



PROFESSIONAL EXPERIENCE

European Commission • Luxembourg • Full-time

03 - 07/2024 **Blue Book Trainee** for [Destination Earth](#)

Development of digital model of the earth (data science, statistical modelling, cloud technologies, satellite data).

Climate Pre-Accelerator • UK • Part-time

01 - 05/2023 **Team Member**

Working on a climate start-up *Farming 3.0*. Using data science to help farmers deal with climate change.

University of Cambridge • UK

10/2019 – 11/2023 **PhD Student** in [Di Martino Lab](#) • Full-time

Development of sustainable brain-inspired computing (memristors based on NiO, HfO₂, h-BN, and MoS₂).

10/2019 – 02/2024 **Academic Teacher** • Part-time

Lab demonstrator and supervisor for Experimental Methods Course (statistics, electronics, optics).

01/2020 – 06/2022 **Supervisor** of [NanoDTC](#) projects • Part-time

TU Wien • Austria • Full-time

09/2018 - 09/2019 **Research Assistant** in [Mueller Group Lab](#)

Fabrication of [first artificial neural network image sensor](#).
Development of 2D electrical devices ([Graphene Flagship](#)).

Acturis • Poland • Full-time

03/2018 - 07/2018 **Software Developer**

Development of [application](#) for brokers in XSLT, XML, SQL.

Technical University of Denmark • Denmark

02/2017 - 02/2018 **Project Member** • Full-time

Development of nanoparticle CZTS thin-film solar cells.

06/2017 - 12/2017 **Academic Employee** • Part-time

Development of fault detection method in silicon solar cells.
Automation of data analysis from weather station.

EIT+ Wrocław Research Centre • Poland • Part-time

03/2015 - 11/2016 **Grant Member**

Grant *Flexible polymer solar cells with improved long-term stability*. Electrical characterization of organic solar cells.

MB & Nartekspol Design Studio • Poland • Part-time

08/2014 - 10/2015 **Architect**

Head of renovation of the Most Holy Redeemer church in Wrocław. Designer of Pathomorphological Laboratory at Wrocław Medical University.

Polish Academy of Science, Institute of Nuclear Physics • Poland • Full-time

07/2014 - 08/2014 **Intern**

Particle Physics. C++ and Pythia data analysis of soft diffraction in proton production at LHC detector, CERN.

EDUCATION & AWARDS



Data Science Bootcamp, 13/11/2023 – 24/03/2024
[CoGrammar](#), [HyperionDev](#), UK

- Current Score: 100%
- ✓ Data Science (*Python*, *Pandas*, *Jupyter Notebook*)
- ✓ Machine Learning (Supervised, Natural Language Processing)



Physics PhD, 01/10/2019 – 23/01/2023
University of Cambridge, UK

- **Cambridge Trust** European Scholarship
- **Winton** Scholarship for the Physics of Sustainability
- **EPSRC** PhD studentship
- Invitation to **House of Lords** for *Energy Security in the Baltic and Northern Europe 2023*
- Winner of **Peter Watson Prize**
- **Myson College Prize** for Personal Achievements
- Honourable Mention, **UK Doctoral Researcher Awards**
- Personal grants for **Cambridge Royce** facilities
- Best Presentation Award at **E-MRS 2022 Spring Meeting**
- Best Poster Award at **London Plasmonics Forum 2021**
- Events Officer at [CU Polish Society](#)
- Board member at [Kvanta](#) Maths & IT School
- Active member of [Cambridge Union](#)



Physics MSc, 1/09/2016 - 21/02/2018
University of Copenhagen, Denmark

- Score: 11.8 / 12.0 (best in class)
- **Danish State Educational Grant**



Physics BSc, 1/10/2012 - 11/09/2015
Wrocław University of Science and Technology, Poland

- Score: 5.01 / 5.00 (best in class)
- **Polish Ministry of Education Award** (the most prestigious scholarship for top 500 students Poland)
- **Best graduate** in class of Physics
- **Rector Award for best students**
- **Scholarships for best students** (5 times)
- **Scholarships for most active students** (5 times)
- **Best presentation** at the [Winter Kindergarten of Theoretical Physics](#) Conference 2014
- Public Resources at [Erasmus Student Network](#)



Architecture BArchEng, 1/10/2011 - 12/02/2016
Wrocław University of Science and Technology, Poland

- Score: 4.93 / 5.00
- **Dean Award for the best student 2014**
- **Rector Award for best students**
- **Scholarships for best students** (6 times)
- **Scholarships for most active students** (6 times)
- Founder and head of [Shapes of Logic](#) Conference
- President of Faculty Student Government
- Member of University's Parliament and Senate
- *Medieval Studies* Course, University of Cambridge
- Member of grant 4667/PB/IAR/13 (Archaeology)



High School Diploma, 26/06/2010
Saville High School, USA

- Score: 102%



SKILLS

Tech Stack (9 years):

- **Python:** object-oriented programming, source version control, *Spyder*, *Jupyter Notebook*, *Pandas*, *NumPy*, *GitHub*. Daily use for data analysis and measurement automatization, data science bootcamp (5 years).
- **Machine Learning:** hardware development (my scientific papers: *Nature* 2020, 579, 62-66; *Adv. Mat.* 2023, 35, 2209968), data science bootcamp (5 years).
- **Risk modelling:** Development of *Destination Earth*, *Climate Pre-Accelerator* (1 year).
- **C++:** object-oriented programming, *Visual Studio Lab*, *Python*. University courses, internship at *CERN* (1 year).
- **SQL:** software developer at *Acturis*, data science bootcamp (3 months).
- **Front-end:** XML, CSS, HTML. Job at *Acturis*, university courses (1 year).

Scientific Research (9 years):

- **Data science, qualitative analysis:** data acquisition, transformation, manipulation, visualisation; statistical and probabilistic modelling. Daily use in academia, university courses, data science bootcamp (9 years).
- **Lab experience:** optical & electrical characterization, fabrication, synthesis. Daily use in academia (9 years).
- **Nanoelectronics:** memristors, image sensors, optoelectronics. PhD thesis, job at TU Wien (5.5 years).
- **Solar cells:** kesterite, silicon, organic. BSc and MSc theses, job at DTU (3.5 years).

Teamwork & Leadership (9 years):

- President of Faculty *Student Government* (2 years)
- Founder and head of *Shapes of Logic* Conference
- Public Relations at *Erasmus Student Network* (2 years)
- Teacher (4.5 years at the *University of Cambridge*, English teacher at *Cambridge Inner Game Leadership Ltd.*)
- Events Officer at *Cambridge University Polish Society* (1.5 years)

LANGUAGES

- **Polish:** mother tongue
- **English:** fluent (2010: *High School Diploma*; 2012: *Cambridge CAE* level C1; 2019: *TOEFL* result: 117/120; 2023: English teacher)
- **German:** B2 (2021 *CULP* B2 German course diploma)
- **Slovak, Ukrainian, Serbo-Croat:** communicative in speech

LIST OF KEY PUBLICATIONS

My Google scholar account (620 citations)

- Mennel L, **Symonowicz J**, Wachter S, Polyushkin D K., Molina-Mendoza A J., Mueller T, *Ultrafast machine vision with 2D material neural network image sensors*. *Nature* (2020) 579, 62-66.
- **Symonowicz J**, Polyushkin D, Mueller T, Di Martino G, *Fully optical in operando investigation of ambient condition electrical switching in MoS₂ nanodevices*. *Advanced Materials* (2023) 35, 10, 2209968.
- Engberg S, **Symonowicz J**, Schou J, Canulescu S, Jensen KMØ, *Characterization of Cu₂ZnSnS₄ Particles Obtained by the Hot-Injection Method*. *ACS Omega* (2020) 5, 18, 10501–10509.
- **Symonowicz J**, Morawski M, Dusza M, Peksa P, Sieradzki A, Granek F, *Investigation of the light-soaking effect in organic solar cells using dielectric permittivity and electric modulus approaches*. *Organic Electronics* (2018) 52, 32-41
- **Symonowicz J**, Riedel N, Thorsteinsson S, Sera D, Poulsen PB, *New method of silicon photovoltaic panel fault detection using impedance spectroscopy*. *33rd Eur. Photovolt. Sol. Energy Conf. Exhib.* (2018) 1831-1835.
- **Symonowicz J**, Nisztuk M, Pakowska M, *Shapes of Logic: everything that surrounds us can be described*. *Oficyna Wydawnicza Politechniki Wrocławskiej*, Wrocław, 2016.

OTHER ODD THINGS I DID IN MY LIFE

- 03/2023 – 02/2024: **English teacher** at *Cambridge Inner Game Leadership Ltd.* (part-time)
- 01/2017 – 01/2018: **Painting teacher** at *Smag Først* Paint Bar Copenhagen (part-time)
- 05/2009: **2nd Prize in the National Literature Competition** *Diary for the 10th Anniversary* organised by *Gazeta Wyborcza* (the most popular newspaper in Poland)
- 04/2007: My first **portrait gallery art exhibition** (I still draw/paint portraits and sell them commercially)
- 06/2006: Music School graduate in the class of **violin**
- 06/1999: **ballet dancer** in the *Nutcracker* at *Wroclaw Opera House*
- **Hitch-hiking:**
07/2013: From Porto (Portugal) to Wroclaw (Poland)
09/2015: from Wroclaw (Poland) to Mostar (Bosnia) and back