

Alessandro Comunian, Ph.D.

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Research and work experience

- Assistant professor**, Università degli Studi di Milano, Italy *Apr.2014 - onwards*
Main research topics: characterization of geological heterogeneity with statistical methods; groundwater flow and transport modeling; near-surface geophysics.
- Post-Doc. Research Fellow**, CWI, University of New South Wales, Sydney, Australia *Jul.2011 - Mar.2014*
Main research topic: Innovative characterisation of aquifers and aquitards (NCGRT, Program 1).
- Visiting Research Fellow**, Colorado School of Mines, Colorado *May 2012*
Collaborating with the research team of Prof.R.Maxwell; learning the flow simulation platform ParFlow.
- Ph.D. candidate**, CHYN, Université de Neuchâtel, Switzerland *Jan.2007 - Jan.2011*
Main topics: Multiple-point Geostatistics (3D simulation using 2D training images), probability aggregation methods, aquifer characterization, facies modeling, World Wide Hydrogeological Parameters DAtabase (*wwhypda*).
- Scientific collaborator**, CHYN, Université de Neuchâtel, Switzerland *Nov.2005 - Dec.2006*
Conception and development of the schema and of the web interface of *wwhypda*, the World Wide Hydrogeological Parameters DAtabase. Collaboration in the European project *degree* (Disseminate and Exploit GRid in Earth ScienceE).
- Scientific collaborator**, DIA, Università degli Studi di Milano, Italy *May - Sep.2005*
Development of a Fortran 90 module for the computation of phenological coefficients depending on meteorological conditions in the *TvoLeB* project framework.
- Collaborator**, A.R.P.A. Lombardia, Milano, Italy *Jan. - Apr.2005*
Installation and management of stations for the continuous remote monitoring of electric fields.
- Technician**, A.R.P.A. Lombardia, Milano, Italy *Aug. - Nov.2004*
Analysis of electromagnetic impact of mobile phone-radio base stations with numerical simulations and measurements.
- Research grant**, C.I.L.E.A., Segrate (Mi), Italy *Jul.2003 - Jul.2004*
Improved a Fortran 90 2D finite elements library to make use of integrated finite differences method and *quasi-3D* approximation. Extended a code for triangulation to visualize result in SVG.
- Civil service at the Comunità Betania, a juvenile house-family. *Sep.2002 - Jun.2003*

Education

- Ph.D.**, Stochastic Hydrogeology, CHYN, Université de Neuchâtel, Switzerland Jan.2011
Dissertation title: Probability aggregation methods and multiple-point statistics for 3D modeling of aquifer heterogeneity from 2D training images.
Advisors: Prof. P. Renard, Dr. J. Straubhaar
- M.Sc.**, Physics, Università degli Studi di Milano, Italy Jul.2002
Tesi di Laurea: Interpolazione geostatistica per la preparazione di dati per modelli inversi di flusso in acquiferi.
Main topics: Groundwater inverse problem, Geostatistics.
Advisors: Prof. M.Giudici, Prof. F.Delay, Prof. G.Parravicini, Dr. E.Romano
- Stage Socrates-Erasmus**, HYDRASA, Université de Poitiers, France Nov.2001 - Apr.2002
 Attended a Geostatistics course and completed part of the MSc work.

Publications

In peer-reviewed journals

- M.Giudici, P.D'Orsi, V.Caironi, F.Baratelli, L.Cattaneo, **A.Comunian**, G.DeFilippis, D.Dell'Arciprete, C.Durante, S.Inzoli, M.Mele, C.Vassena, (2016) *Exposing high-school students to Geosciences through seminars, laboratory and field demonstrations* Rend. Online Soc. Geol. It., 40, doi:10.3301/ROL.2016.66
- B.Ortuani, E.Chiaradia, S.Priori, G.L'Abate, D.Canone, **A.Comunian**, M.Giudici, M.Mele, A.Facchi, A. (2016) *Mapping soil water capacity through EMI survey to delineate site specific management units within an irrigated field* Soil Science, 181(6) doi:10.1097/SS.000000000000159
- L.Cattaneo, **A.Comunian**, G.de Filippis, M.Giudici, C.Vassena (2016) *Modeling Groundwater Flow in Heterogeneous Porous Media with YAGMod* Computation, doi:10.3390/computation4010002
- A.Comunian**, L.DeMicheli, C.Lazzati, F.Felletti, F.Giacobbo, M.Giudici, R.Bersezio (2015) *Hierarchical simulation of aquifer heterogeneity: implications of different simulation settings on solute-transport modeling* Hydrogeology Journal, doi: 10.1007/s10040-015-1343-1
- A.Pickel, J.D.Frechette, **A.Comunian** and G.S.Weissmann (2015) *Building a Better Training Image with Digital Outcrop Models* Journal of Hydrology, doi: 10.1016/j.jhydrol.2015.08.049
- M.Giudici, M.Mele, S.Inzoli, **A.Comunian** and R.Bersezio (2015) *The application of hydrogeophysics to study water-based ecosystem services in alluvial plains* First Break, 33(8), pp.55-60
- P.Bayer, **A.Comunian**, D.Höyng, and G.Mariethoz (2015) *High resolution multi-facies realizations of sedimentary reservoir and aquifer analogs* Scientific Data, 2 doi: 10.1038/sdata.2015.33
- A.Comunian**, S.K.Jha, B.M.S.Giambastiani, G.Mariethoz and B.F.J.Kelly (2014) *Training Images from Process-Imitating Methods*. Mathematical Geosciences 46(2) doi:10.1007/s11004-013-9505-y
- S.K.Jha, **A.Comunian**, G.Mariethoz and B.F.J.Kelly (2014) *Parameterization of training images for aquifer 3D facies modeling integrating geological interpretations and statistical inference*. Water Resour. Res. 50(10) doi:10.1002/2013WR014949
- B.F.J.Kelly, W.Timms, T.J.Ralph, B.M.S.Giambastiani, **A.Comunian**, A.M.McCallum, M.S.Andersen, R.S.Blakers, R.I.Acworth and A.Baker (2014) *A reassessment of the Lower Namoi Catchment aquifer architecture and hydraulic connectivity with reference to climate drivers*. Australian Journal of Earth Sciences 61(3) doi:10.1080/08120099.2014.900647

- G.Mariethoz, **A.Comunian**, I.Irarrazaval and P.Renard (2014) *Analog-based meandering channel simulation*. Water Resources Research 50(2) doi:10.1002/2013WR013730
- T.C.Kessler, **A.Comunian**, F.Oriani, P.Renard, B.Nilsson, K.E.Klint and P.L.Bjerg (2013) *Modeling Fine-Scale Geological Heterogeneity - Examples of Sand Lenses in Tills*. Groundwater 51(5) doi:10.1111/j.1745-6584.2012.01015.x
- D.dell’Arciprete, R.Bersezio, F.Felletti, M.Giudici, **A.Comunian** and P.Renard (2012) *Comparison of three geostatistical methods for hydrofacies simulation: a test on alluvial sediments*. Hydrogeology Journal 20(2) doi:10.1007/s10040-011-0808-0
- D.Allard, **A.Comunian** and P.Renard (2012) *Probability aggregation methods in geoscience*. Mathematical Geosciences 44(5) doi:10.1007/s11004-012-9396-3
- A.Comunian**, P.Renard and J.Straubhaar (2012) *3D multiple-point statistics simulation using 2D training images*. Computers & Geosciences 40 doi:10.1016/j.cageo.2011.07.009
- P.Bayer, P.Huggenberger, P.Renard and **A.Comunian** (2011) *Three-dimensional high resolution fluvio-glacial aquifer analog: Part 1: Field study*. Journal of Hydrology 405(1-2) doi:10.1016/j.jhydrol.2011.03.038
- A.Comunian**, P.Renard, J.Straubhaar and P.Bayer (2011) *Three-dimensional high resolution fluvio-glacial aquifer analog - Part 2: Geostatistical modeling*. Journal of Hydrology 405(1-2) doi:10.1016/j.jhydrol.2011.03.037
- A.Comunian** and P.Renard (2009) *Introducing wwhypda: a world-wide collaborative hydrogeological parameters database*. Hydrogeology Journal 17(2) doi:10.1007/s10040-008-0387-x

Book chapters

- J.Guillaume, R.Hunt, **A.Comunian**, R.Blakers & B.Fu. “Ch.28 - Methods for Exploring Uncertainty in Groundwater Management Predictions”, in Jakeman, A.; Barreteau, O.; Hunt, R.; J., R. & Ross, A. (Eds.) “Integrated Groundwater Management: Concepts, Approaches and Challenges” Springer International Publishing, 2016 doi:10.1007/978-3-319-23576-9_28

In proceedings of international/national conferences

- A.Comunian**, F.Felletti, F.Giacobbo, M.Giudici, R.Bersezio *A hierarchical multiple-point statistics simulation procedure for the 3D reconstruction of alluvial sediments* 42th IAH, 13-18 September 2015, Rome, Italy
- M.Giudici, R.Bersezio, **A.Comunian**, F.Felletti, F.Giacobbo, F.Baratelli, L.Cattaneo, E.Cavalli, D.Dell’Arciprete, L.DeMicheli, S.Inzoli, C.Lazzati, M.Mele, L.Pessina, C.Vassena, G.Zappa *A multidisciplinary research on aquifer analogues to assess the effect of hydrofacies heterogeneities at fine scale on solute transport at large scale* 42th IAH, 13-18 September 2015, Rome, Italy
- M.Giudici, D.Casabianca, **A.Comunian** *Comparison of three direct methods of inversion for the identification of transmissivity from source and head data: tests on synthetic aquifers and real data* 42th IAH, 13-18 September 2015, Rome, Italy
- B.Ortuani, E.A.Chiaradia, S.Priori, G.L’Abate, D.Canone, M.Mele, **A.Comunian**, M.Giudici and A.Facchi *Comparing EM38 and Profiler-EMP400 for the Delineation of Homogeneous Management Zones within Agricultural Fields* First Conference on Proximal Sensing Supporting Precision Agriculture, 6-10 September 2015, Torino, Italy
- M.Giudici, D.Casabianca and **A.Comunian** *Comparison of three methods of solution to the inverse problem of groundwater hydrology for multiple pumping stimulation* Geophysical Research Abstracts Vol. 17, EGU2015-4814, EGU General Assembly 2015

- A.Comunian**, R.Bersezio, F.Felletti, F.Giacobbo and M.Giudici *Including stratigraphic hierarchy information in geostatistical simulation: a demonstration study on analogs of alluvial sediments* Geophysical Research Abstracts Vol. 17, EGU2015-10051, EGU General Assembly 2015
- P.Renard, G.Mariethoz, **A.Comunian** and J.Straubhaar *Hybrid Geostatistics: Object-based Simulations Using MPS-generated Meandering Channels* Second EAGE, Integrated Reservoir Modelling Conference, Dubai, UAE, 16-19 November 2014
- R.Bersezio, **A.Comunian**, L.DeMicheli, F.Felletti, F.Giacobbo, M.Giudici, C.L.Lazzati and G.Zappa *A stochastic multi-scale approach to study contaminant transport in heterogeneous alluvial sediments*. The Future of the Italian Geosciences - The Italian Geosciences of the Future, Milan, Italy, 10-12 September, 2014.
- D.Burkett, B.F.J.Kelly, **A.Comunian**, I.Graham and D.Cohen *Imputation of left censored grade data of the Kulumadai epithermal gold deposit and implications for subsequent multivariate analysis*. Geological society of Australia, abstracts no 110, Newcastle, Australia, 7-10 July 2014.
- M.Giudici, R.Bersezio, F.Felletti, F.Baratelli, L.Cattaneo, E.Cavalli, **A.Comunian**, D.Dell'Arciprete, L.DeMicheli, F.Giacobbo, C.L.Lazzati, M.Mele, G.Parravicini, L.Pessina, C.Vassena and G.Zappa *A multidisciplinary approach to model aquifer analogues: from fine scale heterogeneity to large scale flow and transport*. The Future of the Italian Geosciences - The Italian Geosciences of the Future, Milan, Italy, 10-12 September, 2014.
- M.Giudici, P.D'Orsi, V.Caironi, F.Baratelli, L.Cattaneo, **A.Comunian**, G.DeFilippis, D.Dell'Arciprete, C.Durante, S.Inzoli, M.Mele and C.Vassena *Familiarizzare gli studenti del Liceo Scientifico con le geoscienze attraverso attività seminariali e di terreno*. The Future of the Italian Geosciences - The Italian Geosciences of the Future, Milan, Italy, 10-12 September, 2014.
- A.Comunian**, A.King, S.K.Jha, B.F.J.Kelly, G.Mariethoz, M.E.Cox and M.Raiber *A comparison of two multiple-point statistics approaches for characterisation of the Cressbrook Creek alluvial aquifer, Queensland, Australia*. Solving the Groundwater Challenges of the 21st Century. IAH, 40th Int. Congress., Perth, Australia, 15-20 September 2013.
- S.K.Jha, **A.Comunian**, G.Mariethoz and B.F.J.Kelly *Numerical 3D geological modeling using prior knowledge derived from 2D hand-drawn sketches*. Solving the Groundwater Challenges of the 21st Century. IAH, 40th Int. Congress., Perth, Australia, 15-20 September 2013.
- B.F.J.Kelly, G.Mariethoz, **A.Comunian** and A.Baker *A multifractal analysis of laminated stalagmites*. Solving the Groundwater Challenges of the 21st Century. IAH, 40th Int. Congress., Perth, Australia, 15-20 September 2013.
- J.Straubhaar, P.Renard and **A.Comunian** *3D Multiple-Point Statistics for facies simulation using 2D and 1D conceptual models*. 15th Annual Conference of the International Association for Mathematical Geosciences, Madrid, Spain, 2-6 September 2013.
- D.Allard, **A.Comunian** and P.Renard *Combinaisons de probabilité: le modèle log-linéaire est calibré*. 44^e Journée de Statistique, Bruxelles, Belgium, 21-25 May 2012.
- A.Comunian**, D.Allard and P.Renard *A Review of Probability Aggregation Methods in Earth Sciences*. 9th International Geostatistics Congress, Oslo, Norway, 11-15 June 2012.
- A.Comunian**, G.Mariethoz and B.F.J.Kelly *Using Climatic Insights to Guide Stochastic Process-Based Modelling of a Valley Filling Fluvial Sequence in the Murray-Darling Basin, Australia*. 51st annual meeting of the British Sedimentological Research Group, Dublin, 18-20 December 2012.

- A.Comunian**, P.Renard, J.Straubhaar and B.F.J.Kelly *An improved methodology for 3D multiple-point simulation from 2D training images*. geoENV2012, Valencia, Spain, 19-21 September 2012.
- A.Comunian**, P.Renard, J.Straubhaar and B.F.J.Kelly *An improved methodology for 3D multiple-point simulations from 2D training images*. 34th International Geological Congress, Brisbane, Australia, 5-10 August, 2012.
- G.Mariethoz, **A.Comunian**, I.Irarrázaval and P.Renard *A new angle: meandering river modeling using Direct Sampling*. 34th International Geological Congress, Brisbane, Australia, 5-10 August, 2012.
- G.Mariethoz, **A.Comunian**, I.Irarrázaval and P.Renard *Conditional simulation of realistic meandering channels using 1D multiple-point simulations*. 9th International Geostatistics Congress, Oslo, Norway, 11-15 June 2012.
- P.Bayer, **A.Comunian**, J.Straubhaar, P.Huggenberger and P.Renard *High-resolution reconstruction of three-dimensional sedimentary aquifer analog: the Herten case study*. Geophysical Research Abstracts (GRA), EGU General Assembly 2011.
- A.Comunian**, J.Straubhaar, P.Renard, R.Froidevaux and O.Besson *Modeling heterogeneous geological reservoirs using multiple-point statistics simulations*. 7th Swiss Geoscience Meeting, Neuchâtel, Switzerland, 20-21 November 2009.
- A.Comunian**, P.Renard and M.Kisanga *whypda: a worldwide hydrogeological parameters database*. Calibration and Reliability in Groundwater Modelling: Credibility of Modelling, Copenhagen, Denmark, 9-13 September 2007..
- A.Alcolea, P.Renard, F.Cornaton, **A.Comunian**, J.Kerrou and G.Mariethoz *GIM (Groundwater Integrated Modelling). The hydrogeological compiler*. Geophysical Research Abstracts (GRA), EGU General Assembly 2007.
- A.Alcolea, P.Renard, F.Cornaton, **A.Comunian**, J.Kerrou and G.Mariethoz *GIM (Groundwater Integrated Modelling). The hydrogeological compiler*. International Conference on Calibration and Reliability in Groundwater Modelling: Credibility of Modelling, Copenhagen, Denmark, 9-13 September 2007..
- A.Comunian** and P.Renard *whypda: a world-wide hydrogeological parameters database*. IAH International symposium - Aquifers Systems Management, Dijon, France, 30 May - 1 June 2006.

Other publications

- A.Comunian** *Probability aggregation methods and multiple-point statistics for 3D modeling of aquifer heterogeneity from 2D training images*. PhD thesis, University of Neuchâtel, January 2011.
- A.Comunian** *Sviluppo di modelli di flusso nei mezzi porosi con la tecnica delle Differenze Finite Integrate*. technical report, CILEA, July 2004.
- A.Comunian** *Interpolazione geostatistica per la preparazione di dati per modelli inversi di flusso in acquiferi*. MSc thesis, Università degli Studi di Milano, July 2002.

Data sets

- P.Bayer, **A.Comunian**, D.Höyng and G.Mariethoz (2015) *Physicochemical properties and 3D geostatistical simulations of the Herten and the Descalvado aquifer analogs* doi: 10.1594/PANGAEA.844167

Conferences presentations

- 42th IAH International Congress, Rome, Italy Sep.13-18, 2015
A.Comunian, F.Felletti, F.Giacobbo, M.Giudici, R.Bersezio *A hierarchical multiple-point statistics simulation procedure for the 3D reconstruction of alluvial sediments (e-poster)*
- EGU General Assembly, Vienna, Austria Apr.13-17, 2015
A.Comunian, R.Bersezio, F.Felletti, F.Giacobbo and M.Giudici *Including stratigraphic hierarchy information in geostatistical simulation: a demonstration study on analogs of alluvial sediments (poster)*
- Giornate Assereto 2015, Milan, Italy Feb.9-11, 2015
A.Comunian *Multiple-point statistics: a powerful tool to reproduce heterogeneity in space and time (oral)*
- SGI-SIMP 2014, Milan, Italy Sep.10-12, 2014
 R.Bersezio, **A.Comunian**, L.DeMicheli, F.Felletti, F.Giacobbo, M.Giudici, C.L.Lazzati and G.Zappa *A stochastic multi-scale approach to study contaminant transport in heterogeneous alluvial sediments (oral)*.
- AGU Fall Meeting, San Francisco, CA Dec.9-13, 2013
A.Comunian, H.Ajami and B.F.J.Kelly *Quantifying groundwater recharge from floods in semi-arid environments (poster, H13A-1305)*.
 S.K.Jha, **A.Comunian** and B.F.J.Kelly *Methods for obtaining 3D training images for multiple-point statistics simulations: a comparative study (poster, H13D-1360)*.
- 40th IAH International Congress, Perth, Australia Sep.15-20, 2013
A.Comunian, A.King, S.K.Jha, B.F.J.Kelly, G.Mariethoz, M.E.Cox and M.Raiber *A comparison of two multiple-point statistics approaches for characterisation of the Cressbrook Creek alluvial aquifer, Queensland, Australia (oral)*.
- NCGRT Summer School, Canberra, Australia Nov.28-30, 2012
A.Comunian *Multiple-point statistics for the characterization of geological heterogeneity (keynote speaker)*.
- geoENV 2012, Geostatistics for Environmental Applications, Valencia, Spain Sep.19-21, 2012
A.Comunian, P.Renard, J.Straubhaar and B.F.J.Kelly *An improved methodology for 3D multiple-point simulation from 2D training images (oral)*.
- 1st Impala users meeting, Neuchâtel, Switzerland Sep.13-14, 2012
A.Comunian, D.Allard and P.Renard *Probability aggregation methods in Geosciences and their use for 3D simulations from 2D TI (oral)*.
- 34th International Geological Congress, Brisbane, Australia Aug.5-10, 2012
A.Comunian, P.Renard, J.Straubhaar and B.F.J.Kelly *An improved methodology for 3D multiple-point simulations from 2D training images (oral)*.
- 9th International Geostatistics Congress, Oslo, Norway Jun.11-15, 2012
A.Comunian, D.Allard and P.Renard *A review of probability aggregation methods in Earth sciences (oral)*.
- NCGRT Summer School, Adelaide, Australia Nov.28-Dec.2, 2011

- A.Comunian** *Innovative Characterization of Aquifer and Aquitards* (poster).
7th Swiss Geoscience Meeting, Neuchâtel, Switzerland Nov.20-21, 2009
- A.Comunian**, J.Straubhaar, P.Renard, R.Froidevaux and O.Besson *Modeling heterogeneous geological reservoirs using multiple-point statistics simulation* (poster).
geoENV 2008, Geostatistics for Environmental Applications, Southampton, UK Sep.8-10, 2008
- A.Comunian**, J.Straubhaar, P.Renard, D.Allard and R.Froidevaux *3D Multiple points statistics simulation using 2D training images* (poster, 2nd best poster price).
ModelCARE 2007, Credibility in Modelling, Copenhagen, Denmark Sep.9-13, 2007
- A.Comunian**, P.Renard and M.Kisanga *wwhylda: A worldwide hydrogeological parameters database* (oral).
IAH International symposium: Aquifer System Management, Dijon, France May 30-Jun.1, 2006
- A.Comunian** and P.Renard *wwhylda: a world-wide hydrogeological parameters database* (oral).

Teaching

Università degli Studi di Milano

- Geophysical fluid dynamics (coord.: Prof. M.Giudici)** 2014, 2015
post-grad. level - teaching and practical classes.
- Shallow geophysical exploration (coord.: Prof. M.Giudici)** 2014, 2015
post-grad. level - teaching and practical classes.

University of New South Wales

- 3D Geological Modelling (GEOS6734, coord.: Ass.Prof. B.F.J. Kelly)** 2012
post-grad. level - teaching (Multiple-point statistics and practical classes on geostatistics using SGeMS), groundwater modeling practical classes.
- Environmental Geophysics (GEOS6733, coord.: Ass.Prof. B.F.J. Kelly)** 2012
post-grad. level - teaching and practical classes (stream-flow measurements techniques).
- Ground and Surface Water (GEOS2291, coord.: Ass.Prof. B.F.J. Kelly)** 2012
under-grad. level - groundwater modeling practical classes.

Université de Neuchâtel

- How-to aqua** 2010
post-grad. and PhD level - teaching (Introduction to the unix shell and to submitting jobs on a computing cluster).
- Hydrogeology field trip** 2009
post-grad. level - 2 days (Electrical Resistivity Tomography)
- Reservoir Modelling (coord. P. Renard)** 2008
post-grad. level - practical classes.

Co-supervision of students

M.Bonamore (MSc, Physics, 2010-2011), S.Valentini (BSc, Physics, 2014-2015), D.Casabianca (MSc, Physics, 2014-2015), E.Thieme (BSc, Physics, 2014-2015) L.Landoni (MSc, Physics, ongoing), C.Zuffetti (PhD, Earth Sciences, ongoing)

Short courses - Workshops

Organized by DHI, Australia

Introduction to river and channel modelling with MIKE 11. Apr.16-17, 2012
 Introduction to integrated catchment modelling with MIKE SHE. Apr.18-20, 2012

Organized by the NCGRT

Modelling of Groundwater flow with the AEM. Dec.14, 2011

Organized by the CHYN, Université de Neuchâtel, Switzerland

Feflow and IFM programming. Nov.23-25, 2009
 3D geometrical modelling for geological interpretation and mapping. Aug.27-Sep.3, 2009
 Deep inside the Stanford Geostatistical Modeling Software (SGeMS). Jul.27-29, 2009
 Model calibration and quantification of predictive uncertainty using PEST. Sep.15-19, 2008
 Dimensionnement d'installations géothermiques: champs de sondes géothermiques, géostructures énergétiques et captages dans la nappe phréatique. Oct.24, 2007
 Inverse Problem Aug.30-Sep.7, 2007
 Evaluation des ressources naturelles et incertitude. Comment utiliser correctement les concepts et méthodes de la géostatistique? Sep.26-30, 2005

Organized by the Institute of Mathematics, Université de Neuchâtel, Switzerland

An introductory course to statistical learning and prediction. May-Jun., 2009
 Towards conditioning Gaussian processes, using R.

Other courses organized by Université de Neuchâtel, Switzerland and the C.I.L.E.A., Segrate (Mi), Italy

Matlab, Latex, SQL and Oracle, Fortran, C++, XML, MPI, OpenMP, HPF, Grid computing.

IT skills

Operating systems: Linux, Mac OS X and Windows user.

Programming: Good knowledge of Python, Fortran and C. Discrete knowledge of R, Matlab, bash and LaTeX. Slight knowledge of C++. Smattering of MPI libraries, OpenMP and HPF.

Web: Good knowledge of HTML, Plone, Zope, TAL. Average knowledge of XML, Javascript, PHP, CSS.

Databases: Good knowledge of MySQL. Some experience with Oracle.

Language skills

Italian: mother tongue.

English: good knowledge of spoken and written.

French: good knowledge of spoken, good notions of written.

Slight knowledge of *Russian* and *Swahili*.

Interests

Playing flute (diplome de fin d'études non professionnelles, Conservatoire de Musique Neuchâtelois, July 2009).

Last updated: September 7, 2016