, France, United States) developing specific competencies and skills.

I'm co-author of more than 580 publications in refereed international journals with a total of 23982 citations (19685 without self-citations, h-index is 80 (ISI – WoS, September 2022)).

My teaching activity has been mainly devoted to teach General Physics to Engineering and Medicine students. I've mentored and supervised some Master degree and PhD students. I've been teaching part of a PhD course (10 hours) to the Physics PhD students at Padua University for few years.

Concerning management experience I've been Deputy Director of the Engineering Faculty at the University of Udine for two years. I had the responsibility of the teaching organization of the whole Faculty, in particular I was in charge of guiding the actions aimed at applying the Bologna Process to the first and second level degree courses (Italian law decree 270/04). I joined the group that, at National level, took care of all the aspects of this process for the Engineering courses. I resigned from this role when I moved to Padua University.

When I arrived to Padua University, I first was in charge of the Teaching Committee of the Physics Department. The Committee (about 10 professors and researchers) manages the teaching duties of the whole Department, i.e. agreements with professors for their teaching duties and management of Physics courses in all the degrees of the University of Padua (more than 10000 hours of teaching in 7 different Faculties serving more than 5000 students). I covered this role until the end of 2011.

At the end of 2009 I was appointed as Deputy Director of Physics Department in Padua. I cooperated to the management of the Department, I had the responsibility on the management of the teaching duties of the whole Department, I coordinated the first step of the National Research Evaluation Process at the Department level. I was director's delegate for the relations with the Engineering Faculty of the University of Padua. I had this role until the end of 2011.

From January 2012 I was appointed as Director of the new Physics and Astronomy Department at the University of Padua. The Department, resulting from the merge of pre-existing Physics and Astronomy Departments, is one of the largest Departments in the field of Physics in Europe. The Department has almost 200 employees, 70 postdocs, 80 graduate students, about 1000 first and second level degree students in Physics, Astronomy and Optics and Optometry. I was in charge of each aspect of the Department life: research,

teaching, stake-holders connections, safety, daily life and inconveniences. I served as Director for two mandates until the end of September 2019.

During the two mandates I personally coordinated two National Research Evaluation Processes. In both of them the Department turned out to be the first one at National level among large Physics Departments.

As Department Director I was elected as representative in the Academic Senate of the University of Padua (October 2014-September 2019).

In 2013 I entered in the list of disciplinary experts for the assessment process (CEV) of ANVUR after following dedicated courses. A CEV takes part into the evaluation process of Universities finalized to the accreditation of the Institution itself. While I was appointed as CEV from March 2014 to December 2014, I never had the chance to serve as CEV since the L 240/10 law sets incompatibility between being member of a Senato Accademico and serving as CEV.

From January 2014 to January 2015 I was member of the Independent Evaluation Unit (Nucleo di Valutazione) of the University of Udine, role from which I resigned due to the incompatibility with being a member of the Senato Accademico of the University of Padua. Inside the Evaluation Unit I was in charge of the aspects related to Teaching.

Since January 2017 I was selected as member of the Executive Board of con.Sienze (Italian National Conference of Science Faculties) as one of the two delegates of the Physics Departments Directors. The role implies coordination of the Physics area, especially for what concerns teaching, examination of new laws decrees and advices to CUN (Consiglio Universitario Nazionale).

I still carry on this role despite I'm not anymore Department Director, this was a common decision of Physics Department Directors.

Since December 2020 I'm member of the Evaluation Unit (Nucleo di Valutazione) of the Scuola Internazionale Superiore di Studi Avanzati (SISSA). I am the Coordinator of the Unit. The Unit has to assess the different activities performed by SISSA in the fields of research, teaching and technology transfer. The appointment is for 2 years. I've just been appointed for a second mandate.

From December 2020 to December 2022 I've been member of the Commission for the Supervision of Teaching Quality (CPQD) of the University of Padua as representative of Science School. The Commission takes care of examining all the aspects related to the Teaching Quality (students' opinions, new courses, performance of the existing courses, quality assurance processes inside the courses, etc.). The appointment is for three academic years.

Padova, 25th January 2023

Francesca Soramel