

CURRICULUM VITAE ET STUDIORUM



PERSONAL INFORMATION

Name **DODARO ALESSANDRO**
Address
E-mail **alessandro.dodaro@enea.it**
Nationality **Italian**
Date of birth
Birth place

EDUCATION AND TRAINING

October 2018 Training course "The management of security in the nuclear field"
Educational institution name SOGIN Radwaste management School

October 2018 Training course "The environmental management system according to ISO14001"
Educational institution name SOGIN Radwaste management School

March 2014 Training course "Strong Board of Directors for Stronger Companies"
Educational institution name SDA Bocconi School of Management

October 2007 Qualification to exercise the profession of III degree radiation protection expert
Educational institution name Central Medical Inspectorate of Labor
Qualification awarded **III degree radiation protection expert**

March 1994 **License to practice the profession of engineer**
Educational institution name University of Rome "Sapienza"

October 1993 **Nuclear Engineering Master Degree** with a score of 108/110
Educational institution name University of Rome "Sapienza"

July 1987 **High school diploma** with a score of 60/60
Educational institution name Cosenza - Liceo classico "B. Telesio"

LANGUAGES

MOTHER TONGUE **ITALIAN**

OTHER LANGUAGES **ENGLISH**

Reading C2
Writing C1
Oral expression C1

FRENCH

Reading B2
Writing B1
Oral expression B1

PROFESSIONAL ACTIVITY

1

Employer **ENEA** National Agency for New Technologies, Energy and Sustainable Economic Development
Headquarters and address Lungotevere Thaon di Revel n. 76, 00196 ROME
Dates (from – to) **April 12, 1999 to date**
Role and Level Fusion and Technology for Nuclear Safety and Security Department Director since July 16, 2019
Researcher since 2009
Junior Researcher since 1999

Main duties and responsibilities

16 July 2019 to today **Director of the Fusion and Technologies for Nuclear Safety Department (FSN)** with the task of planning and coordinating the activities of 6 Divisions, 3 Sections and of the National Institute of Metrology of ionizing radiation constituting the Department (current staff about 476 units) managing the human and economic resources made available to the Department.

Role of Employer pursuant to Legislative Decree 81/08 for all personnel belonging to the department.

During the period, the Department generated revenues of approximately 92 million € (national and international research projects, technical-scientific services for public and private sectors, the National Fusion Program...).

In the same period, it made financial commitments for contracts / orders relating to the department's activities for approximately 31 million €.

As Director of the Department, he coordinates all the Agency's nuclear activities with particular reference to:

- Physics and technologies of nuclear fusion
- Superconductivity
- Experimental engineering for materials and components for fusion plants
- Development of new experimental plants for the production of radiopharmaceuticals
- Technologies, materials and plants for nuclear fission
- Nuclear safety and sustainability
- Technologies for the safety and health of man and environment
- Metrology of ionizing radiation (role assigned to ENEA by law no. 273 of 11 August 1991)
- Applications of nuclear technologies for space

Coordinates and guarantees the management of the **Integrated Service** (Article 74 of Legislative Decree 101/20) for the management of non-nuclear waste by carrying out a function of direction, supervision and control of the whole management cycle, thus allowing ENEA to take ownership of the waste and sources collected and take charge of their final disposal, freeing the producer of the waste from any legal responsibility.

He is the **Operator** of two of the main Italian Research Reactors: **RSV-TAPIRO** and **TRIGA-RC1**.

In accordance with the EURATOM regulation 302/2005, he is **responsible** for the management of materials subject to **nuclear accountancy** held in ENEA.

Responsible for the memorandum of understanding between ENEA and the regions of Tuscany and Emilia Romagna for the strengthening of the C. R. ENEA del Brasimone.

He exercises the role of **Italian Program Manager** within the **European Fusion Program** which places him at the helm of a team of over 20 public and private entities committed to guaranteeing the national contribution to the European research program funded by Euratom, and managed by the EUROfusion consortium. As the **Italian Head Research Unit** (HRU), it actively participates in defining the program of activities of the **EUROfusion Consortium**, identifying those activities that the Italian partners can carry out, and coordinating Italy's participation in the calls for the allocation of resources. The EUROfusion Grant Agreement for Framework Program 9 (2021-2025) is currently being finalized with a forecast of approximately 100 million € for the Italian team (against a total loan of approximately € 550 million).

He is responsible of the structure entrusted with the role of **Italian Industrial Liason Officer (ILO)** for the European agency **Fusion for Energy** (F4E), which is responsible for the construction of the ITER reactor.

In the frame of the construction of the **Divertor Tokamak Test Facility** (DTT), one of the main plants envisaged by the European fusion roadmap (and the only one to be built in Italy, at CR ENEA in Frascati), is **responsible** for the management **of economic (500 million €) and**

human resources (approximately 50 units fully operational) that ENEA makes available to the consortium set up to design and build the facility. In the two-year period he has undertaken commitments for approximately 70 million € for the construction of the facility.

Responsible for the agreement with the Lazio Region for the management of the resources that it makes available for the implementation of the DTT.

01 July 2015 to 15 July 2019: **Head of the Technologies, Plants and Materials for Nuclear Fission Division**, in the Fusion and Technologies for Nuclear Safety Department (FSN-FISS), with the task of planning and coordinating the activities of the three laboratories making up the Division (staffing equal to 73 units) independently managing the economic and human resources made available to the Division.

During the period, the Division generated revenues of approximately 5.5 million € (national and international research projects, technical-scientific services for public and private sectors, reimbursements from Sogin S.p.A. for seconded personnel in support of the dismantling program of the former nuclear fuel cycle installations...). In addition, the Division staff participated in the complementary EUROFUSION activities with about 400 PM per year engaged in the period.

In the same period, it made economic commitments for contracts / orders for approximately 2.8 million €.

As Head of Division, he coordinates the activities of the laboratories belonging to the Division in the field of research and development (national and international) of nuclear energy and its industrial applications, on the production of radiopharmaceuticals for medical diagnostics, for the safety and security of nuclear and radioactive materials:

Scientific manager of the **"Molybdenum Project"**, which aims to create a technological infrastructure aimed at the production of Technetium 99m for nuclear medicine centers.

In the field of radioactive waste management, the Division **coordinates and guarantees the management of the Integrated Service** by carrying out a function of direction, supervision and control of the whole management cycle, thus allowing ENEA to take ownership of the waste and sources collected and taking charge of their final disposal, freeing the producer of the waste from any legal responsibility.

It provides technical-scientific and operational support for the decommissioning activities of the plants relating to the former nuclear fuel cycle of ENEA entrusted to Sogin S.p.A ..

Since July 2015 he has been the **Operator of the RSV-TAPIRO and TRIGA-RC1 Nuclear Research Reactors** as well as the Head of Operations of the C-43 Radiochemistry Laboratory at the Casaccia Research Center.

23 April 2010 to 30 June 2015: **Head of the Nuclear Materials Characterization Laboratory** of the Technologies and Plants Technical Unit for Fission and Nuclear Material Management (UTFISST CATNUC), in charge of:

- **Delegate for the operation of the C-43 Radiochemistry Laboratory** at the Casaccia Research Center, according to the Nulla Osta cat. A, pursuant to art. 28 of Legislative Decree 230/95, and to this end implement all useful actions for compliance with the operating requirements and the safe management of the flow of radioactive materials and waste.
- **Responsible for the radiological characterization** of the materials coming from the dismantling activities of the RB-3 Research Reactor at the C.R. ENEA Montecuccolino, for the purpose of their correct classification, treatment and conditioning or unconditional release according to the levels of removal established and prescribed by the Supervisory Authority.
- **Casaccia Site Representative** for the obligations relating to the Additional Protocol to the Verification Agreement of the Nuclear Weapons Non-Proliferation Treaty (position held until 2015).
- **Responsible for ENEA** for the obligations relating to **the declarations** pursuant to art. 2.a.i **of the Additional Protocol** to the Verification Agreement of the Nuclear Weapons Non-Proliferation Treaty (assignment assigned by the Extraordinary Commissioner in 2013).
- **ENEA representative** since 2004 at the **Steering Committee** of the European Network of Testing Facilities for the Quality Checking of Radioactive Wastes Packages (**Entrap**), an international network of national radiological characterization laboratories of the main countries of the European Community. In this context, Chairman in the two-year period 2007-2008.

12 April 1999 to 22 April 2010: Researcher working at the beginning in the Radioactive Waste and Plant Decommissioning Unit (RAD) then in the Fission and Nuclear Presidium Unit (FPN):

Head of the Non-Destructive Analysis Service

In the period following the assignment of the fuel cycle plants to Sogin S.p.A. has reconstituted for ENEA, at the C-43 Radiochemical Laboratory, the analytical skills of the National Laboratory for the Characterization of Radioactive Waste, previously located mainly in areas entrusted to Sogin in the Saluggia (at EUREX) and Casaccia (at Plutonium Plant), transforming the Non-Destructive Analysis Service into a more complete reality, capable of dealing with all fields of radiological characterization of radioactive materials and waste, as well as the issues of waste treatment and conditioning.

As a support to the Management:

- **collaborator of prof. Carlo Rubbia** as part of the related project activities
 - Accelerator-driven Subcritical Nuclear Systems - ADS;
 - Nuclear systems for space propulsion (project 242).

As **Quality Assurance Manager**, after having designed and made operational the quality system, through the drafting of the procedures and the experimental validation of the test methods in use at the Non-Destructive Analysis Service, in the four-year period 2000-2003 he obtained the accreditation to ISO-IEC 17025 for three test methods.

2

Employer	NUCLECO S.p.A. Private company (owned by SOGIN (60%) and ENEA (40%)), for the management of medium and low level radioactive materials and waste and radioactive sources, research and development in the nuclear sector and for the characterization of radioactive materials, decommissioning of nuclear plants and the provision of advanced technical services.
Headquarters and address	Strada Provinciale Anguillarese n. 301, 00123 ROME
Dates (from – to)	06 Dec. 2013 to 6 Mar. 2020
Role and Level	Chairman of the Board of Directors (proposed by ENEA) with the following responsibilities, in addition to the law commitments: <ul style="list-style-type: none">· Site Representative of the Licence Owner (ENEA) of Authorizations of NUCLECO's nuclear installations, for the technical and administrative management of nuclear plants and laboratories, in accordance with the law, management of nuclear safety and protection of workers and populations. In this frame, he successfully supervised the authorization process for the export to Slovakia of a difficult to treat batch of radioactive waste aiming to its treatment abroad and subsequent repatriation: the success of the initiative, the first in Italy, led to the signing of a contract similar in type but much more demanding in terms of volumes involved (approximately 600 cubic meters compared to approximately 50 in the first lot).· Procurator, jointly with the Chief Executive Officer of Nucleco (Licencee is the Legal Representative of ENEA) so that, "in the name and instead, on behalf and in the interest of ENEA, they implement the conditions and prescriptions contained in Nulla Osta IMP/37/0 of the Ministry of Economic Development and, in particular, in the documents related to it, as well as to carry out any useful action in order to maintain a high level of safety for the purpose of population, workers and environment protection".· Appointed by the Board of Directors to:<ul style="list-style-type: none">· define the technical guidelines for the management of the Company facilities, take care of the technical and scientific coordination of the activities, coordinate the nuclear safety activities of the installations, workers and populations;· take care of the technical-scientific relations with ENEA in order to guarantee the Company adequate management of the installations owned by the Agency;· managing relations with international and national organizations, research centers and universities to ensure the Company, also in the international sphere, an adequate connection on a technical and scientific level and constant updating in the areas of competence;· managing relations with the competent institutional bodies for the purpose of defining the technical regulations in the areas of competence. <p>During the period he gained considerable management experience in the administration of publicly owned companies and presented and approved the financial statements for the years from 2013 to 2018 at the Board of Directors and at the Shareholders' Assembly, which saw the Company pass from a production value equal to 18 M € (2013) to 33.3 M € (2018) and increase the gross operating margin (EBITDA) from approximately 1.5 M € (2013) to approximately 5.2 M € (2018). In the same period, over 4 million € were allocated to shareholders as dividends.</p> <p>The significant increase in the volume of business made it necessary to increase the share capital from 500 k€ to 3 million €, keeping the shareholding percentages unchanged.</p> <p>In the same period, by virtue of the increase in the Company's activities, Nucleco personnel went from an average number of 159 to 214 units.</p> <p>As Legal Representative, he followed the continuous evolution of the anti-corruption and transparency legislation, taking care of numerous improvements and implementations both in the Organizational Model pursuant to Legislative Decree no. 231/2001 (Discipline of administrative liability of legal persons, companies and associations, including those without legal personality) and in the Company's Code of Ethics.</p>

3

Employer **Accredia**, Italian Accreditation Body
Headquarters and address Via G. Saliceto 7/9 – 00161 Roma
Dates (from – to) **November 2012 – December 2014** Occasional performance
Role and Level Technical Inspector
Main duties and responsibilities Having recognized experience in the field of Radiometric Laboratory Tests, he collaborated with the Italian Accreditation Body carrying out in the three-year period 15 Inspection Audits at both public laboratories (ARPA, Zooprophyllactic Institutes, Universities) and private companies, located throughout the national territory, in relation to laboratory tests in the radiometric field accredited according to the ISO / IEC 17025 standard.

4

Employer **FN S.p.A.:** Nuove tecnologie e Servizi Avanzati Spa
Headquarters and address s.s. 35 Bis dei Giovi Km. 15 - 15062 Bosco Marengo (AL)
Dates (from – to) **October 1996 – July 1998**
Main duties and responsibilities In the frame of a collaboration agreement between FN S.p.A. and the Energy Department of ENEA, whose object was Waste Management and Plant Decommissioning, worked at the National Laboratory for the Characterization of Radioactive Waste (CR ENEA Casaccia) taking care of the development of radiological characterization techniques and treatment and conditioning methods of radioactive waste.

SKILLS AND COMPETENCES

Experience in managing national and international scientific projects **Italian Program Manager** for the activities related to the **European Fusion Program** (EUROfusion) for the final two-year period of the FP8 framework program and for FP9 (2021-2025).

Responsible and / or economic resource manager for over 50 European projects negotiated during the last five Framework Programs (from FP5 to FP9).

Management experience In his working activities he has gained experience in the management of publicly-owned companies and has acquired additional skills and experiences related to corporate law and corporate taxation, as well as in the implementation of the dictates of Legislative Decree 81/2008 (also by providing specific Internal audits, according to model 231), to the adoption of the organizational model pursuant to Legislative Decree 231/2001 and its application in the company through e-learning procedures and personnel recruitment according to the principles of Law 133/08..

FURTHER INFORMATION

He has held seminars and lectures for the Master in Nuclear Techniques, for the Polvani School of Radioprotection and other education and training courses..

Since 2016 he has been a member of the Board of Directors of the Italian Nuclear Association representing the Entrepreneurship Category.

Since 2017 he has been a member of the Nuclear Technologies and Radiation Protection Commission TC 85 of the Italian Standardization Body (UNI).

He deals also with scientific dissemination, publishing in paper and digital magazines aimed at the general public, and intervening as a guest in television broadcasts on national networks or in streaming.

SCIENTIFIC PRODUCTION

LIST OF MAIN PUBLICATIONS IN ANNEX

Canale Monterano, 19 May 2023

Ing. Alessandro Dodaro

I authorize the processing of personal data, pursuant to D. Lgs. 30/06/2003, n. 196

Canale Monterano, 19 May 2023

Ing. Alessandro Dodaro

Annex: list of main publications

1. M. Capone, N. Cherubini, M.L. Cozzella, A. Dodaro, G. Guidi, S. Pozzetto
Proposal of a prototype plant based on the exfoliation process for the treatment of irradiated graphite,
Nuclear Engineering and Technology Volume 52, Issue 4, April 2020
ISSN: 1738-5733
2. M. Capone, N. Cherubini, M.L. Cozzella, A. Dodaro, T. Guarcini.
The exfoliation of irradiated nuclear graphite by treatment with organic solvent: a proposal for its recycling,
Nuclear Engineering and Technology 2019, 10.1016/j.net.2019.01.003. ISSN: 1738-5733
ISSN: 1738-5733
3. C. Andreozzi, B. Bianchilli, A. Dodaro, F. Gagliardi, E. Mauro, M. Sisti.
Free release of radioactive waste containing very low-level waste and short-lived radionuclides at Nucleco
Proceedings of the 2018 26th International Conference on Nuclear Engineering, ICONE26, July 22-26,
2018, London, UK
ISBN: 978-0-7918-5143-2
4. N. Cherubini, A. Dodaro, G. Gandolfo, L. Lepore, G. A. Marzo, E. Piccinelli, R. Remetti.
The neutron active interrogation system for in-field detection of transuranic-based radioactive dispersal
devices for security applications
Proceedings of the 2018 26th International Conference on Nuclear Engineering, ICONE26, July 22-26,
2018, London, UK
ISBN: 978-0-7918-5143-2
5. Capogni M., Pietropaolo A., Quintieri L., Angelone M., Boschi A., Capone M., Cherubini N., De Felice P.,
Dodaro A., Duatti A., Fazio A., Martini P., Pagano G., Pasquali M., Pillon M., Uccelli L., Pizzuto A.,
"14 MeV neutrons for 99Mo/99mTc production: Experiments, simulations and
perspectives", 2018, "10.3390/molecules23081872" ISSN 1420-3049.
6. P. Agostini, M. Capogni, A. Dodaro, A. Pietropaolo
Sorgenti di neutroni in ENEA per la salute dell'uomo
Energia Ambiente e Innovazione, Nucleare: dal Passato alle Opportunità, 04/2017
ISSN: 1124-0016
7. A. Dodaro, G. Giorgiantoni, N. Cherubini, G. A. Marzo
The ENEA Contribution to the Implementation of National Nuclear Safeguards
ESARDA Symposium 39th Annual Meeting, Düsseldorf, 16-18 Maggio, 2017.
ISBN 978-92-79-73861-6
8. A. Dodaro, G. Giorgiantoni, N. Cherubini, A. Compagno, G. A. Marzo
Field Implementation of Nuclear Safeguards: ENEA's Capability Projection
WM 2017 Conference, Phoenix, Arizona, Marzo 5-9, 2017.
ISBN:9781510844025
9. N. Cherubini, A. Dodaro, G. Gandolfo, L. Lepore, G. A. Marzo, E. Piccinelli, R. Remetti
Field Prototype of the ENEA Neutron Active Interrogation Device for the Detection of Dirty Bombs
Challenges 2016, 7(2), 17
ISSN 2078-1547
10. H. Tietze-Jaensch, P. Van Iseghem, L. Boucher, A. Dodaro, et al.
ENTRAP and its potential interaction with European networks.
Mineralogical Magazine (2015) 79 (6): 1515-1520.
ISSN 0026-461X
11. N. Cherubini, A. Dodaro, R. Iacovacci, G. A. Marzo, G. Giorgiantoni, M. Sepielli
Experimental estimation of the uncertainties associated to low-background alpha-spectrometry
measurements
ESARDA Symposium 37th Annual Meeting, Manchester, 19-21 Maggio 2015.
ISBN 978-92-79-49495-6

12. N. Cherubini, G. M. Contessa, A. Dodaro, R. Natale, M. Scognamiglio and S. Sandri
Indicazioni di radioprotezione per le operazioni di estrazione dei materiali contaminati dalle scatole a guanti appartenenti all'ex-ciclo del combustibile nucleare
XXXVI Congresso Nazionale di Radioprotezione, 28-30 ottobre, Matera, Italia, 2015
ISBN 9788888648422
13. N. Cherubini, G. M. Contessa, A. Dodaro, L. Lepore, G. A. Marzo and S. Sandri
Caratterizzazione teorica e sperimentale del fascio neutronico di un generatore di neutroni del tipo D-T e conseguente analisi dosimetrica
XXXVI Congresso Nazionale di Radioprotezione, 28-30 ottobre, Matera, Italia, 2015
ISBN 9788888648422
14. L. Baldassarre, E. Cimini, A. Dodaro, M. Russo
The decommissioning program of the research reactor RTS-1 "G. Galilei – Italy"
European Research Reactor Conference 2015 Proceedings, pp 513-523
ISBN 978-92-95064-23-2
15. M. Capone, N. Cherubini, A. Compagno, A. Dodaro, F. Rocchi
The dismantling of the Montecuccolino RB3 Research Reactor: radiological characterisation of materials for free release
European Research Reactor Conference 2015 Proceedings, pp 503-512
ISBN 978-92-95064-23-2
16. P. Avino, A. Dodaro, M. Manigrasso, A. Rosada
Measurement of organic and elemental carbon in downtown Rome and background area: physical behavior and chemical speciation
Environmental science processes & impacts, volume 17, n. 2, 2015, pp 249-500
ISSN 2050-7887
17. A. Dodaro, et al.
IRIDE: Interdisciplinary research infrastructure based on dual electron linacs and lasers
Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment A740 (2014) 138-146.
ISSN 0168-9002
18. N. Cherubini, A. Dodaro, G. Giorgiantoni, G. A. Marzo, M. Sepielli, F. Troiani
The Italian experience in implementing the Additional Protocol
ESARDA, 35th Annual Symposium on safeguards and nuclear material management: proceedings, 2013.
ISBN 978-92-79-32730-8
19. N. Cherubini, A. Dodaro
La salute dell'uomo e la protezione dell'ambiente
L'atomo a scuola: l'utilizzo pacifico dell'energia nucleare, dai principi base alla ricerca tecnologica,
Editrice 21mo secolo S.r.l. dicembre 2011 pp 227-256.
ISBN: 9788887731484