



Dr. Grigorios G. Anagnostopoulos

Development of Civil Engineering Software

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Professional Attributes

- Geotechnics, Structural and Environmental Engineering.
- Eurocodes and Swiss Norm.
- Laboratory experience on soil mechanics tests.
- Statistics and stochastic hydrology.
- Hydrological modelling (surface and subsurface hydrology, runoff modelling, flood forecasting).
- Numerical modelling techniques (Finite differences, finite elements, finite volumes, boundary elements).
- Programming (C/C++, Python, Delphi) with high performance computing (HPC) implementations on multi-core (OpenMP) and (multi-)GPU (CUDA, OpenCL) systems.

Experience

CUBUS AG, ZÜRICH

Jul 2014 – Present

Development of Civil Engineering Software

Participated in the development of CEDRUS (Finite Element Program for plates and buildings), STATIK (Linear-elastic analysis of general 3D frame structures) and LARIX (Geotechnical Analysis based on classic methods).

More specifically: (1) BIM (Building Information Modelling) capabilities were added to CEDRUS. (2) Foundation and soil-structure interaction and (3) 3D terrain modelling and settlements computation was implemented in LARIX. **Main programming languages:** Delphi, C++. **Other duties:** client support, user-manual writing and presenting programs to clients.

ETH ZÜRICH

Mar 2009 – Dec 2013

Research Assistant

Development of a computer model for the investigation of the interactions between surface and subsurface hydrology and landslides initiation. Collaborator of the ACQWA EU Project (Assessing Climate impacts on the Quantity and quality of WAter).

CHATZIKOMNINOS DIMOS & SIA EE.

Jan 2008 – Jan 2009

Design and Supervision of the construction of various structures

Worked at Chatzikomninos Dimos & SIA EE (Athens, Greece) designing and supervising the constructions and reinforcement of various structures.

GREEK PUBLIC POWER CORPORATION S.A Jan 2006 – Jan 2007

Soil Mechanics Laboratory Assistant

Worked as assistant at the Soil Mechanics Laboratory of the Greek Public Power Corporation S.A (Athens, Greece) performing all the basic soil laboratory tests and analyses.

Education

ETH ZÜRICH Mar 2009 – Feb 2014

PhD in Geotechnical and Environmental Engineering

Title: Hydrological Modelling of Slope Stability

Dissertation description: Goal of the dissertation is to develop a physically-based distributed model, continuous in space and time, in order to investigate the interactions between surface and subsurface hydrology and landslides initiation. The model uses the object-oriented features of C++ and is accelerated using the CUDA architecture.

NATIONAL TECHNICAL UNIVERSITY OF ATHENS Sep 2003 – Feb 2009

Diploma in Civil Engineering, 9.0/10.0

Specialisation: Geotechnics.

Diploma thesis: Assessment of reliability of climatic models based on comparisons with historical time series. (Grade 10.0/10.0)

Thesis description: Goal of the thesis was to compare the output of various climate models to temperature and precipitation observations at point and continental scale and assess their reliability for making predictions in various disciplines.

Languages

English (Certificate of Proficiency in English).

German (C1 of the Goethe Institute).

French (Diplome Approfondi de la Langue Francaise).

Greek (mother tongue).

Computer Skills

- **Operating Systems:** Windows, Linux, MacOS.
- **Office:** Word, Excel, Access, PowerPoint.
- **Engineering:** Cedrus, Statik, Fagus, Larix, Geoslope, Plaxis, AutoCAD, ArcGIS.
- **Programming:** C/C++, Python, Delphi, Fortran, Matlab.
- **Parallel Computing:** OpenMP, MPI, CUDA, OpenCL.

Awards

EVGENIDIO FOUNDATION, GREECE 2009

Postgraduate Scholarship

Scholar of the Evgenidio Foundation for excellence performance.

THOMAIDIO PRIZE, GREECE 2008

Undergraduate Scholarship (National Technical University of Athens)

Thomaidio Prize for the best diploma thesis of the year.

GREEK STATE SCHOLARSHIPS FOUNDATION 2003 - 2006

Undergraduate Scholarship

Scholar of the Greek State Scholarships Foundation for excellent performance.

Publications

1. Anagnostopoulos, G. G., S. Fatichi, and P. Burlando, **An advanced process-based distributed model for the investigation of rainfall-induced landslides: The effect of process representation and boundary conditions**, *Water Resources Research*, 51, 2015.
2. Anagnostopoulos, G. G., and P. Burlando, **An Object-oriented computational framework for the simulation of variably saturated flow in soils, using a reduced complexity model**, *Environmental Modelling & Software*, 38, 191–202, 2012.
3. Koutsoyiannis, D., A. Christofides, A. Efstratiadis, G. G. Anagnostopoulos, and N. Mamassis, **Scientific dialogue on climate: is it giving black eyes or opening closed eyes? Reply to “A black eye for the Hydrological Sciences Journal” by D. Huard**, *Hydrological Sciences Journal*, 56, 1134-1139, 2011.
4. Carpentier, S., K. Markus, R. Fischer, G. Anagnostopoulos, K. Meusburger, and K. Schoeck, **Geophysical imaging of shallow subsurface topography and its implication for shallow landslide susceptibility in the Urseren Valley, Switzerland**, *Journal of Applied Geophysics*, 83, 46–56, 2012.
5. Anagnostopoulos, G. G., D. Koutsoyiannis, A. Christofides, A. Efstratiadis, and N. Mamassis, **A comparison of local and aggregated climate model outputs with observed data**, *Hydrological Sciences Journal*, 55, 1094-1110, 2010.

Conferences

1. Burlando, P., Anagnostopoulos, G. G. and S. Fatichi, **On the importance of variable soil depth and process representation in the modeling of shallow landslide initiation**, *American Geosciences Union Fall Meeting*, 2014, San Francisco.
2. Anagnostopoulos, G. G., P. Burlando and A. Kyriakou (2011), **A parallel computational framework for the simulation of variably saturated flow based on the Cellular Automata concept using CUDA architecture**, *American Geosciences Union Fall Meeting 2011*, San Francisco.
3. Anagnostopoulos, G. G., and P. Burlando (2011), **Hydrological modeling of slope stability**, *European Geosciences Union General Assembly*, 2011, Vienna.
4. Anagnostopoulos, G. G., S. Carpentier, M. Konz, R. Fischer and P. Burlando, **The role of subsurface topography and its implications on the water regime in the Urseren Valley, Switzerland**, *European Geosciences Union General Assembly*, 2011, Vienna.
5. Anagnostopoulos, G. G., M. Konz, and P. Burlando, **Modelling variably saturated flow using cellular automata**, *European Geosciences Union General Assembly*, 2010, Vienna.
6. Anagnostopoulos, G. G., D. Koutsoyiannis, A. Efstratiadis, A. Christofides, and N. Mamassis, **Credibility of climate predictions revisited**, *European Geosciences Union General Assembly*, 2009, Vienna.

Interests

Professional

Data analysis, risk analysis, economics, web design, software design.

Personal

Track and field (400m and 800m), dancing (salsa, latin and argentine tango), reading.
