Ing. IHOR MIRZOV, PhD

Research engineer (nuclear and automotive industries).
Always seeking the most elegant solution.
Smart, intelligent, strict, punctual, accurate.
Ukrainian, age 40, IQ 124, speak 4 languages, ISTJ.
+420 606 471 603, ihor@mirzov.cz

LinkedIn
Research Gate
Google Scholar
GitHub

MAIN SKILLS

Complex problem solver, good presenter

12 years in science research. H-index 7.
38 publications and conference papers.

Wide programming experience since 1992

Main language for now is Python.
Two of my most popular projects have more than 4000 users on GitHub.

Non-linear FE analyses in SIMULIA Abaqus with Fortran subroutines

My report was acknowledged as the best one in Czech Republic on SIMULIA Abaqus User Meeting in 2019.

EDUCATION

2016: Got a PhD degree

"Stress-strain state of the VVER-1000 reactor pressure vessel internals". Performed non-linear stress-strain analyses of the nuclear irradiation swelling process due to neutron flux and gamma heating in austenitic steel structure (the reactor's core baffle). During 7 years I was the only expert able to do it on the whole post-Soviet region including Czech Republic.

2008–2011: Postgraduate studies in National Academy of Sciences, Kyiv

According to official statistics only 1 of 5 candidates gets a PhD degree. I did.

2002–2008: Moscow Institute of Physics and Technology

Specialty: applied physics and mathematics.
As one of the most active students I had a paid position in the dean's department.

1999–2002: Correspondence school of physics and mathematics

I graduated with excellent grades.

1992–2002: Primary school in Bila Tserkva, Kyiv region, Ukraine

Regular participant and prize winner of city olympiads on physics, mathematics and programming.
Graduated with gold medal

EMPLOYMENT

2020–Now: Programmer at Škoda Design (externist from IDIADA)

- Light orchestration: independent software for amplitudes and animations definition, a VRED tool for 3D model lights orchestration, data format development and Arduino/Raspberry programming for a physical facility. Vision O, Elroq Respectline, Octavia PA2, Global SUV.
- Autodesk VRED. A set of scripts for exterior/interior presentations, including turntables with control buttons, multiuser VR with drawing capability and gravity simulation. A set of scripts for wheel rims presentations, HTML page with XMLHttpRequests (client) and python socket listener (server).
- Blender. Addons for data processing, wheels presentations, exterior presentations with turntables, switching capability like in VRED.
- Unreal/Blender. Plugin for PNG metadata parsing and scene setup according to the parsed camera parameters.
- Designrunde. PPTX script on VisualBasic for timetables presentations.
  The same done on pure HTML/CSS/Javascript.

2019–Now: CAE Project Engineer at Applus IDIADA

- Python scripting for ANSA/META, Abaqus CAE and Animator.
- Research projects, software development.
- Spatial tensor data mapping, composites.
- FE analyses for the automotive industry.
- Machine learning (linear regression) with TensorFlow and SciKitLearn.
- CAN / Ethernet packet parsing, byte array processing.

2016–2019: R&D specialist at UJV Řež a.s.

- Completed 6 big projects for Czech and Ukrainian nuclear power plants.
- Python coding for data processing, FE models pre- and post-processing.
- Created non-linear Abaqus models with Fortran subroutines and calculated stress-strain state with radiation creep and swelling. Assessed strength for thermal transients.
- Supervised work of one MA student.

2007–2016: Research specialist at Paton Electric Welding Institute

- 13 commercial projects. Matlab/Octave scripting for scientific spatial data processing.
- Welding simulation, strength assessment of operating Ukrainian NPP components. Static strength, fatigue, thermal shock etc.
- Supervised work of two MA students and one PhD candidate (for now all of them work abroad: Canada, Israel, Germany).
- Had a part-time job as a website developer (Wordpress/Joomla/ArpSite, PHP).
- As hobby: 5 years of Java development for Google Application Engine (pet project).

2003–2006: XSLT developer (webmaster) at MIPT

- Developed websites on ArpSite CMS. We had an IT laboratory developing the content management system for all university's websites. I was one of the developers.
  XML/XSLT/XPath, HTML4/CSS2/JavaScript.

HOBBIES

- Regular gym visitor, non-smoker.
- Maintain open source CalculiX FEA community on the GitHub.
  Two of my most popular projects have 2500 (CalculiX CAE) and 1700 (ccx2paraview) users.
- Maintain my own reality server running on Python.
- Hobbyist photographer.