

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name **FANTONI, ROBERTA**
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Nationality Italian
Date of birth [21, 06, 1955]

WORK EXPERIENCE

- Dates (20.4.2010 to now)
• Main activities and responsibilities
Head of the Technical Unit UTAPRAD "Development of Applications of Radiations" of ENEA .
Coordination of researches in the field of Development of Applications of Radiations, including processes and diagnostics based on lasers and particles (electrons, protons) beams for the Industry, Environment, Cultural Heritage and Bio-medicine, and Micro- Nanotechnology.
- Name and address of employer
• Type of business or sector
ENE A, 45 V.E. Fermi, 00044 Frascati (Italy)
Government Agency – Fundamental and Applied Research on Energy, Environment and New Technologies
- Occupation or position held
Head of Technical Unit (First level responsibility)
- Dates (1/12/1998 – 19/4/2010)
Head of the section FIS-SPET of ENEA dealing with spectroscopy and laser applications (staff personnel about 35 units), successively the section renamed as FIS-LAS (since jan. 2002) and FIM-FISLAS with the same staff and aims.
- Dates (1/12/1998 – 19/4/2010)
Coordination of researches in the field of Laser Applications including laser diagnostics for the Industry, Environment, Cultural Heritage and Bio-medicine, and Micro- Nanotechnology.
- Name and address of employer
• Type of business or sector
ENE A, 45 V.E. Fermi, 00044 Frascati (Italy)
Government Institute – Fundamental and Applied Research on Energy, Environment and New Technologies
- Occupation or position held
Head of Section (Second level responsibility)
- Dates (1/1/1989 – 30/11/1998)
Senior scientist responsible for spectroscopic and non linear laser diagnostics in FIS-SPET division. Scientific responsible for ENEA of several research and service contracts with other research institutes and industries, and for different projects and service contracts with external personnel and firms. Tutor of international fellowships, postDoc and PhD students.
- Name and address of employer
• Type of business or sector
ENE A, 45 V.E. Fermi, 00044 Frascati (Italy)
Government Institute – Fundamental and Applied Research on Energy, Environment and New Technologies
- Occupation or position held
Senior scientist
- Main activities and responsibilities
Scientific responsible for activities in laser diagnostics of environmental and industrial interest, especially relevant to combustion.
- Dates (12/1/1982 – 31/12/1997)
Scientist working on experiments in the field of laser spectroscopy, laser isotope separation and laser photochemistry
- Name and address of employer
• Type of business or sector
ENE A (former CNEN) 45 V.E. Fermi, 00044 Frascati (Italy)
Government Institute – Fundamental and Applied Research on Energy, Environment and New Technologies
- Occupation or position held
Junior scientist working with a fellowship

- Main activities and responsibilities
 - Dates (1/1/1979 – 11/1/1982)

Laboratory experiments and models. Data acquisition and data analysis.
Junior scientist working on experiments in the field of electron spectroscopy, laser isotope separation and laser photochemistry
 - Name and address of employer

CNEN, 45 V.E. Fermi, 00044 Frascati (Italy)
 - Type of business or sector

Government Institute – Fundamental and Applied Research on Energy, Environment and New Technologies
- Main activities and responsibilities

Laboratory experiments and models. Data acquisition and data analysis.

EDUCATION AND TRAINING

- Dates (oct. 1973-jun. 1978)

University studies
- Name and type of organisation providing education and training

University of Rome "La Sapienza" , Chemical-Physics Dep.
- Principal subjects/occupational skills covered

Chemistry, Physical Chemistry, Spectroscopy, Quantum Mechanics, Physics, Mathematics
- Title of qualification awarded

Degree in Chemistry at
- Level in national classification (if appropriate)

(110/110 cum laude)
- Dates (oct. 1973-jun. 1978)

High School studies
- Name and type of organisation providing education and training

Liceo Scientifico Statale F. Borromini
- Principal subjects/occupational skills covered

Scientific High school
- Title of qualification awarded

High school diploma
- Level in national classification (if appropriate)

59/60

A list of papers is given in the annexes

PERSONAL SKILLS AND COMPETENCES

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

English

excellent

excellent

excellent

French

good

basic

basic

SOCIAL SKILLS

AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

- Scientific work in an International contest, member of steering Committee of International conferences: (1) ECONOS, former ECW, from 1995 to now, chairman for the period 2000-2001; (2) LIBS and EMSLIBS from 2006 and 2007, respectively, to now.
- Training course for surviving in Antarctica (Sept. 15-30.1997), as a member of 2 Italian expedition (nov. 1997 – feb. 1998 and jan. – mar. 2001), the campaigns were conducted on board of the Italica Oceanographic ship.
- Since more than 30 years private Mountain sport activities (Ski randonné, climbing, hiking) carried on in the Alps (Italy, France, Swisse, Austria, Slovenia borders) in close cooperation with partners.
- Since more than 20 years regular weekly group training in gymnastic and aerobic dance.

ORGANISATIONAL SKILLS

AND COMPETENCES

*Coordination and administration of
people, projects and budgets: at work, in
voluntary work (for example culture and
sports) and at home, etc.*

- Head of division at ENEA since dec. 1998 coordinating the staff personnel of about 35 units, and an average of 10 students and fellows each year.
- National Coordinator of the project MIAO "Optical micro-systems for hostile environments" funded by the Italian Ministry of Scientific Research (21.11.2003-20.11.2007)
- Conference organizer of: XVIII European CARS Workshop ECW99, 19-22 /3/1999 Frascati; VIII ECONOS/ECW 23-25/5/2009 Frascati; EMSLIBS'09 28/9-1/10/2009 Tivoli Terme.
- Scientific coordinator of the ENEA unit in several National and European projects, since 1989.

TECHNICAL SKILLS

AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

Specialist in laser applications, starting from researches related with the project of laser isotope separation mostly dealing with IR multiphoton processes and with high resolution IR spectroscopy.

Expert of different applications of lasers related to microelectronics (thin film deposition), material science (ultrafine powder synthesis), environment (pollutant decomposition) and remote sensing. Currently the main activities in the latter field are related to the development of fluorescence lidar, used to monitor the water quality (chemical and biochemical pollution) and the vegetation health (both on phytoplankton species and on green plants), and to the remote application of laser induced breakdown spectroscopy (LIBS).

Known expert in the field of laser spectroscopy and diagnostics, which include IR diode laser spectroscopy, Raman spectroscopy, visible/UV emission spectroscopy, multiphoton Ionization, Laser Induced Fluorescence (LIF), Coherent AntiStokes Raman Scattering (CARS), Degenerate Four Wave Mixing (DFWM) and Laser Induced Grating Spectroscopy (LIGS). Major activities concern applications of the spectroscopic techniques as on-line diagnostics during laser assisted chemical reactions, and to the hydrocarbon combustion monitoring with space and time resolved measurements of reaction intermediates and temperature.

ARTISTIC SKILLS

AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS

AND COMPETENCES

Competences not mentioned above.

DRIVING LICENCE(S)

Italian category B (cars) , since 1975.

ADDITIONAL INFORMATION

ANNEXES

LIST OF PUBLICATION ON INTERNATIONAL JOURNALS, BOOKS AND CONFERENCE PROCEEDINGS.