

INFORMAZIONI PERSONALI

 Davide Manca

 OCCUPAZIONE PER LA QUALE
SI CONCORRE

AVVISO PUBBLICO PER L'AGGIORNAMENTO DELL'ELENCO APERTO DI ACCREDITAMENTO, APPROVATO CON PROVVEDIMENTO DIRIGENZIALE N. 2617 IN DATA 13/7/2015, AI SENSI DELLA LEGGE REGIONALE 28 APRILE 1998, N. 18, ART. 7, COMMA 6, PER IL CONFERIMENTO DI INCARICHI PROFESSIONALI PER LA VALUTAZIONE DI PIANI DI SVILUPPO (L.R. 14/2011) E DI PROGETTI DI RICERCA (L.R. 84/1993).

ISTRUZIONE E FORMAZIONE

Education

- 1994-1995 Post Doc grant from Fondazione Lombardia per l'Ambiente
 Research topic: Technologies for the combustion improvement and reduction of toxic compounds
- 1991-1994 Ph.D. in Chemical Engineering at Politecnico di Milano
 Thesis: Optimization and Control of Multiple Crude Oil Distillation Units
- 1991 Chemical Engineering qualifying examination, 100/100 at Politecnico di Milano
- 1984-1990 M.Sc. in Chemical Engineering, 100/100 cum laude at Politecnico di Milano
 Thesis: Design of a MIMO control system for distillation columns: linear and non-linear approach

 ESPERIENZA
PROFESSIONALE

Academic career

- 2002- Associate professor in Process Systems Engineering
 Politecnico di Milano
- 1995-2002 Assistant professor in Process Systems Engineering
 Politecnico di Milano

Academic courses

- 1998-1999 Applied Mathematics (numerical calculus)
 Faculty of Architecture – Politecnico di Milano
- 1999-2002 Conceptual Design of Chemical Processes
 Master Degree in Chemical Engineering– Politecnico di Milano
- 2003- Applied Numerical Calculus
 Bachelor Degree in Chemical Engineering – Politecnico di Milano
- 2003-2012 Process Design and Economics
 Master Degree in Chemical Engineering – Politecnico di Milano

2004-2007	Safety assessment for the city and the territory Faculty of Architecture – Politecnico di Milano
2005-	Advanced methods for process design and optimization (in English) Ph.D. school of Chemical Engineering – Politecnico di Milano
2007-2011	Dynamics and Control of Chemical Processes Master Degree in Chemical Engineering – Politecnico di Milano
2009-	Instrumentation and Control of Chemical Plants Master Degree in Chemical Engineering – Politecnico di Milano
2012-	Process Systems Engineering (in English) Master Degree in Chemical Engineering – Politecnico di Milano

Supervisor

- 27 Bachelor degree theses in Chemical Engineering
- 46 Master degree theses in Chemical Engineering
- 5 Ph.D. theses in Chemical Engineering
- 2 Post-doc positions

National research collaborations (other than Politecnico di Milano)

- Prof. M. Barolo, Università di Padova, “Batch distillation and optimal control trajectories”
- Prof. A. Barresi, G. Baldi, D. Marchisio, Politecnico di Torino, “Simulated moving bed reactors. Modeling and Optimization”
- Prof. R. Baratti, Università di Cagliari, “Artificial Neural Networks for system identification”
- Prof. C. Scali, Università di Pisa, “Model based control in process industries”
- Prof. A. Servida, Università di Genova, “System identification”
- Prof. S. Crescitelli, Università di Napoli, “Non-linear process dynamics”
- Proff. G. Continillo, E. Mancusi, Università del Sannio, “Non-linear process dynamics”
- Prof. M. Grassi, Università di Trieste, “First principles modeling of pharmaceutical processes”
- Prof. V. Cozzani, Università di Bologna, “Safety assessment in chemical processes”
- Prof. F. Bezzo, Università di Padova, “Strategic design for the supply-chain optimization”
- Prof. G. Lamberti, Università di Salerno, “Pharmacokinetics and pharmacodynamics”
- Prof. M. Grassi, Università di Trieste, “Pharmacokinetics and microencapsulation”
- Prof. G. Cavallaro, Università di Palermo, “Special polymers for controlled release of anticancer drugs”

International research collaborations

- Prof. J.A. Fay – MIT, USA, “Pool spreading and evaporation”
- PhD. S. Hanna - Hanna Consulting, USA, “Pool spreading and evaporation”
- Prof. D.M Webber – HSE, UK, “Pool spreading and evaporation”
- Prof. P.W.M. Brighton – HSE, UK, “Pool spreading and evaporation”
- PhDs M. Brown, Reisner, Chang – LANL, “Dispersion of heavy and buoyant gases in complex industrial environments”
- Prof. P. A. Webley, Monash University – Australia, “Numerical solution of stiff ODE systems”
- Prof. U. Diwekar – Vishwamitra Research Institute – USA, “Multiobjective optimization of fuel-cell systems for trucks”
- Prof. V. Plesu – Bucarest, Romania – Reviewer of the Ph.D. thesis of Petrica Iancu “Process integration for water minimization in oil processing and petrochemistry”
- Prof. R. Aguilar-López – Special issue of Chemical Product and Process Engineering “Process modeling and Control”, Departamento de Biotecnología y Bioingeniería, CINVESTAV-IPN – Mexico

- Prof. I. Mujtaba – Bradford University, UK – Research activity on Water Desalination Systems
- Prof. IL Moon – Yonsei University, Korea – Price forecast of commodities and utilities
- Prof. Fengqi You – Northwestern University, USA – Supply chain management
- Prof. Annette Kluge – Duisburg University, Germany – Human factors in industrial operators training
- Prof. Kjell Ivar Øvergård – Vestfold University College, Norway – Situation awareness of operators in the maritime sector
- Prof. Antonio Espuna – Escola Tècnica Superior d'Enginyeria Industrial de Barcelona, Spain – Econometric models for scheduling and planning problems of chemical processes

Academic appointments

- Member of the department executive board
- Member of the department external relations commission
- Member of the interdisciplinary and inter-departmental research center for Combustion
- Member of the department informatics commission
- Member of the department publications commission
- Member of the department commission for spin-off projects
- Member of the joint committee of the Engineering School at Politecnico di Milano
- Member of three national commissions for assistant professor positions
- Member of four national commissions for the PhD final defense
- Member of five commissions for post-doc positions at Politecnico di Milano
- Member of the Joint Committee (Commissione Paritetica) of the Engineering School of Industrial Processes at Politecnico di Milano
- Head of PSE-Lab the “Process Systems Engineering” laboratory at Politecnico di Milano
- Executive member and Treasurer of EURECHA (The European Committee for Use of Computers in Chemical Engineering Education)

PhD schools and Continuing education courses

- Founder of the national and triennial PhD school in Process Systems Engineering, “1. Process Dynamics”, “2. Process Control”, “3. Process Reconciliation and Optimization”, (2001–2009)
- Director of the continuing education school “Advanced control, optimization and supervision of chemical processes”, Politecnico di Milano
- Director of the continuing education school “Design and Control of Incineration plants”, Politecnico di Milano
- Director of the continuing education school “Artificial Neural Networks, Fuzzy Logic, Genetic Algorithms”, Politecnico di Milano
- Academic staff of the continuing education school “Advanced process control”, ENI group
- Academic staff of the PhD School “Numerical methods for chemical engineering”, University of Bologna
- Academic staff of the continuing education school “Heating systems: quality of the air and of the environment”, AIRU association
- Academic staff of the Master in “Design of off-shore platforms. How to model the safety”, University of Bologna
- Academic staff of the continuing education school “Process Analytical Technologies: applications to the pharmaceutical industry”, DISTEF Project, MIUR Grant (DM 28539) “Nanotechnologies for the Industrial Packaging”, Bologna, 2008
- Academic staff of the qualification course “Heat and mass transfer”, SILSIS school, (2003–2009)
- Academic staff of the advanced qualification course “Planning in areas with integrated risk”, Italian Ministry for the Environment, 2011

National research grants

- Member of the Italian Research Project (PRIN-MIUR ex MURST) “Numerical modeling of combustion processes” for POLIMI Research Unit, (1996-1998)
- Person in charge for POLIMI of the Italian Research Project (PRIN-MIUR ex MURST) “Dynamics, Control, and Optimization of Chemical Processes”, (1998-2000)
- Person in charge for POLIMI of the Italian Research Project, (PRIN-MIUR ex MURST) “Multivariable control systems for forced networks of unsteady reactors”, (2002-2004)
- Member of the Italian Research Project (FIRB-MIUR) “Conceptual design of a new natural-fiber process” for the POLIMI Research Unit, (2007-2011)
- Member of the Italian Research Project (PRIN-MIUR) “Performance indicators in the process design” for the POLIMI Research Unit, (2008-2010)
- Person in charge for POLIMI of the Italian Research Project (PRIN-MIUR-2010) “Identification of optimal delivery systems for the Nucleic Acid Based Drugs and study of the action mechanisms in some models of human tumoral and inflammatory pathologies, (36 months, 2013-2016)

Funded Research projects with private industries

- Research member of the industrial contract with CISE (ENI), “Steady-state simulation of water treatment units”, (1997-2009)
- Research member of the industrial contract with Enea Casaccia “Steady-state simulation of fuel-cell systems”, (1999-2002)
- Person in charge of the industrial contract with Eurand S.p.A. “Microencapsulation of drugs and Controlled Release”, (2000-2001)
- Person in charge of the industrial contract with Eurand S.p.A. “Interfacial phenomena in the deposition of polymers on active principle granules”, (2002-2003)
- Person in charge of the industrial contract with Eurand S.p.A. “High energy mechanochemical activation”, (2003-2005)
- Person in charge of the industrial contract with Pietro Fiorentini S.p.A. “Design and simulation of a centrifuge multiphase separator for the treatment of crude oils”, (2005-2006)
- Research member of the industrial contract with Transplan S.r.l. “Design of a rescue vehicle for hazardous industrial environments”, (2007)
- Person in charge of the industrial contract with Termokimik Corporation “Steady-state simulation of the CO₂ absorption with amines”, (2007)
- Person in charge of the industrial contract with IMA S.p.A. “Introduction of the Process Analytical Technologies in the solid-dose production line”, (2007-2008)
- Person in charge of the industrial contract with IMA S.p.A. “Optimization of batch and continuous granulation and exsiccation processes”, (2008-2009)
- Co-Person in charge (with prof. S. Pierucci) of the industrial contract with Altran Italia S.p.A. “Value proposition of DCS product lines”, (2010-2011)
- Person in charge of the industrial contract with ABB Italia S.p.A. “Modeling of the microwave characterization of the unburnt C fraction in exhaust streams from coal-dust power plants”, (2011-2012)
- Person in charge of the industrial contract with CIM Progetti S.p.A., “Conceptual design of a pilot scale reactor for calcium hydroxide by sonochemical activation”, (2012-2013)
- Person in charge of the industrial contract with APT Services S.r.l., “Design of experiments for fire-prevention systems in railway tunnels”, (2013-2015)

Funded Research projects with National or European Community public bodies

- Person in charge of the public contract "Safety in the municipality", Lombardia Region, (2002-2004)
- Person in charge for the CMIC Department of the public contract "Quater – Quality of the territory", European Community, (2003-2004)
- Research member for the public contract "Emergency preparedness and emergency response. Procedures for the mitigation of natural and anthropic risks", European Community, (2004-2005)
- Research member for the public contract "Municipal emergency plan in case of industrial accident", Lainate municipality, (2004-2005)
- Person in charge for POLIMI of the public contract "PRE-EMERGENCIES: emergency preparedness for civil protection to sudden and mounting risks", European Community – DG Environment, (2006-2007)
- Person in charge of the working group on "Simulation of industrial accidents. Pools fires, explosions, dispersion of toxic compounds", VIRTUALIS Project, European Community – DG Research, (2006-2010)
- Research member for the inter-departmental project "An integrated approach to risk assessment in industrial areas", Politecnico di Milano, (2006-2009)
- Research member for the inter-departmental project "Knowledge structure for the support of preventive actions", Politecnico di Milano, (2006-2009)

Invited speaker

- "Mathematics", Lombardia Region undergraduate course, 1996
- "Advanced control of incineration processes", CRIS specialization course, 1998
- "Dynamics, Control, and Supervision of Chemical Processes", ENI, 1998
- "Micropollutants formation in combustion processes", postgraduate course, 1999
- "System identification: ARX, ARMAX, NARX, ANN", PhD course, 2001
- "Model Based Control of Heterogeneous Combustion Processes", PhD course, 2001
- "Fluid Mechanics", undergraduate course, 2002
- "Chemical and Industrial Risk analysis", ASERI Master course, 2002 and 2003
- "Technological disasters: industrial and transport accidents", IREF Master course, 2004
- "Multivariable control. Thermographic analysis of the combustion chamber in an incineration plant", ANIPLA, 2005 and 2006
- "Civil protection: advanced systems for the emergency response", Palazzo Turati, 2006
- "PAT – Process Analytical Technologies for pharmaceutical processes", IMA, 2006
- "Dispersion models for heavy and buoyant gases", POLIMI postgraduate course, 2006-2011
- "Emergency planning for chemical and industrial risk", IREF postgraduate course, 2006
- "Chemical and industrial risk", IREF postgraduate course, 2006
- "Emergency preparedness and Risk analysis", ILAS, 2007
- "Hierarchical improvement of the safety in road tunnels", Italian Civil Protection Agency, Varenna, 2008
- "Data Reconciliation and Soft Sensors in continuous and batch processes", Chemprod Workshop, Milan, September 4, 2008
- "Inferential measures and soft sensors for dynamic tracking of process variables", Workshop "PAT solutions for the efficiency and quality improvement in the pharmaceutical industries", Siemens, Milan, October 6, 2009
- Dynamic Simulation of accident events in industrial plants for the training of control room and field operators", Workshop "Operator Training Simulator and Dynamic Simulation", ENI, Milan, November 10, 2009
- "Model-based innovation in the process industry", Workshop DIPIC, Padua, 2010
- "Dynamic simulation of accident events in industrial plants: the BP Texas Refinery case study", Workshop on Dynamic Simulation of Industrial Plants", ENI, Milan, October 26, 2010

- “Inferential measures and soft sensors for dynamic tracking of process variables”, workshop on “Industrial Applications of EUDRAGIT”, IMA, Bologna, October 13, 2011
- “Virtual and Augmented Reality: tools to increase the process understanding of field operators”, Workshop “3D Simulation”, ENI, Milan, October 18, 2011
- “Event reconstruction of Viareggio accident event by means of detailed numerical simulation”, Workshop “Innovative aspects in the field of relevant accident risks”, University of Insubria, Varese, 14 November, 2011
- “The Viareggio railway accident: lessons-learned”, International symposium “Integrated Risk Definition, Assessment, Management”, Milan, March 14-16, 2012
- “The Viareggio railway accident: Lessons-learnt”, AIAS Conference, Milan, May 18, 2012
- “3D virtual immersive environments for industrial operator training”, Duisburg, Germany, October 23-24, 2013
- “The Viareggio railway accident: Lessons-learned”, ESA-AIAS Conference, Milan, November 14, 2013
- “A PSE approach to patient-individualized physiologically based pharmacokinetic modeling”, Keynote Lecture at ESCAPE-25 and PSE 2015 on in Copenhagen, Denmark, May 31 - June 4, 2015
- “Similarities between human body and chemical plants in modeling of physiologically-based pharmacokinetics”, McCormic Northwestern University, Chemical and Biological Engineering Department, Evanston, Chicago (USA), August 27, 2015
- “Apprendere dalla ricostruzione degli incidenti industriali per migliorare la sicurezza di processo”, Congress on “La sicurezza nell'industria di processo e la riduzione dei rischi al valore ALARP (As Low As Reasonably Possible)”, Milan, September 25, 2015
- “Dati, cifre, numeri, quantità, grandezze, percentuali, andamenti e fenomeni: gli errori da non commettere nella formulazione di una notizia”, Conference given to the Order of Italian Journalists, Milan, November 20, 2015

Academic awards

- 4 awards for the “Best chemical engineering thesis” at POLIMI in: 1996, 2001, 2003, 2005
- Second position in the international contest “Excellence in Simulation. University Grant Program Simsci-Esscor (Invensys Process Systems). Lake Forest, CA, USA”, with the manuscript “Advances in Plant-Wide Design and Control by Process Dynamic Simulation”, F. Manenti, D. Manca, 2007

Industrial awards

- Four grants as best undergraduate, graduate and post-doc student, (1986-1993)
- Winner of the Honeywell User Group prize for the best research memory, Barcelona, 2010
- Winner of the best 2009 paper prize by the Italian National Association for the Automation (ANIPLA), 2010

Chairman at International Conferences

- “First European Congress on Chemical and Process Engineering, ECCE 1”, Firenze, Italy, May 4-7 (1997)
- “The Fourth Italian Conference on Chemical and Process Engineering, ICheaP-4”, Florence, 2-5 May, (1999)
- “The Fifth Italian Conference on Chemical and Process Engineering, ICheaP-5”, Florence, 20-23 May, (2001)
- “ICheaP-7 Chemical and Process Engineering”, Taormina, 15-18 May, (2005)
- “Major Risks Challenging Publics, Scientists and Governments”, Society for Risk Analysis, Como 12-14 September, (2005)
- “CISAP-2: Second International Conference on Safety & Environment in Process Industry, Napoli, Italy, (2006)
- “ESCAPE-17 European Symposium on Computers and Process Engineering”, Bucharest, Romania, (2007)
- “CISAP-3: Second International Conference on Safety & Environment in Process Industry”, Rome, Italy, (2008)
- “PSAM-9 International Conference on Probabilistic Safety Assessment and Management”, Hong Kong (2008)
- “ICheaP-9: The ninth International Conference on Chemical & Process Engineering”, Rome, Italy, (2009)
- “CISAP-4: 4th International Conference on Safety & Environment in Process Industry”, Florence, Italy, (2010)

- “ESCAPE-20 European Symposium on Computer Aided Process Engineering”, Ischia, Italy, (2010)
- “ESCAPE-21 European Symposium on Computer Aided Process Engineering”, Porto Carras, Greece, Italy, (2011)
- “CISAP-5: 5th International Conference on Safety & Environment in Process Industry”, Milan, Italy, (2012)
- “PSE-2012: 11th International Symposium on Process Systems Engineering” Singapore, (2012)
- “ICheaP-11 International Conference on Chemical & Process Engineering” Milan, Italy, (2013)
- “ESCAPE-23 European Symposium on Computer Aided Process Engineering”, Lappeenranta, Finland, (2013)
- “CISAP-6: 6th International Conference on Safety & Environment in Process Industry”, Bologna, Italy, (2014)

Member of the scientific committee at international conferences

- “DINIP 2002: Nonlinear Dynamics and Control in Process Engineering”, Benevento, 11-13 April, (2002)
- “Major Risks Challenging Publics, Scientists and Governments”, Society for Risk Analysis, (2004-2005)
- “PSAM-9: Ninth International Probabilistic safety Assessment and Management Conference”, International Association PSAM, Hong-Kong (China), (2007-2008)
- “WCCE8: 8th World Congress of Chemical Engineering”, Montreal, Canada, (2009)
- “CISAP-4: Fourth International Conference on Safety & Environment in Process Industry, Florence, Italy, (2010)
- “ESCAPE-20: European Symposium on Computers and Process Engineering”, Ischia, Italy, (2010)
- “ICheaP-10: 10th International Conference on Chemical & Process Engineering”, Florence, Italy, (2011)
- “CISAP-5: Fifth International Conference on Safety & Environment in Process Industry, Milan, Italy, (2012)
- “PSE-2012: 11th International Symposium on Process Systems Engineering” Singapore, (2012)
- “ESCAPE-23: European Symposium on Computer Aided Process Engineering” Lappeenranta, Finland, (2013)
- “ICheaP-11: 11th International Conference on Chemical & Process Engineering”, Milan, Italy, (2013)
- “CISAP-6: Sixth International Conference on Safety & Environment in Process Industry, Bologna, Italy, (2014)
- “ESCAPE-24 Working party - European Symposium on Computer Aided Process Engineering”, Budapest, Hungary, (2014)
- “ICheaP-12: 12th International Conference on Chemical & Process Engineering”, Milan, Italy, (2015)
- “ESCAPE-26 European Symposium on Computer Aided Process Engineering”, Portorož, Slovenia, (2016)
- Chairman of “CISAP-7: Seventh International Conference on Safety & Environment in Process Industry, Bologna, Italy, (2016)

Reviewer of International Journals

- Arabian Journal for Science and Engineering
- Bioresource Technology
- Chemical and Biological Engineering Quarterly
- Chemical Engineering Research and Design
- Chemical Engineering Science
- Chemical Product and Process Modeling
- Chemistry Today
- Combustion and Flames
- Computers & Chemical Engineering
- Environment & Planning C: Government & Policy
- Environmental Engineering Science
- Industrial & Engineering Chemistry Research
- International Journal of Computer Systems Science and Engineering
- International Journal of Disaster Risk Reduction
- International Journal of Thermal Sciences
- International Journal of Zhejiang University SCIENCE (A&B)

- Journal of Hazardous Materials
- Journal of Loss Prevention in the Process Industries
- Journal of Pharmaceutical Sciences
- Journal of Power and Energy
- Journal of Zhejiang University SCIENCE (A&B)
- Numerical Heat Transfer
- Pharmaceutical Engineering
- Progress in Colloid and Polymer Science

Reviewer of national research projects

- Peer reviewer of three applications to the Italian Flagship Project “La Fabbrica del Futuro”, 2012
- Peer reviewer of two applications to the Italian Flagship Project “La Fabbrica del Futuro”, 2013
- Reviewer of a MIUR/PRIN application for an Italian inter-university research project, 2012

Associate Editor of International Journals

- Chemical Product and Process Modeling, 12/2007-
- The Scientific World Journal, 06/2012-

Public advices

- Province of Lucca, “Technical advice for the criminal trial of the Viareggio Jun-2009 LPG railway accident”, 2012

Industrial advices

- Vampa Combustion, “Design and simulation of incineration plants”, 1990
- Sipsa Ecologica, “Design and simulation of incineration plants”, 1991
- SNIA Engineering, “Design of H₂S removal by Claus process”, 1991
- Snamprogetti, “Design and simulation of incineration plants”, 1992
- KTI, “Design and simulation of incineration plants”, 1993
- Ambiente, “Optimization of incineration processes”, 1994
- Eniricerche, “Optimization of energy-intensive processes”, 1995
- Snamprogetti, “Optimization of incineration processes”, 1996
- ECO Center, “On-line measurement and monitoring of micropollutants from incineration processes, 1998-2005
- Orsi automation, “Advanced control and optimization of incineration processes”, 1999
- AGAC, “Advanced control and optimization of incineration processes”, 2001
- Samil Defence, “Security devices for military applications”, 2002-2004
- ABB, “Advanced control and optimization of incineration processes”, 2003
- Esploidenti Sabino, “Safety plans for industrial processes that handle explosive materials”, 2010-2015
- PF EUROCOM, “Simulation program of an incineration plant for off-line training of operators”, 2012-2013
- COIM, “The role of precursors for the production of drugs”, 2013
- HeTech-Marpos, “Legal advice in a prosecution of Helium pressurized testing equipment”, 2014-2015
- Esploidenti Sabino, “Conceptual design of an ultrasonic granulator for explosive substances”, 2015

Participation and founding of spin-off companies

- Promoting partner of Virthualis Srl an engineering and research company focused on improving decision-making in the design and implementation of industrial safety. Virthualis Srl is the natural spin-off of the five-year EC VI FP DG Research project.

- RTD and ENG Director of Virthualis Srl company (www.virthualis.com), 2010-2014.

Current research activity and interests

- PAT – Process Analytical Technologies for pharmaceutical processes
- Cancer growth models and pharmacokinetic and pharmacodynamic models of anti-tumoral drugs
- Lime hydration: process understanding, conceptual design and advanced control
- Industrial accident simulation: liquid and gas emissions, pool spreading on ground and water, pool fires, dispersion of heavy and buoyant gases in complex environments, jet streams and jet fires, fireballs
- Interaction of a dynamic process simulator with a dynamic accident simulator for operator training simulation
- Virtual and Augmented-virtual reality to enhance the safety of industrial field-operators
- Situation Awareness and Performance Assessment of control room and field operators in the process industry
- Dynamic Conceptual Design of chemical processes. Economic assessment and feasibility study of industrial plants under price volatility, demand uncertainty, and market fluctuations
- Scheduling, planning and supply chain of chemical and industrial processes

Publications and patents

- Author and coauthor of more than 210 publications as books, chapters of books, international and national peer-reviewed journals, proceedings to international and national conferences
- Coauthor of an Italian patent in the field of incineration processes

Lingua madre Italiano

Altre lingue

ENGLISH				
COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
C2	C2	C2	C2	C2

Sostituire con la lingua

Livelli: A1/A2: Utente base - B1/B2: Utente intermedio - C1/C2: Utente avanzato
 Quadro Comune Europeo di Riferimento delle Lingue

Competenza digitale

AUTOVALUTAZIONE				
Elaborazione delle informazioni	Comunicazione	Creazione di Contenuti	Sicurezza	Risoluzione di problemi
Avanzato	Avanzato	Avanzato	Base	Avanzato

Patente di guida B



Con riferimento alla legge 196/2003 autorizzo espressamente l'utilizzo dei dati personali e professionali riportati nel presente curriculum vitae.