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Maciej P. Kopeć

Education

2015–present **PhD**, *AGH-UST*, Cracow.
Major: **Physics** at Faculty of Physics and Applied Computer Science

2014–2015 **MSc**, ***AGH-UST***, **Cracow**, 5.0.
Major: **Technical Physics** at Faculty of Physics and Applied Computer Science

2010–2014 **BSc**, ***AGH-UST***, **Cracow**, *4.5*.
Major: **Technical Physics** at Faculty of Physics and Applied Computer Science

2007–2010 **4th High School, Radom** *Specialization: mathematics and physics*

Professional experience

December 2014 – present **National Synchrotron Radiation Centre "Solaris"** *Beam instrumentation and diagnostics specialist*

- Electronic readout and measurement systems design.
- Design for manufacture and cases.
- Electronic prototyping.
- Electrical reworking.
- Beam instrumentation diagnostics and assembly.
- Beam diagnostic equipment design and maintenance

January 2014 – June 2014 **Woodward Poland sp. z o.o.** *Hardware development intern*

- Electrical circuit design.
- Reworking and servicing PCB prototypes (e.g. soldering under a microscope, test setup preparation).
- Measurements and data analysis.
- RoHS directive compliance verification.

July 2013 – August 2013 **Faculty of Physics and Applied Computer Science** *Electrical engineering trainee*

- Programming microcontrollers with ARM Cortex-M3 core.

Courses and certificates

Later in 2016 **Advanced PCB Layout Course** *FEDEVEL Academy*

Later in 2016 **Learn Altium Essentials** *FEDEVEL Academy*

April 2016 **PCB design at RF — multi-Gigabit transmission, EMI control and PCB materials** *Cadence GmbH*

April 2016 **Essential high-speed PCB design for signal integrity** *Cadence GmbH*

University and private projects and designs

October 2014 – January 2015 — **Free fall measurement device** — *University project*

- Atmega8 based custom PCB designed to measure free fall dynamics using LEDs and phototransistors. Data is acquired by an internal 10-bit SAR ADC and then sent to a PC via RS-232 port.
- Fully functional revision 1.
- Revision 2 hardware prototyping in progress.

July 2014 – September 2015 — **Control interface for SALT ASIC for LHCb detector tracker upgrade** — *Master thesis*

- Hardware I^2C interface implementation in Verilog.

June 2014 – September 2014 — **Analog filter measurement automation software** — *University project*

- RS-232 based software written in Python to automate analog filter measurements. Currently beta version. Will be used as a part of the Electronics lab for third year students.

December 2013 – January 2014 — **PS/2 driver in Verilog** — *University project*

- Design, implementation, synthesis and simulation of simple PS/2 driver in Verilog.

October 2013 – December 2013 — **Digital to analog converter** — *University project*

- Parallel loaded, resistor ladder based, 8-bit DAC with nonlinearities less than 0.5 LSB, simulations included temperature sweep and Monte Carlo simulations.

July 2013 – October 2013 — **Demo application for colour touchscreen working in embedded system** — *Bachelor thesis*

- Design and implementation of GUI library for LPC1768 microcotroller with a demo application.

Languages

English — **Fluent (FCE)**

Russian — **Basic**

Other skills

Programming languages — **C, C++ (basic), Python, Verilog, VHDL, SQL (more than basic), MATLAB (basic), Simulink(basic)**

Design software — **KiCad, EAGLE 6 (schematic and layout), LTspice IV, Xilinx ISE, Xilinx Vivado (more than basic), Xilinx SDK (basic), Keil uVision, Atmel Studio, Eclipse**

Other software and technologies — **Linux, LaTeX, git, Wordpress, MS Office**

Additional qualifications — **SEP 1 kV license, driving license, good knowledge of circuits and signals theory, coping with analytical problems**

Interests

- books, snooker, e-sports, cycling trips, physics.

Disclaimer

I hereby authorize you to process my personal data included in my job application for the needs of the recruitment process in accordance with the Personal Data Protection Act dated 29.08.1997 (uniform text: Journal of Laws of the Republic of Poland 2002 No 101, item 926 with further amendments)