PATRIK DANIEL

Curriculum Vitae

Contact

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Statement

Looking for interesting job opportunities on the edge between research, engeneering and possibly also management where I could use my mathematical knowledge and programming skills.

Computer skills

- Windows, Linux, Mac OS
- Matlab, C, C++, LaTeX, Python, SQL, HTML, CSS, Bash
- MS Visual Studio & SQL Server Management Studio, ANSYS, Wolfram Mathematica, Git, ParaView, MS Office

Languages

Self-assessment European level CEFR (C2 maximum evaluation)

A1 A2 B1 B2 C1 C2

English

TOEFL iBT score 107/120

French

German

Slovak (native speaker)

Interests

Sport, Travelling, Music festivals, Books, Typography

Education

October 2015 - Present (Expected finish: early 2019)

PhD. student at INRIA Paris & ENPC (project team SERENA)

Thesis title: ***Adaptive multilevel solvers with a posteriori error control for porous media flows***

A posteriori error estimation based on equilibrated fluxes in context of hp-adaptive FEM in conjunction with an inexact algebraic solver. Balancing the different error components and designing adaptive stopping criteria for algebraic solver and over-all simulation itself.

Supervised by: **Martin Vohralík** (*INRIA Paris & ENPC*) and **Alexander Ern** (*ENPC & INRIA Paris*)

2013 - 2015

Slovak University of Technology, Bratislava - *Applied Mathematics*
(Master's level) *Study Program*: ***Mathematical and Computational Modeling***

University education in the specialization of Applied Mathematics with a focus on computer modeling and modern methods of applied mathematics (numerical, statistical, optimization, graphics and visualization methods and software).

Master thesis: **Reconstruction of 3D objects from point clouds using surface evolution**
Supervised by: Mariana Remešíková

2010 - 2013

Slovak University of Technology, Bratislava - *Applied Mathematics*
(Bachelor's level) *Study Program*: ***Mathematical and Computational Modeling***

Bachelor thesis: **Shape analysis of 3D objects using the spectrum of the Laplace-Beltrami operator**
Supervised by: Mariana Remešíková

Experience

Academic

Academic year 2016/2017

Teaching assistant, *UPMC Paris 6 (Sorbonne University):*
Linear Algebra, Integrals and Sequences, first year **(54h)**
Matrix Calculation, first year **(18h)**

Numeric days in Nice - workshop on a posteriori error estimation **(2 days)** :
-in charge of the practical exercices which accompanied the course of M. Vohralík

Academic year 2014/2015

Junior scientist, *Departement of Mathematics and Constructive Geometry, Faculty of Civil Engineering (Slovak University of Technology):*
Help in research contained in my master thesis.

Publications

2015 - Present

Reconstruction of surfaces from point clouds using a Lagrangian surface evolution model, *M. Remešíková, K. Mikula, M. Medla, P. Daniel*, Scale space and variational methods in computer vision, Lecture Notes in Comput. Sci., **2015**

An adaptive hp-refinement strategy with computable guaranteed bound on the error reduction factor, *P. Daniel, A. Ern, I. Smears, M. Vohralík, Submitted for publication*, **2017**

Conferences

2016 - Present

ENUMATH 2017 – The European Conference on Numerical Mathematics and Advanced Applications, Voss, Norway, September 25–29, 2017 **(talk)**

14th U.S. National Congress on Computational Mechanics (USNCCM14), Montréal, QC, Canada, July 17–20, 2017 **(talk)**

The 15th European Finite Element Fair, Milano, 26–27 May, 2017 **(talk)**

ALGORITMY 2016, Podbanské, Slovakia, March 13–18, 2016 **(poster presentation)**

Working

August 2015 - September 2015

IAESTE internship for students in Technical Fields, Manipal, India
Internship abroad with the main focus on Clustering methods in Image Processing

June 2013 - August 2014

Internship, VÚB a.s. (member of Intesa Sanpaolo banking group):
Support for testing the implementations of scoring models (PD, LGD, EAD) and IT solutions within the Risk division of the bank. I participated in the process of development.(requirements analysis, communication with the developer, validation & verification,testing) of internal application for scoring the credit risk of clients.