



Rainer Kuusvek

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WORK EXPERIENCE

20/09/2020 – 01/03/2022 Glasgow, United Kingdom

GRADUATE RESEARCHER UNIVERSITY OF GLASGOW

Graduate work in the field of CubeSat Multifunctional Systems and In-Orbit Manufacturing. Focus in novel research into analog thermal management, topology optimisation of on-orbit printed mechanisms, analog actuators including bimetallics and shape memory alloys, and multifunctional satellite components.

Lab experience included experiments in thermal-, mechanical-, material-, and surface finish- testing. Equipment included the use of vacuum chambers, Helmholtz cages, impact testers, fatigue testers, and various additive manufacturing devices. Additionally, a strong focus was placed on thermal and mechanical simulation methods using Python, Ansys, Patran, Thermal Desktop, Fusion360, and OpenFoam.

01/06/2019 – 01/09/2020 Noordwijk, Netherlands

YOUNG GRADUATE TRAINEE IN EXTREME SCALE SYSTEMS EUROPEAN SPACE AGENCY

Young Graduate Trainee at the Advanced Concepts team. Research was specialized in Extreme-Scale Systems, including optimised orbital propagation of smart dust, analysis of the dynamics of kilometer-scale momentum exchange and electrical tethers, the statistical modelling of asteroid rendezvous for deep-space mining, and optimisation of continuous-thrust spacecraft orbits.

Here I designed simulation tools from scratch in a variety of programming languages, which were used in multidisciplinary teams to achieve tight deadlines with industrial partners.

01/10/2018 – 01/03/2019 Durham, United Kingdom

HARDWARE ENGINEER FUMARII

Responsible for designing and building the electrical monitoring, diagnostic, and fault management systems at a new startup in the home heating industry. Earned valuable hands-on experience in building electrical systems from the ground up in a multidisciplinary product design environment, while getting acquainted with the tough deadlines and responsibilities associated with venture capital-backed young companies.

01/06/2015 – 30/08/2015 Tallin, Estonia

MANUFACTURING TRAINEE ABB ESTONIA

Supported design briefs and shadowed manufacturing manager at Estonian wind turbine factory for 10 weeks across ranges of languages (English, Estonian, Russian) and backgrounds.

EDUCATION AND TRAINING

01/10/2017 – 30/09/2018 London, United Kingdom

MASTER OF SCIENCE Imperial College London

Address Exhibition Road, London, United Kingdom | **Website** <https://www.imperial.ac.uk/>

01/10/2014 – 01/07/2017 Bristol, United Kingdom

BACHELOR OF ENGINEERING University of Bristol

Address Beacon House, Queen's Road, Bristol, United Kingdom | **Website** <https://www.bristol.ac.uk/>

● **LANGUAGE SKILLS**

Mother tongue(s): **ENGLISH** | **ESTONIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
FRENCH	B1	B1	B1	B1	B1
RUSSIAN	B1	B1	B1	B1	B1
DUTCH	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Microsoft Office | Microsoft Word | Technical drawing | Social Media | Outlook | Microsoft Excel | Programming Languages: C, C++, Python, Matlab | Facebook | Solidworks, Autodesk Inventor & AutoCad | Fusion 360 Autodesk | Article Writing | Blender, 3D modeling | ANSYS design modeler | Good familiarity with MATLAB, Simulink | 3D design and prototyping | 3D modelling & 3D printing | Graphic Design, Inkscape, Illustrator, Photoshop | Solidworks | Arduino | Raspberry Pico | vacuum technology | Operating Systemns | Thermal Engineering | Spacecraft Engineering | Patran