

Alberto Manganaro

Date of birth: 05-07-1976
Birth place: Città di Castello (PG), Italy
Sex: Male
Nationality: Italian



Correspondence

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Education

- Apr 2006 University of Milano Statale – Polo di Crema
Degree in Computer Science
Final grade: 110/110 cum laude
Degree thesis: *“Metodologie chemiometriche per lo studio di matrici di correlazione di grandi dimensioni e costruzione del corrispondente codice in MATLAB”* (*“Chemometric methodologies for studying wide correlation matrices and development of corresponding code in MATLAB”*) performed at Milano Chemometrics and QSAR Research Group, Milano - Bicocca University.
- 1995 High school: Liceo Scientifico “G. Gandini”, Lodi
Final grade: 52/60.

Professional experiences

- Nov 2008 - now Partner of the Laboratory of Environmental Chemistry and Toxicology led by prof. Emilio Benfenati at Istituto di Ricerche Farmacologiche “Mario Negri”, Milano. Research work is mainly related to the development of in-silico models for toxicological endpoints required by the REACH regulation.
- Apr 2006 - now Member of the Milano Chemometrics and QSAR Research Group (michem.disat.unimib.it/chm) led by prof. Roberto Todeschini, at university of Milano - Bicocca. Research work is mainly related to multivariate statistical analysis and statistical software development.
- Scientific consultant for Talete srl (www.talete.mi.it): chemometric consulting and collaboration in the development of software for multivariate analysis.
- Sep - Dec 2002 Temporary teacher of Computer Science in high school “Istituto Tecnico Industriale Statale A. Volta”, Lodi.
- 1999 - 2002 Partner of Eidos SAP s.r.l. (industrial and environmental risk assessment): development of web-based application and standalone software, office IT technician.

Software development and IT related activities

- 2009 Developer of software modules for the **CAESAR – Computer Assisted Evaluation of industrial chemical Substances According to Regulation** project (www.caesar-project.eu). CAESAR is an EC funded project which is specifically dedicated to develop QSAR models for the REACH legislation.
- 2008 Co-developer of the online free database **MOLE db** (Molecular Descriptors Database), michem.disat.unimib.it/mole_db/. The database is intended as a research and teaching tool and allows to search for a specific group of molecules and analyse the corresponding values of molecular descriptors. It is constituted of 1124 molecular descriptors calculated on over 230000 molecules.
- Co-developer of scientific application **DART – Decision Analysis by Ranking Techniques version 2.0**. DART is downloadable for free at European Chemicals Bureau website (ecb.jrc.it).
- 2007 Co-developer of scientific application **DART – Decision Analysis by Ranking Techniques**. DART is a software package for multicriteria decision making, based on several partial and total ranking algorithm, including Hasse Diagrams. DART has been developed in Visual Basic. DART is downloadable for free at European Chemicals Bureau website (ecb.jrc.it).
- Developer of MATLAB module **Variable Reduction Testbench**. VRT is a graphic interface based tool for application of several algorithms of variables reduction, including a new method based on the K correlation index proposed by prof. Todeschini. VRT module is downloadable for free at Milano Chemometrics website (michem.disat.unimib.it).
- Developer of a web module for on-line tests for the master “Diplomado Superior en Analisis de Datos y Sistemas Complejos” organized by Universidad del Azuay, Cuenca (Ecuador). The module has been developed using PHP and MySQL technologies.
- Co-author of the report for the European Chemical Bureau “**Comparative study of different programming languages used for chemistry software development**”.
- Installer and maintainer of the server michem.disat.unimib.it, hosting Milano Chemometrics homepage and other web-based project related to its research work. Job included installing and setting of Linux OS (CentOS distribution) with main server-related services (Apache webserver, MySQL server, PHP). The server is physically located at Milano Chemometrics laboratory, University of Milano - Bicocca.
- 2006 Co-author of the website www.moleculardescriptors.eu. The website is a free resource repository for the chemometric scientific community, providing tutorials, example datasets, information about software and books, a free forum.
- Co-developer of **Molecular Descriptor Correlation**. MDC is a free tool for the analysis of molecular descriptor correlation calculated on a huge dataset of chemicals (based on the National Cancer Institute database). MDC has been developed in Free Pascal using Lazarus IDE, both for Win and Linux platforms. MDC module is downloadable for free at Milano Chemometrics website (michem.disat.unimib.it).

- 2001-2002 Developer of intranet applications for the AGIP Petroli oil refineries of Gela and Livorno, consisting in an ActiveX based client-server application developed in Visual Basic, allowing the interactive access to plant's risk assessment documentation across the intranet. Job included installation and testing directly made in situ at Gela and Livorno.
- 1999-2000 Developer of commercial application **Parsifire** for Windows. Parsifire is a tool for evaluation of fire risks. Parsifire has been developed in Visual Basic.

Information Technology skills

Known programming languages and development tools: Java, C/C++, Visual Basic, Object Oriented Pascal (Delphi/Lazarus), SQL, MATLAB;

Knowledge of networking authoring and development technologies: HTML, XML, PHP, ASP, MySQL Server, Microsoft IIS, Apache webserver;

Experiences with: Linux , Windows , management of small networks, system administration.

Fields of interest

Chemometrics, QSAR, Software Development and Information Technology, In-Silico methods as alternative to animal-testing, Multicriteria Decision Making strategies, Applied Statistics.

Publications

Papers on peer-reviewed international journals

2. "Introduction to MOLE DB - on-line Molecular Descriptors Database"
D. Ballabio, A. Manganaro, V. Consonni, A. Mauri, R. Todeschini
MATCH, communications in mathematical and in computer chemistry (2009), 62, 199-207
1. "Peptides multivariate characterisation using a molecular descriptor based approach"
A. Mauri, D. Ballabio, V. Consonni, A. Manganaro, R. Todeschini
MATCH, communications in mathematical and in computer chemistry (2008), 60, 671-690

Book chapters

1. "The DART (Decision Analysis by Ranking Techniques) software"
A. Manganaro, D. Ballabio, V. Consonni, A. Mauri, M. Pavan, R. Todeschini
in "Ranking methods", R. Todeschini and M. Pavan (ED), Elsevier, 2008

Other papers

2. "Evaluation of multivariate classification and variable selection for the distinction of cachaca and rum samples"
R. Todeschini, D. Ballabio, C. Rojas, A. Manganaro, A. Mauri, V. Consonni, P. Tripaldi
Alimentos, Ciencia e Ingenieria (2007), 16, 113-115
1. "CFA interpolation testbench"
A. Manganaro, P. Brambati, P. Benzi
Note del Polo, Dipartimento di Tecnologie dell'Informazione – Università degli Studi di Milano, 008 (February 2003).

Posters

3. "MOLE DB – on-line Molecular Descriptors Data Base"
D. Ballabio, A. Manganaro, V. Consonni, A. Mauri, R. Todeschini
MATH/CHEM/COMP 2008 Conference, Verbania (Italy), 10–13 June 2008.
2. "Novel XML-Based Electronic Format for QSAR Models Exchange and Application"
A. Manganaro, R. Todeschini, V. Consonni
MATH/CHEM/COMP 2008 Conference, Verbania (Italy), 10–13 June 2008.
1. "Evaluation of multivariate classification and variable selection for the distinction of cachaca and rum samples"
R. Todeschini, D. Ballabio, C. Rojas, A. Manganaro, A. Mauri, V. Consonni, P. Tripaldi
Ibero-American Congress in Food Engineering, Ambato (Ecuador), 5-8 November 2007

Courses and congresses

Oral presentation and lectures

4. "DART – Decision Analysis by Ranking Techniques"
MATH/CHEM/COMP 2008 Conference, Verbania (Italy), 10–13 June 2008.
3. "MOLE DB – Molecular Descriptors online database"
Italian Chemometric Workshop, Pisa (Italy), 14-15 May 2008.
2. "DART – Decision Analysis by Ranking Techniques"
Italian Chemometric Workshop, Pisa (Italy), 14-15 May 2008.
1. "Analisi di correlazione di descrittori molecolari su grandi insiemi di dati"
Italian Chemometric Workshop, Modena (Italy), 15-16 February 2007.

Courses and congresses attended

10-13 June 2008,
MATH/CHEM/COMP 2008 Conference, Verbania (Italy).

14-15 May 2008,
Italian Chemometric Workshop, Pisa (Italy).

10 March 2008,
OSIRIS (Optimized Strategies for Risk Assessment of Industrial Chemicals through Integration of Non-Test and Test Information) training, Milano (Italy).

15-16 February 2007,
Italian Chemometric Workshop, Modena (Italy).

2-4 October 2007,
Workshop on Ranking Methods and Multicriteria Decision Analysis in Environmental Sciences,
Verbania (Italy).