

Aleš Podolník

Curriculum Vitae

Prague, Czech Republic
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I like to do stuff.
The stuff should not be boring.
This haiku is bad.

Work Experience

- 2019–present **Postdoc**, *Institute of Plasma Physics of the Czech Academy of Sciences*, Prague.
Simulations of edge plasma physics using kinetic (SPICE) and fluid models (SOLPS-ITER).
- 2012–2019 **Ph.D. student**, *Institute of Plasma Physics of the Czech Academy of Sciences*, Prague.
Data analysis from simulated plasma probe diagnostics and plasma-surface interaction using particle-in-cell model. Co-development of simulation code SPICE2 and SPICE3 (parallel Poisson equation solver, Fortran 95).
- 2011–2015 **Software engineer**, *4mobile s.r.o.*, Prague.
Developer of mobile applications and client server backend/frontend for domestic and international clients and in-house projects.
- BookJet Trafika Editor** – Server/client framework for e-book publication. Browser-based UI (Javascript – ExtJS) & PDF converter tool (ASP.net).
- Webview & JS applications** – *Groupe SEB* trade catalogue, *KPMG* form processing app.
- Native UI applications** – Children book for *Hallmark UK* (iOS), *KPMG* app port for Blackberry etc.
- Various proof of concept projects** – Adobe After Effects/Amazon AWS video rendering platform, augmented reality, image recognition.

Volunteering

- 2007–present **Organizer**, *Czech puzzlehunts*, Prague.
Member of a production team of acclaimed puzzlehunts in Prague and Brno including *Krtčí norou* (2008–2016), *Matrix* (2014–2017, team leader of the last issue), *Navíc* and *Puzzled Pint* (both 2018–present).
- 2007–2010 **Team leader**, *FYKOS*, Prague.
Chief organizer of physics correspondence course and competition for high school students. Managed a mid-sized team for 3 year-long rounds of the contest, 2 national rounds of on-site team contest Fyziklání, and several training camps for talented students.
- 2006–2019 **LOC and staff member**, *MFF UK*, *IPP CAS*, Prague, Brno.
Support staff at various conferences (SOFT 2017, FuseNet Ph.D. Event 2016) and university events (open days 2006–2010, Fyziklání and Náboj team contests 2007–2019). Team member at FYKOS.

Education

- 2019 **Ph.D. in Physics of Plasmas and Ionized Media**, *Charles University*, Prague.

- 2012 **Master's degree in Physics of Surfaces and Ionized Media**, *Charles University, Prague*.
- 2009 **Bachelors's degree in General Physics**, *Charles University, Prague*.
- 2006 **Gymnázium se zaměřením na matematiku**, *Gymnázium Brno, tř. Jaroše 14, Brno*.

Publications

H-index 6 (as of 9/2019)

ORCID profile <https://orcid.org/0000-0003-1237-8812>

Selected best

- 2019 Podolník A. et al., Interpretation of flush-mounted probe current-voltage characteristics using four-parametric fits, *Plasma Physics and Controlled Fusion* **61** 105011, <https://doi.org/10.1088/1361-6587/ab3de8>
- 2018 Podolník A. et al., 3D particle-in-cell modeling of Langmuir probe effective collecting area in magnetized plasma, *Plasma Physics and Controlled Fusion* **60** 085008, <https://doi.org/10.1088/1361-6587/aac701>

Computer Skills

While I have never studied Computer Science or Engineering, I gained nontrivial knowledge of several languages and environments.

- Languages Fortran 95, Matlab (advanced), C#, Python, Objective-C, Java (intermediate), lua, C/C++ (basics)
- Web HTML, XML, CSS, Javascript (*ExtJS, jQuery*), PHP (*WordPress*), *ASP.net* (intermediate)
- Databases MySQL/MS SQL (user)
- OS Windows (advanced), Linux (intermediate), OS X (user)
- Software Matlab, \LaTeX , git, bash (user)

Languages

- Czech native speaker
- English upper intermediate
- French basics
- German basic words and phrases only

Interests

- Public outreach activities *Work with talented students at FYKOS and Výfuk.*
- Puzzlehunts *Winner of several renowned Czech over-night outdoor events.*
- Classical music *Opera listener and guitar player.*
- Arduino *Tinkering with circuit boards.*
- Art and architecture *Graduate of 2nd cycle elementary art school.*