Personal information

First name(s) / Surname(s)	ENRICO DANZI
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Nationality	Italian
Date of birth	05 February 1986

Professional experiences

Project on calibrating and testing of a wireless gas sensors network to be installed in the Department of Applied Science and Technology in Politecnico di Torino in collaboration with Minteos S.r.L. (September-November 2012).

Collaboration as laboratory assistant in “Reactors and chemical kinetics/Safety in industrial processes” Bachelor-level course in Chemical and Food Engineering at Politecnico di Torino

(December 2013-January 2014)

Collaboration as laboratory assistant in “Chemistry” Bachelor level course in Aerospace Engineering in Politecnico di Torino

(September 2014-January 2015)

Development of FLAME (Fire Level Assessment Matrix for Enterprises), an index semi-quantitative tool for fire risk evaluation in workplaces, in collaboration with EPC-Eade Srl (2012-in progress)

PhD candidate in Metrology: Measuring Science and Technique - Occupational Safety and Health at Department of Applied Science and Technology - Politecnico di Torino

(March 2013-Final dissertation May 2016)

Application of fire evaluation methods (FLAME, FRAME) to care-facilities (ambulatories, hospitals) in collaboration with ASL TO2 (2015-in progress)

Collaborations a laboratory assistant in “Chemical and Electrochemical Reactors” Master level course in Chemical Engineering and Sustainable Processes at Politecnico di Torino

(January 2016 – May 2016)

PhD in Metrology: Occupational Safety and Health – Final Dissertation title: Development of Speditive Explosibility Test (SET): a statistical reliable method for combustible dust explosibility investigation (March 2013 – May 2016)

Application and development of F&E index methods to chemical industry in Italy-in collaboration with TECSA Srl (June 2018 – in progress)

Academic Mentor for students in SMART TOWER Hackathon-organised by TERNA & Politecnico di Torino, for the fire risk monitoring design, application to electric medium-voltage lines (Sep 2019 – Jul 2020)

Technical support in the project "CORADIA STREAM FNM-HMU - Design, Engineering e Certificazione di un convoglio alimentato a idrogeno (Hydrogen -.fuelled railcar certification)" BY Alstom in collaboration with Politecnico di Torino and FBK (Apr 2021 – in progress)

Erasmus+ Training Mobility at the Laboratoire Réactions et Génie des Procédés, Université de Lorraine, Nancy – France (Jun 2021)

Technical staff – D category (Applied Science and Technology Dept.), Politecnico di Torino, (Nov 2021, permanent contract)

Education and training

Dates	November 2016
Title of attestation delivered	"Premio Qualità 2015" (Quality Award) recognised to PhD student for excellence in the research
Name and type of organisation providing education and training	PhD School "Scudo" Politecnico di Torino

Dates	Nov 2016
Title of attestation delivered	PhD in Metrology: Occupational Safety and Health
Name and type of organisation providing education and training	Politecnico di Torino

Dates	February 2016
Title of attestation delivered	Fire Prevention Course, according to D.M. 05/08/2011
Name and type of organisation providing education and training	Italian Home Office – Fire Corps Department

Dates	Sep 2009- July 2012
Title of attestation delivered	Master in Chemical Engineering – Bologna Process
Principal subjects/occupational skills covered	Supplements to the technical-scientific and mathematical background (including numerical methods, probability analysis, advanced transport phenomena principles and multiphase reactors modelling). Complex multiphase systems Physics of particles (fine dispersed systems, thermodynamics of interfaces) and of turbulence. Electrochemical reactors principles and knowledge of sustainable energy and automotive systems (fuel cells, HV) Advanced process control implementation (multivariable system, P&ID basis design) Knowledge of biotechnological products and processes Recycling processes, basis of life cycle analysis) Safety industrial equipment and implementation in chemical industry, risk analysis methods. Basis of oil engineering, polymers properties, production and development Investigation of food industry processes and peculiar technologies (separation, cryoconcentration, freeze-drying) and rheology of food industry fluids.

Final project	Thesis “Dynamics of a gas release in atmosphere – Experimental and numerical study on plume rise phenomena”, performed at Ecole Centrale de Lyon – Ecully, Lyon, France Final mark 107/110
Subject and realisation	Evaluation of the dynamic of an hot air plume through a chimney within a wind tunnel measurement campaign; analysis and elaboration of experimental data (performed with Matlab and NI LabVIEW) to validate numerical models for atmospheric pollutants dispersion (Lagrangian and integral Eulerian model).
Name and type of organisation providing education and training	Politecnico di Torino, Turin, Italy
Dates	September 2005 – May 2009
Title of attestation delivered	Bachelor degree in Chemical Engineering
Principal subjects/occupational skills covered	Basic knowledge of general principles of process engineering. Basic knowledge of measuring methods and of basic concepts of process control. Ability to organize, describe and implement a simple chemical or physics or chemistry experiment. Basic knowledge of organic chemistry, material properties and structures, thermodynamics principles and reaction kinetics. Basic understanding of safety and environmental issues. Understanding of the product engineering concept: formulation, definition, performance.
Final Project	Thesis: “Wireless fire detectors for confined rooms”, in collaboration with “Minteos S.r.L.” – Final mark 92/110
Subject and realisation	Experimental campaign of measurement of CO pollution in confined room to calibrate and test wireless sensors; analyse of results to define relevant importance of critical conditions of smouldering combustion and CO production in propagation of fire in confined room..
Name and type of organisation providing education and training	Politecnico di Torino, Turin, Italy
Dates	September 2000 – July 2005
Title of attestation delivered	High School diploma
Name and type of organisation providing education and training	Liceo Scientifico “Giuseppe Peano” - Cuneo, Italy

Personal skills and competences

Mother tongue: Italian

Other language(s): English, French, German

Self-assessment

European level (*)	**Understanding**		**Speaking**		**Writing**
Language	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	C1	C1	B2	B2	B1
German	A2	A2	A2	A2	A1
Chinese	A1	A1	A1	A1	A1

Certifications

English: Cambridge PET with merit – 2004
IELTS 7,5 – 2012

Social skills and competences	Ability to work in teams, both in real life and working environments (during Master team work of development, process analysis and design of a textile waste treatment plant) and in sporting teams (namely, football teams since early primary school years). Ability to make teams stronger and closer by creating connections and relationships among team members. Good ability in facing difficulties and in motivating other team members. Good adaptability, even when conditions are not comfortable, such as during voyages to Africa. Obtained good results in his partnership with the Minteos Srl firm during his bachelor final project.)
Organisational skills and competences	Satisfactory leader attitude during team work, especially in decision making when it concerns the team attitude towards the other teams or subjects involved in the projects (i.e. relationship with working partners, professors, project leader); open-minded and critical approach at problems and process studies**.**
Technical skills and competences	Environments and languages of programming.: MS OFFICE (Word, Excel document compiling, Access basic functions, Power Point presentation) Text compiler: LaTeX (TeXniCcenter) Cad software: Autocad 2D, SolidWorks Language Visual C, Turbo Pascal Other software or environments: Aspen package (chemical engineering application), Matlab package, NI LabVIEW software, R software (statistical analysis), Ozone software, FLACS software.
Other skills and competences	14 years experience in AGESCI scout group in Cuneo, among them 2 years as educator assistant and 3 years as educator of a 13-18 year old teen-agers of both sexes, still in charge. Children counsellor at local parochial groups for many years. Volunteer in "Ujamaa" association, supported by LVIA , nongovernmental association, which goal is to promote African culture, sustainable development and interracial relationships through lessons in primary schools, solidarity events in our city and responsible tourism in Africa, especially addressed to students of secondary schools. Co-founders of "Libera" group in Cuneo (Italy) Organisation of courses of education to legality and engaged citizenship in secondary school with "Libera" association against "mafia" and illegality. Organization of "Campeggio Resistente" (www.campeggioresistente.com), since 2009, summer camp in which young people met to discuss, reflect and exchange ideas concerning politics, democracy and society, that gather every year about a thousand people. Experience in skiing, mountain climbing, football and mountain-bike.
Driving licence	European driving licence B (since 2005)
Additional information	Main publications : Marro, M., Salizzoni, P., Cierco, F.X., Korsakissok, I., Danzi, E., Soulhac, L., 2014. Plume rise and spread in buoyant releases from elevated sources in the lower atmosphere. Environ. Fluid Mech. 14, 201–219. doi:10.1007/s10652-013-9300-9 Danzi, E., Marmo, L., Riccio, D., 2015. Minimum Ignition Temperature of layer and cloud dust mixtures. J. Loss Prev. Process Ind. 36, 326–334. doi:10.1016/j.jlp.2015.04.003 F.L.A.M.E: software – Valutazione del rischio incendio. EPC EADE Luca Fiorentini, Luca Marmo, Enrico Danzi Marmo, L., Piccinini, N., Danzi, E., 2015. Small magnitude explosion of aluminium powder in an abatement plant : A telling case. Process Saf. Environ. Prot. 98, 221–230. doi:10.1016/j.psep.2015.06.014 Performance Based Fire Engineering. Case study from Italy. Fiorentini, L., Marmo, L., Danzi, E., Puccia, V. Presented at 11th Conference on Performance-Based Codes and Fire Safety Design Methods SFPE, Warsaw (Poland), May 2016

Fire risk assessment of photovoltaic plants. A case study moving from two large fires: from accident investigation and forensic engineering to fire risk assessment for reconstruction and permitting purposes. Fiorentini, L., Danzi, E., Marmo, L., Puccia, V. Paper invited to: 15th International Symposium on Loss Prevention and Safety Promotion in the Process Industries, ICHEME, At Konzerthaus Freiburg (Germany), June 2016

A parametric fire risk assessment method supporting performance based approaches. Fiorentini, L., Marmo L., Danzi, E.– 2017 SFPE Middle East Conference: Getting-It-Right Tools and Strategies to Improve Fire Protection Engineering on Projects, Dubai 19/23 March 2017.

Explosibility of metallic waste dusts Marmo, L., Riccio, D., Danzi, E. (2017) Process Safety and Environmental Protection 107, pp 69-80. DOI 10.1016/j.psep.2017.01.011

Studies of the explosible properties of textile dusts. Marmo, L., Sanchirico, R., Di Benedetto, A., Di Sarli, V., Riccio, D., Danzi, E. (2018) Journal of Loss Prevention in the Process Industries, 24 pp. 110-122. DOI 10.1016/j.jlp.2018.03.003

Moreno, V. C., Danzi, E., Marmo, L., Salzano, E., & Cozzani, V. (2019). Major accident hazard in biodiesel production processes. Safety Science, 113(December 2018), 490–503. https://doi.org/10.1016/j.ssci.2018.12.014

Danzi, E., & Marmo, L. (2019). Dust explosion risk in metal workings. Journal of Loss Prevention in the Process Industries, 61, 195–205. https://doi.org/10.1016/j.jlp.2019.06.005

Salzano, E., Debernardi, M. L., Riccio, D., Danzi, E., Di Lolli, A., & Marmo, L. (2019). A case study of multiple explosions of chemicals under fire conditions. Journal of Loss Prevention in the Process Industries, 103932. https://doi.org/10.1016/j.jlp.2019.103932

Marmo, L., Ferri, A., & Danzi, E. (2019). Dust explosion hazard in the textile industry. Journal of Loss Prevention in the Process Industries, 62(April), 103935. https://doi.org/10.1016/j.jlp.2019.103935

Danzi, E., Fiorentini, L., & Marmo, L. (2020). FLAME: A Parametric Fire Risk Assessment Method Supporting Performance Based Approaches. Fire Technology. https://doi.org/10.1007/s10694-020-01014-9

Pietraccini, M., Danzi, E., Marmo, L., Addo, A., & Amyotte, P. (2021). Effect of particle size distribution, drying and milling technique on explosibility behavior of olive pomace waste. Journal of Loss Prevention in the Process Industries, 71, 104423. https://doi.org/10.1016/j.jlp.2021.104423

I do authorize the use of my personal data in compliance with EU legislation 679/2016,

Turin, 16/02/2022

Enrico Danzi