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Curriculum Vitae

Personal data

Name: **Petr Havlásek**
Date of Birth: December 14, 1984
Place of Birth: České Budějovice, Czech Republic
Nationality: Czech
Phone: +420 774 225 885
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Education

2010–2014 **Ph.D.**, *Department of Mechanics*, Faculty of Civil Eng., CTU in Prague.
Thesis: Numerical modeling of creep and shrinkage of concrete
Babuška's prize winner (2014)

2008–2010 **Ing.**, *Department of Mechanics*, Faculty of Civil Eng., CTU in Prague.
Struct. and Transportation Eng., specialization: Statics and Dynamics of Str.
Grad. with distinction, SVOČ winner (2010), Bažant's prize winner (2010)

2004–2008 **Bc.**, Faculty of Civil Eng., CTU in Prague.
Structural and Transportation Engineering
Grad. with distinction, SVOČ winner (2008), Bažant's prize winner (2008)

1996–2004 **Gymnázium nad Alejí**, *Prague*, secondary highschool focused on foreign languages.

Educational Exchange

2013 **Northwestern University**, *Evanston, Illinois, USA*, 3 months.
Work in Prof. Bažant's research group, analysis and improvement of the MPS model, numerical simulations

2006–2007 **University of Southern Denmark**, *Odense, Denmark*.

Languages

Czech mother tongue
English very good *Certificate of Advanced English (CAE)*
German beginner
Spanish beginner

Work Experience

2014–present **Researcher**, *Department of Mechanics*, Faculty of Civil Engineering, CTU in Prague.

2015 **Honorary Research Associate**, *School of Engineering*, University of Glasgow.

2013–2014 **Junior Researcher**, *UCEEB, CTU in Prague*.

2009–2013 **Consulting Engineer**, *Červenka Consulting, s.r.o.*, Prague.

2007–2008 **Structural Engineer**, *Ing. Martin Stránský*, Prague.
Structural analysis, project documentation

Teaching Activities

- undergraduate courses: 2010–present, OOFEM training course: 2018–present
- supervisor of 1 Ph.D., 6 master and 5 bachelor theses

Scientific activities

- Research interests: time-dependent behavior of concrete, confined concrete, finite element analysis, constitutive models
- Contribution to OOFEM (www.oofem.org), and its extensions ConTemp and Malcolm

Participation in research projects (last 5 years, selection)

- Shrinkage-induced deformations and microcracking in structural concrete - monitoring, modeling and identification, GACR 2019-2021, principal investigator, successfully completed with recognition of outstanding results
- SUMO: Sustainable design empowered by materials modelling, semantic interoperability and multi-criteria optimization, GACR (Weave) 2022-2024
- Towards improved assessment of safety performance for long-term opearation of nuclear civil engineering structures, H2020 2020-2023
- Thermo-hygro-mechanical model for concrete pavements, GACR 2021–2023
- Extending service life of concrete road pavements using mineral admixtures and blended cements, TACR 2018-2020
- Compression tests with confinement for advanced modeling of concrete columns, GACR 2019-2021
- Reducing material demands and enhancing structural capacity of multi-spiral reinforced concrete columns - advanced simulation and experimental validation, TACR 2020-2022

Publication activity

- WoS: 20 publications, 230 citations, h-index: 9/7 (with/without self citations)
- Scopus: 31 publications, 274 citations, h-index: 9/8 (with/without self citations)
- 15 verified peer reviews
- Paper “Multiscale modeling of drying shrinkage and creep of concrete” was selected as one of 11 world-leading results in category Engineering and Technology (Czech national evaluation, 2019)

Selected Publications (last 5 years)

[1] I. Aldellaa, P. Havlásek, M. Jirásek, and P. Grassl. Effect of creep on corrosion-induced cracking. *Engineering Fracture Mechanics*, page 108310, 2022.

[2] P. Havlásek, V. Šmilauer, L. Dohnalová, and R. Sovják. Shrinkage-induced deformations and creep of structural concrete: 1-year measurements and numerical prediction. *Cement and Concrete Research*, 144:106402, 2021.

[3] P. Havlásek. Numerical modeling of axially compressed circular concrete columns. *Engineering Structures*, 227:111445, 2021.

[4] V. Nežerka, P. Havlásek, and J. Trejbal. Mitigating inclusion-induced shrinkage cracking in cementitious composites by incorporating recycled concrete fines. *Construction and Building Materials*, 248:118673, 2020.

[5] V. Šmilauer, P. Havlásek, T. Gasch, A. Delaplace, D. Bouhjiti, F. Benboudjema, M. Briffaut, F. Kanavaris, and M. Azenha. Hygro-mechanical modeling of restrained ring test: COST TU1404 benchmark. *Construction and Building Materials*, 229:116543, 2019.

[6] R. Sovják, P. Havlásek, and J. Vítek. Long-term behavior of concrete slabs prestressed with CFRP rebars subjected to four-point bending. *Construction and Building Materials*, 188:781–792, 2018.