

# Vincenzo Romanello

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## Professional Profile

A highly experienced and committed nuclear engineering professional with almost 8 years' experience in nuclear research and development. Very well qualified to PhD level with comprehensive knowledge of scientific and technical matters related to the nuclear sector. Demonstrates the ability to identify and resolve complex problems using innovative and creative thinking to realise effective solutions. Has experience of working on an international basis, both as part of a team and on an independent basis. Possesses excellent communication and interpersonal skills with the ability to build and maintain strong relationships at all levels, including stakeholders. A strong leader and presenter with a natural ability to deliver training and coaching for individuals to learn and develop key skills.

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## Work Experience

**Centrum výzkumu Řež s.r.o. (CVŘ) – Czech Republic**

**Jun 2016 – to date**

He is currently the Scientific Director of the Research Center Řež.

- Developing and implementing the company research strategies
- Continuously developing environment and culture of high quality research results
- Acting as an ambassador and public representative of CVR research

**Karlsruhe Institute of Technology (KIT-CAMPUS NORD) - Germany**

**Jan 2008 – May 2016**

**Institute for Nuclear Waste Disposal (INE)**

**Nuclear Researcher (Jan 2014 – May 2016)**

- Worked within the Radiation Research Division performing various tasks in relation to gamma spectroscopy
- Assessed a Monte Carlo simulation model of a spent nuclear fuel cask (POLLUX), delivering to junior colleagues and PhD students and providing training in radiation protection calculations and nuclear fuel inventory simulations
- Played an integral role in a computer simulation task, which was aimed at reproducing the alpha, beta, and gamma dose rate measured in a special experimental device containing a PWR (Pressurized Water Reactor) spent fuel pellet with satisfactory results (peer reviewed paper in progress)
- Estimated the ambient dose and neutron activation in a proton therapy sample facility

**Institute for Nuclear and Energy Technologies (IKET)**

**Nuclear Researcher (Jan 2008 – Jan 2014)**

- Key person within the Transmutation Division concerning nuclear fuel cycle analyses and scenario studies
- Actively involved in a number of international projects and groups, including EU funded projects such as :
  - EUROTRANS-PATEROS: delivered a scenario study with a subcritical waste burner system (Accelerator Driven System – European Facility for Industrial Transmutation, ADS-EFIT) in a double strata European context
  - LWR-DEPUTY: designed an inert matrix fuel (molybdenum-based) for plutonium burning and a benchmark study of an irradiated thorium pellet (in a German PWR)
  - ARCAS: conducted a study devoted to the determination of the cost issues of transmutation facilities (both critical and subcritical). Acted as KIT representative and task leader of WP 1 (determination of the minor actinides flow and composition)
- Group activities included being a member of the (Organisation for Economic Co-operation and Development) OECD-Nuclear Energy Agency (NEA) with responsibility for performing fuel cycle world transition scenario studies (assessing consumption, waste disposal and required infrastructures needs) – NEA official publication delivered

- Participated to NEA Integral Experiments for Minor Actinide Management expert group, acting as scenario expert and addressing the uncertainties in nuclear data and requirements for future nuclear systems - NEA official publication delivered

**NUCLEONICA GmbH - Germany**  
**Nuclear Science Consultant**

**Aug 2013 – Feb 2014**

- A short-term consultancy role, developing software solutions (based on C++ language) for Monte-Carlo based dosimetry applications (GEANT4)
- Created a Virtual Cloud Chamber tool based on real sources (emitting  $\alpha$ ,  $\beta$  and  $\gamma$  radiations), which was issued and reached testing phase

**CONSULTANCY ASSIGNMENTS - Italy**

**Nov 2003 – Dec 2004**

- Acted as external consultant for Sorit s.r.l (Italy) involving fuel cycle radiotoxicity calculation using the devoted code CARL (available on Nuclear Energy Agency (NEA) program database), developed on purpose by NEA contract
- Provided consultancy for the University of Lecce (Italy) in the development of a deterministic and a Monte Carlo based models for erosion-corrosion synergistic effects on ceramic materials for naval waste burner applications

## Professional Development

"Nuclear Waste Management" Graduate & Executive Nuclear Training & Lifelong Education (GENTLE)	2015
"Technology & Management of the Decommissioning of Nuclear Facilities" (KIT/AREVA School)	2015
Security clearance from the Ministry of Interior of the state Baden-Wuerttemberg - category 2	2014
"Reactor Physics Calculations with Deterministic Methods" (KIT/AREVA School)	2013
"Introduction to Nucleonica: Core Applications & Tools with "Hands on" Exercises" (Nucleonica GmbH)	2012
"Innovative Nuclear Power in a Closed Fuel Cycle Scenario" (WE-Heraeus-Seminar)	2011
Cross-cultural Communication Course (KIT)	2010
MCNP5/MCNPX Training Course (NEA)	2010
ERANOS Code Course Certification – CEA (France)	2009
AREVA School "Neutronic calculations with MCNP code" (KIT/AREVA School)	2009
COSI Code Course Certification – CEA (France)	2008
APOGENE Code Course Certification – CEA (France)	2008

## Education

**PhD in Materials Engineering** (University of Lecce, Italy) 2008  
 Spectroelectrochemistry (Raman spectroscopy); technologies for gold recovery from electronic waste, experimental data processing and analysis, chemical lab experience, physico-chemical models development

**Master Degree in Nuclear Engineering** (University of Pisa, Italy) *final voting: 110/110* 2003  
 Master degree thesis on "High Temperature Reactors and hydrogen production" (available online – in Italian). Excellent background and experience in structural analysis, mechanics, neutronic calculations, radiation shielding and radioprotection, scenario analysis and materials science

## Additional Information

Languages: English (fluent), Italian (mother tongue), Croatian (fluent), German (intermediate, B1 certified level), Czech (basic)

Interest: Reading, computers, technology and science in general, travels, amateur experimental rocketry, cross-cultural communication.