

# ING. JAN PETRIK

HARDWARE ENGINEER



## SKILLS AND COMPETENCIES:

- Analog and digital design
- PCB layout and stackup design
- EMC design and testing
- Power and signal integrity
- DfX
- High-frequency design
- SPICE simulation and modeling
- Testing, debugging, design verification
- Analytical design approach
- Teamplayer, easy to work with
- Dependable and responsible

## WORK EXPERIENCE:

**Freelancing** 2021 - present

**Viasat Antenna Systems SA** 2020 - 2021

*Hardware R&D Engineer*

*Development of phased array antenna*

### Assignments:

- EMC design and precompliance testing (DO-160)
- Power integrity and power supply design
- Optimization of stackup and thermal performance
- PCB layout

### Other activities and responsibilities:

- Evaluation of new CAD/Layout software
- Teaching EMC and power integrity

**CERN** 2018 - 2020

*Fellow at TE-MS-C-LMF*

*Testing of superconducting magnets for HL-LHC*

### Assignments:

- HiPot and partial discharge testing
- Insulation system analysis, test results assesment
- Development of a new system for automated test report processing
- Design of a new high voltage material test station

### **Email:**

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### **Address:**

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Czech Republic

### **Nationality:**

Czech

### **Date of birth:**

24.2.1988

### **Native language:**

Czech language

### **Other languages:**

English - C1  
French - A2

### **Other:**

Driving license type B

### **Interests:**

- DIY Audio
- Photography
- Climbing

**Medical Technologies CZ a.s.**

2013 - 2018

*Hardware R&D Engineer*

*Development of medical devices for physiotherapy and aesthetic medicine*

### Assignments:

- EMC design and pre-compliance testing
- RF design
- 1.5kV/0.7A power supply
- General design work and device/component layout
- Liquid cooling of micro-channel cooled laser diode

### Other activities and responsibilities:

- Worst-case analysis and SPICE simulations
- Component testing and modeling
- Board design/PCB layout
- Power delivery system design and evaluation
- Power supply feedback loop stability analysis/design
- Altium Designer site administrator - responsible for tool migration
- Teaching, tutorial writing, design reviews

## ADDITIONAL EDUCATION AND TRAINING:

- New Ways to VRM Modelling & Decoupling, Steve Sandler 2016
- Analog Power Supply Design Workshop, Ali Shirsavar 2015
- Signal Integrity & High Speed System Design with Lee Ritchey 2015
- Altium Designer - Advanced PCB design 2015

## EDUCATION AND STUDENT ACTIVITIES:

**Czech Technical University in Prague,**

2011 - 2013

*Faculty of Electrical Engineering, graduated with honors*

Field of study: Electronics

Master thesis: Audio amplifier with feed-forward error correction, awarded Dean's Prize for Outstanding Master Thesis

**Czech Technical University in Prague,**

2007 - 2011

*Faculty of Electrical Engineering*

Field of study: Electronics and communications

Bachelor thesis: Active filters for loudspeakers

- **STMicroelectronics** - Part-time employee/intern 2012 - 2013
- **Texas Instruments Analog Design Contest - sound card (DSP)** 2012
- **IQRF Wireless Challenge** - 2nd place for Student Design 2012
- **GFE CZ, s.r.o.** - Development of wireless weather station 2011
- **Hackerspace administrator at macgyver.siliconhill.cz** 2009 - 2013