

European Curriculum Vitae



Personal information

First name(s) / Surname(s)

Edoardo Cavalieri d'Oro

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Work experience

Dates

10/09/2004 – today

Name and address of employer

Ministry of the Interiors, Fire department for public safety and civil defence
Via del Viminale 1, 00184 Rome (Italy)

Occupation or position held

Deputy management director

Type of business or sector

Activities of extraterritorial organisations and Institutional/Government bodies

Main activities and responsibilities

- Currently, and during the years 2011-2016, held the roles of head of innovation, deputy head of emergency services, head of the Chemical Biological Radiological Nuclear unit, head of the Urban Search and Rescue services, head of the committee revising the emergency plans of firms with relevant industrial risks, head of logistic for the deployment of base camps, head of emergency services at the Milano-Linate airport;
- managed division of 150 employees and allocated budget ranging from 0.3 to 1M euros/yr;
- performed risk assessment analyses and mapped the risk of companies with significant industrial risks and of hospitals with specific risks such as nuclear medicine therapies in the Milan area
- enforced safety-standard, and fire safety protocols during the period of EXPO 2015: selected member of Integrated Vigilance Commission in Milan for the construction of temporary pavilions
- elected as a representative for the preparation and improvement of security and civil defence plans promoted by the Prefecture of Milan on the occasion of Expo 2015;
- promoted institutional communication and several training exercises amongst public security authorities and civil protection bodies in the Milan area.

Special Projects and Assignments at a National Level

- *Roles assigned at a national level:* national deputy leader for International Urban Search and Rescue Missions and responsible for the INSARAG accreditation for the Italian National Fire brigades (2017), team leader in the delegation sent to observe INSARAG Classification of Chile (2017), National CBRN team officer for the EU response mechanism (2016-2018), national advisor to drive the study: Drones and radiological risks, CBRN team leader at the G7 in Messina (2017), head of the National agreement with the Italian association of national radiological experts (2015-2018), headed the CBRN defence system prepared in Milan in occasion of EXPO 2015, selected by the US secret services as the only authorized member to escort the First Lady M. Obama during her week of visit to EXPO 2015 and the city of Milan.

- *EU projects and special assignments:* recognized expert in the European Multiple Environmental Threats Emergency Network (EMETNET), recognized practitioner on the ENCIRCLE 2017 Project, member of the Community of User CBRN managed by P. Quevauviller at the DG Home - EU Commission, advisor for the European Commission H2020 project PHIRMA "Protection of health Infrastructure Resilience Management and Adaptation" lead by San Raffaele Hospital in Milan; expert for the Prefecture of Milan in the areas of bio-emergency response, defence systems from CBRN attacks and drones to critical infrastructures of the city of Milan

Education

Dates	03/21/2016 – 07/03/2017
Title of qualification awarded	2nd Level Master Course in “Civil Protection against CBRNe events” - Executive Course for CBRNe Advisors of Decision Makers
Name and type of organisation providing education and training	Università Roma Tor Vergata – Department of Industrial Engineering and School of Medicine and Surgery (University) Via del Policinico 1, 00173 Roma (Italy)
Level in national or international classification	Graduate level
Dates	02/09/2007 - 03/06/2011
Title of qualification awarded	Advanced degree in Engineering and Management (SDM)
Principal subjects / occupational skills covered	Subjects: Policies, regulations for nuclear non-proliferation, security and civilians safety, institutions and regulatory bodies for non-proliferation
Name and type of organisation providing education and training	Massachusetts Institute of Technology (University and Research Institute) 77 Massachusetts Avenue, 02139 Cambridge (United States)
Level in national or international classification	Post-graduate level
Dates	01/09/2005 - 03/06/2011
Title of qualification awarded	Research Associate in engineering and international policies in the field of nuclear security
Principal subjects / occupational skills covered	<ul style="list-style-type: none">• Headed the non-proliferation risk assessment segment of a project sponsored by the DoE and led by Prof. G. Apostolakis (nominated by President Obama as Commissioner of the US Nuclear Regulatory Commission) analysing innovative energy production systems concepts• Modified and developed, under the supervision of Prof M. Golay, a novel regulatory framework by introducing new performance metrics and risk acceptability criteria to license future energy designs, compatibly with economic metrics
Name and type of organisation providing education and training	Massachusetts Institute of Technology (University and Research Institute) 77 Massachusetts Avenue, 02139 Cambridge (United States)
Dates	01/09/1994 - 21/12/2002
Title of qualification awarded	Laurea from the Industrial Engineering department in Nuclear Engineering
Name and type of organisation providing education and training	Politecnico di Milano Piazza Leonardo da Vinci 32, 20133 Milan (Italy)
Level in national or international classification	Undergraduate and Graduate level

Academic Experience and Research Projects

Dates	12/13/2017
Name and address of employer	European Space Agency – research grant
Occupation or position held	Head of the project Proponent of the idea awarded by the European Space Agency for the call “Space-based Services in Support of CBRNe Operations”, to the consortium with the business concept named “Space Fly Multiagent”, Didcot Oxford UK, December 2017.
Dates	11/17/2016 – current
Name and address of employer	National Agreements: Politecnico di Milano and Università Cattolica del Sacro Cuore
Occupation or position held	Member of Scientific committees
Main activities and responsibilities	Responsible for the development of research project within the convention between the Ministry of

	Interiors and the two above Universities of Milan in the areas of CBRN, Civil Protection, Social sciences, anti-terrorism, and Urban Search and Rescue technologies
Dates	11/01/2015 – current
Name and address of employer	San Raffaele Hospital - EU projects about the resilience of Hospitals and emergency management during CBRN attacks
Occupation or position held	Advisor in EU project
Main activities and responsibilities	Responsible for the development of research project about resilience of Hospitals and emergency management and hospitalization management in case of large CBRN accidents
Dates	11/10/2016 – current
Name and address of employer	Luigi Sacco Hospital
Occupation or position held	Project about development of procedures in case of bio-threats
Main activities and responsibilities	Leading for the Prefecture of Milan a joint team of fire-fighters and doctors focusing on emergency response, procedures during operations and during analyses in case of biological threats. The work includes the realization of the first national BLS3 biological deployable laboratory
Dates	08/01/2011 - 08/31/2011
Name and address of employer	UNIVERSITÉ D'ÉTÉ, Iverdon-les-Bains, Switzerland
Occupation or position held	Academic Director of Summer School Program
Subject	Waterfront 2011: renewable energy in the urban environment
Dates	02/12/2011 - 06/18/2011
Name and address of employer	Italian Government – Ministry of Youth
Occupation or position held	General Director
Subject	"Imprenditori si diventa!" course. Led a team of 20 people to design the architecture and contents of an entrepreneurship course taught in 4 Italian universities using online tools and media contents
Personal skills and competences	
Languages	Italian (Mother tongue) - English (fluent) French (basic)
Social skills	<ul style="list-style-type: none"> • Dynamic, social and capable to adapt to multicultural environments. • Flexible and committed to complete on time new tasks and new challenges. • Solid Analytical capabilities and promptness to timely identify solutions.
Organisational skills	<ul style="list-style-type: none"> • Capable to lead people under stressful situations; • Ability to listen co-workers prior taking important decisions, also during operations; • Good experience in project management and team management.
Computer skills	Familiar with the use of Microsoft and apple environments. Programming; Matlab, Pascal, HTML. Risk Analysis Tools; R, S+, @Risk, Crystal Ball
Sports and hobbies	Like sailing, skiing, golf, tennis Painting, 3D making, and data visualization
Memberships	MIT Sloan Fellow Affiliation, MITaly (MIT Italian Association)Alumni, ITAlents (Italian talents), MIT Global Talent Initiative, EDUCEN (European expert platform focusing on the role of culture in disaster management and risk reduction in Urban centers), Italian Radiological association, Community of users for security DG Home EU
Driving license	B (Italian driving license)

PUBLICATIONS

- S. Colombo, E. Cavalieri d'Oro et al., "Modeling and evaluating performances of complex edge computing based systems: a firefighting support system case study" VALUETOOLS 2017 - 11th EAI International Conference on Performance Evaluation Methodologies and Tools 5-7 December 2017, Venice.
- E. Cavalieri d'Oro, S. Colombo "Mega-Events Risk Engineering and Management: Italy's EXPO 2015 Experience" under revision before submission to "Safety Sciences"
- S. Colombo, L. Zanotelli, G. Falsina, E. Cavalieri d'Oro, I. Sikor "Risks and Opportunities of Refuelling Aircrafts with Passengers on Board: the SEA Milan Airport Use Case", submitted to "Safety Sciences" 28th November 2017 – under submission to "Safety Sciences"
- E. Cavalieri d'Oro, "Interferential risk profiles generated by drones near airport sediments: Impact prevention and protection measures with aircraft" published in the proceedings of the 1st international conference "UAV & SAR: using drones in rescue operations" 27 March 2017, Rome
- E. Cavalieri d'Oro, S. Sassi, P. Setti "Fire engineering and new standards in fire-prevention of multi-destination structures: the Palazzo Italia of EXPO 2015" published in the proceedings of the 8th VGR Workshop Valutazione e Gestione del Rischio negli Insediamenti Civili ed Industriali, September 2016, Rome
- E. Cavalieri d'Oro "Complessità sistemiche e di attuazione del meccanismo del Decreto Legislativo 6 febbraio 2007, n. 52 sulle sorgenti orfane: il caso di via Soave a Milano", published in the proceedings of the annual AIRP workshop in Radiological Protection, Palermo 2013
- E. Cavalieri d'Oro, M.W. Golay, "Strengthening the non-proliferation regime with risk acceptance criteria", PR&PP special issue of the Nuclear Technology Journal, July 2012, pp. 117 – 128
- E. Cavalieri d'Oro, M.W. Golay, "Informing Energy Systems with Proliferation Risk", PR&PP special issue of the Nuclear Technology Journal, July 2012, pp. 129 – 142
- E. Cavalieri d'Oro, M. Zucchetti, "Security and safeguard problems of generation IV nuclear energy systems", Proceedings of the first Arab conference on the prospects of nuclear power for electricity generation and seawater desalination". June 2010 - Hammamet (Tunisia)
- E. Cavalieri d'Oro, (E. Loewen), "Project management methods and risk management tools in the nuclear energy sector: uncoupling the schedule of large complex nuclear projects from regulatory changes", Proceedings of the first Conference on complex design systems. October 2010 - Paris (France)
- E. Cavalieri d'Oro, M.W. Golay, "Proliferation resistance assessment of the sodium fast reactor energy system using a risk-informed and procedure based regulatory framework", Proceedings of the Global 2009 Conference. September 2009 - Paris (France)
- E. Cavalieri d'Oro, J. Buongiorno "Norme per la sicurezza nucleare: collaborazione USA e Lombardia per un'agenzia nucleare con sviluppate capacità di comunicazione". December 2008 – Milan (Italy)
- E. Cavalieri d'Oro, M.W. Golay, "Integrating system dynamics with predictive learning: measuring the reliability of a passive system in a nuclear power plant", Conference Proceedings at the International System Dynamics Conference. July 2008 - Athens (Greece)
- E. Cavalieri d'Oro, M.W. Golay "Preparing to the near-term deployment of new nuclear fission technologies: a system dynamics analysis of the nuclear market's behaviors", Conference proceedings of the International System Dynamics Conference. July 2005 – Boston (USA)
- Contributed and cited in: "Energy prizes" by R. Lester et al., MIT industrial center for performance, March 2009, MIT; "Investigation of risk-informed methodologies to improve sodium-cooled fast reactor economics with safety, and non-proliferation constraints" by G. Apostolakis et al., PSA Conference -2011

CONFERENCES AND INVITED TALKS

- Lecturer at the 1st scientific international conference on CBRNe (SICC2017) with the work titled "Drones in the nearest future: ally or threat to CBRNe events?"
- Poster at the ASM 2017 annual conference "Biothreats: Research, Response, and Policy meeting" with the work titled "Facing the Bio-emergency: An Integrated Team Based Approach in Lombardia, Italy". Washington DC, February 6-8 2017
- Invited speaker at the workshop "Security, Bureaucracy or Conscious Management?" – 30th November Politecnico di Milano, Milano
- Lecturer at the 3rd international workshop on CBRNe risks, University Roma Tor Vergata – 25th November 2016, Rome (Italy)
- Invited speaker for the inauguration of the agreement between Italian Fire Corps and Politecnico di Milano, "Innovation and emergency management" – 17th November 2016, Politecnico di Milano.
- Lecturer at the 2nd CHIMiVigila Conference "Production, detection and transportation of hazardous substances" – Milan, 16th November 2016
- Organizer and speaker at the "2nd VV.F. National Conference about Radiological Emergencies" held at Politecnico di Milano and the Italian Red Cross training center – Milan, 3-4 November 2016
- Lecturer at the "XXXVII Convegno Nazionale di radioprotezione" organized by the Italian Association of Radiological Protection – Trieste, 19 October 2016

- Lecturer for the European project EDUCEN (European Disasters in Urban centres: a Culture Expert Network), – Politecnico di Milano February 2016
- Lecturer at the “CHEMBioHaza 2015 Conference on emerging CBRN threats” organized by the Military Corps Order of Malta held at the National Research Council – Milan, 21 November 2015
- Lecturer at the 1st CHIMiVigila Conference “Transport of hazardous substances” – Milan, 12th November 2015
- Organizer and speaker at the “VV.F. National Conference about Radiological Emergencies” held at EXPO 2015 – Milan, 23rd October 2015
- Lecturer at the European conference on “Terrorist attacks in hospitals” held at San Raffaele Hospital with the title: “The NBCR-E threats during EXPO 2015” – Milan, June 25th 2015
- Lecturer at the national course in “Radiation protection in the industrial uses of ionizing radiation” organized by the Italian association of radiation protection– Salerno, June 23rd 2015
- Lecturer at the Order of Professional Engineers Monza Brianza “New Scenarios for fire prevention and technology solutions for security” – Monza, 5th May 2015
- International NERIS workshop 2015: Poster session “ Recovery of orphan sources in emergency situations” at the international conference on nuclear and radiological emergencies – Milan, 27-29 April 2015
- Teaching at the Polytechnic of Milano Business School (MIP) the course “Fire prevention and design optimization projects within spaces of office buildings ” – Milan, 5th November 2014
- Co-organizer and speaker in the “Security modelling techniques” session hosted at the international System Dynamics conference in Albuquerque – July 2009, New Mexico (US)
- Invited speaker for the opening of the panel for young professional at the third UC Forum & Workshop: “Non-proliferation in the global nuclear renaissance” – July 2009, Berkeley University (US)
- Invited speaker at the 4th Conference: “The contribution of Italian researchers in the world: assessing the urgent need of a nuclear regulatory framework for Italy” – November 2008, Houston (US)
- Invited Presenter at the 17th System Dynamics Ph.D. Colloquium: “Integrating System Dynamics with predictive learning: a method to improve the reliability of a nuclear plant” – October 2008, Albany
- Organizer responsible for the Panel by Sandia National Laboratories: “Nuclear power’s new markets & applications: small modular reactors”; 2009 MIT Energy Conference - March 2009, Cambridge (US)
- Co-developer and creator of the interactive exposition “Carbon energy footprint calculator”, MIT Energy Conference and MIT Museum – September 2009, Cambridge (US)
- Coordinator International Security Meeting: lead team of 8 directors in developing risk management techniques to improve response strategies in the event of terrorist threats. May 2005, Moreton (UK)

AWARDS and RECOGNITIONS

- Excellence Award received for the best poster at the 3rd international workshop on CBRNe risks, Università Roma Tor Vergata – 2016, Rome (Italy)
- Awarded of letter of praise from the Prefecture of Milan, the Commander of the fire brigades of Milan, the General Manager of the Politecnico di Milano for the personal contribution provided to the safety and security of the city of Milan and its infrastructure in the European Semester and Expo 2015
- Awarded of the fiscal benefits under the Italian law “Controesodo” also called brain drain, 2012-2016
- MIT \$100K Entrepreneurship Competition: participated twice with 2 business ideas and reached semi-finals, May 2007, and May 2011 – MIT (USA)
- Department Of Energy Nuclear Energy Fuel Cycles R&D Excellence Award received for the best second poster at the Fuel Cycle Research & Development 2009 Annual Department of Energy meeting – 2009, Albuquerque (USA)
- One out of the three finalists for the IRER scholarship competition for the Italian scientists abroad “Contributors to studies for the development of the Regione Lombardia”. December 2008, Milano
- Selected to represent Politecnico di Milano at the International Summer School BEST (Best European STudents) program at Budapest University. July 1999, Budapest (Hungary)
- Selected to participate in a competitive summer program at The Max Planck Institute in Munchen. June 1996 (Germany)

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