

# CURRICULUM VITAE



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Date of birth 23.10.1988

## Education

- 2017 Mathematical aspects of inverse problems summer school at The Alan Turing Institute, London
- 2017 Summer school on applied mathematics and mechanics SAMM17 - Bayesian Inference: Probabilistic way of learning from data, Technische Universität, Braunschweig
- 2017 Parametric uncertainty summer school and workshop, Budapest University of Technology and Economics and the SZTAKI, Hungarian Doctoral Academy, Institute for Computer Science and Control, Budapest
- 2015-2016 Three-month doctoral study stay, Institute of Scientific Computing, Technische Universität, Braunschweig, supervisor prof. Hermann G. Matthies
- 2014 Modeling and Numerical Methods for Uncertainty Quantification MNMUQ 2014 Summer School, Porquerolles Island, France
- since 2014 Ph.D. student, Czech Technical University in Prague, Faculty of Civil Engineering, specialization: Physical and material engineering
- 2014 MASTER OF SCIENCE (Ing.), Czech Technical University in Prague, Faculty of Civil Engineering, specialization: Building Structures
- 2012 ATHENS course: Structural reliability at Technische Universität München
- 2012 BACHELOR (Bc.), Czech Technical University in Prague, Faculty of Civil Engineering, specialization: Building Structures
- 2008 HIGH SCHOOL LEAVING EXAMINATION at Dvořák's Gymnasium, Kralupy nad Vltavou

## Participation in research projects

- 2017 Numerical methods for modeling uncertainties in civil engineering  
Grant Agency of the CTU in Prague, project no. SGS17/042/OHK1/1T/11
- 2016 Algorithms for numerical analysis and modeling comprising uncertainties and spatial nonuniformities  
Grant Agency of the CTU in Prague, project no. SGS16/037/OHK1/1T/11
- 2016-2018 Identification of Aleatory Uncertainty in Parameters of Heterogenous Materials  
Czech Science Foundation, project no. 16-11473Y
- 2015 Efficient Methods for Stochastic Modelling of Heterogeneous Materials  
Grant Agency of the CTU in Prague, project no. SGS15/030/OHK1/1T/11

- 2015-2018 Multi scale model of the laser dieless drawing process of tubes from hardly deformable magnesium alloys  
Ministry of Education, Youth and Sports of the Czech Republic, project no. MSM/8F15004
- 2015-2017 Numerical tools for model-based design of robust and optimised experiments  
Czech Science Foundation, project no. 15-07299S
- 2014 Modelling of random heterogeneous material  
Grant Agency of the CTU in Prague, project no. SGS14/028/OHK1/1T/11
- 2014-2015 Reliability Analysis and Life Prediction with Probabilistic Methods  
European Space Agency; part of the Future Launcher Preparatory Programme
- 2013 Advanced algorithms for numerical simulation and modelling in civil engineering  
Grant Agency of the CTU in Prague, project no. SGS13/034/OHK1/1T/11
- 2012-2013 Advanced Nozzle Extension Design Methodology  
European Space Agency; part of the Future Launcher Preparatory Programme
- 2012-2014 Methods for paralelization of engineering problems using low-cost technologies  
Czech Science Foundation, project no. P105/12/1146
- 2011-2013 Computational and theoretical techniques for non-linear material models with uncertain parameters  
Czech Science Foundation, project no. P105/11/0411
- 2011-2013 Effective design, monitoring and forecast of behavior of road prestressed concrete box girder bridges  
Technology Agency of the Czech Republic, project no. TA01030733
- 2010 Optimization as a tool of sustainability and competitiveness of Czech construction industry  
Ministry of Industry and Trade of the Czech Republic, project no. FT-TA4/100

### Scientific competitions & Awards

- 2017 The Alan Turing Institute scholarship - Mathematical aspects of inverse problems summer school
- 2014 Prof. Babuška Honorable Mention for excellent work in computational sciences (for diploma thesis)
- 2014 Dean's Honorable mention for excellent elaboration and defense of diploma thesis
- 2012 Prof. Babuška Honorable Mention for excellent work in computational sciences (for bachelor's thesis)
- 2012 Dean's Honorable mention for excellent elaboration and defense of bachelor's thesis
- 2012 Student scientific activity, Czech-Slovak level, section of Structural Mechanics (2nd place)
- 2011 Rektorys' competition in applied mathematics, CTU in Prague (5<sup>th</sup> - 7<sup>th</sup> place)
- 2011, 2012, 2013 Vyčichlo's competition, CTU in Prague, Faculty of Civil Engineering, Dept. of Mathematics with position on: 1<sup>st</sup> place (2011), 2<sup>nd</sup> place (2012), 2<sup>nd</sup> place (2013)
- 2011, 2012, 2013, 2014 Academician Bažant's prize competition, CTU in Prague, Faculty of Civil Engineering, Dept. of Mechanics with position on: 4<sup>th</sup> place (2011), 2<sup>nd</sup> place (2012), 3<sup>rd</sup> place (2013), 1<sup>st</sup> - 2<sup>nd</sup> place (2014)

## Selected publications published 2011-2016

## Theses

E. Janouchová: *Identification of aleatory uncertainty in parameters of heterogeneous materials*. Doctoral minimum, Czech Technical University in Prague, Faculty of Civil Engineering, 2016.

E. Janouchová: *Bayesian identification of computational model parameters*. Diploma thesis, Czech Technical University in Prague, Faculty of Civil Engineering, 2014.

E. Janouchová: *Designs of experiments for sampling-based sensitivity analysis*. Bachelor's thesis, Czech Technical University in Prague, Faculty of Civil Engineering, 2012.

## ISI Journal papers

T. Mareš, E. Janouchová, A. Kučerová: Artificial neural networks in the calibration of nonlinear mechanical models. In *Advances in Engineering Software*. 2016, vol. 95, pp. 68-81. ISSN 0965-9978.

E. Janouchová, A. Kučerová: Competitive comparison of optimal designs of experiments for sampling-based sensitivity analysis. In *Computers & Structures*. 2013, vol. 124, p. 47-60. ISSN 0045-7949.

## ISI Proceedings papers

E. Janouchová, A. Kučerová, J. Sýkora: Epistemic Uncertainty Identification via Different Bayesian Inference Methods. In *Engineering Mechanics 2016*. Prague: Institute of Thermo-mechanics AS CR, 2016, pp. 246-249. ISBN 978-80-87012-59-8.

E. Janouchová, A. Kučerová, J. Sýkora: Efficient Bayesian parameter identification. In *Engineering Mechanics 2014*. Prague: Institute of Thermomechanics AS CR, 2014, p. 264-267. ISBN 978-80-214-4871-1.

E. Janouchová, A. Kučerová: Comparison of space-filling designs in discrete domains. In *Engineering Mechanics 2011*. Prague: Institute of Thermomechanics AS CR, 2011, p. 239-242. ISBN 978-80-87012-33-8.

Prague, 3 October 2017

Eliška Janouchová