

Education

- 2023 – now  University of Tokyo, Research Centre for Advanced Science and Technology (RCAST)
JSPS fellowship by nomination from the UK Royal Society, hosted in the Ota laboratory
- 2017 – 2023  Christ's College, University of Cambridge, Departments of Physics and Chemistry
PhD in Physics, with a focus on photonics, microfluidics, and biophysics (jan-heck.net/phd)
Master of Research with Distinction at the Sensor Centre for Doctoral Training
Master of Advanced Study with Merit in the Physics Tripos
- 2015 – 2017  Japan–Germany international scholarship by the Studienstiftung and Haniel Foundation
Two M.A. degrees, graduated with final grades A and 1.1
One year each at Keio University (Tokyo) and Martin-Luther Universität (Halle), with research dissertations in Japanese and German on the international history and philosophy of science
- 2012 – 2015  Royal Holloway College, University of London
BSc Physics with First Class Honours, 88.3%, graduated **1st out of 63 students**
- 2002 – 2011  Richard-Wagner-Gymnasium Baden-Baden
Abitur high school diploma, final grade 1.0, graduated **1st out of 88 students**

Awards

- 2024 Awarded a **Kakenhi research grant** by JSPS (¥2 million)
- 2024 Admitted to the **German Scholar's Organization Leadership Academy** (ca. €10 000 by the KTS)
- 2023 Awarded the **JSPS fellowship by nomination from the UK Royal Society** (2 years)
- 2023 Awarded the **Studienstiftung-RIKEN postdoctoral fellowship** (declined to accept other offer)
- 2023 Grant of £2500 by the **Great Britain Sasakawa Foundation** for establishing a Japan-UK collaboration
- 2023 Award of \$1450 by **SPiE** to present a conference paper at Future Sensing Technologies 2023 in Japan
- 2022 Award by the **Christ's College Monica Kornberg Memorial Fund** to give research seminars in Japan
- 2022 Prize for **best speaker** at the Sensors Day 2022 conference
- 2021 Prize for **best poster presentation** at the Cavendish Laboratory Graduate Conference 2021
- 2019 Awarded the **Sensor CDT "Champion" prize** for work undertaken during the MRes degree
- 2018 Admitted to the Cambridge Trust as a **Honorary Scholar**
- 2018 Granted an **EPSRC studentship**, providing stipend and full funding for my doctorate
Awarded an additional £6,000 research budget
- 2017 **Graduate Bursary** from Christ's College during MAST degree
- 2015 *University of London Driver Prize* for **best academic results in the final undergraduate year**
- 2014 Physics Department *Pincherle prize*, awarded for **best academic results in the second year**
- 2013 **Lilian Heather Faculty Prize** in Mathematical Science (1st year BSc prize)
International undergraduate scholarship by the Studienstiftung (approx. €14 000 per year)
- 2012 Admitted into the German National Academic Foundation ("**Studienstiftung**")
- 2011 High school class **top-of-the-year**, additional awards for best English and Physics exam results

Skillsets

Languages

German Native speaker
English Fluent (8 years residence in the UK)
Japanese Fluent (JLPT N1, 2 years residence)

Strengths

Organised, well-structured, dependable working style
Bias for problem solving in research and organisation
Passionate about academic teaching and mentorship

Teaching

Undergraduate laboratory teaching and admissions interviewer for Christ's College. Training and supervision of research students. See next page for details

Engineering

Design, construction and assembly of metalwork for research prototyping; trained and experienced in use of lathe and 3-axis milling; 3D printing; CAD engineering

Electronics

Designing and implementing custom PCBs and microcontrollers in research and automation

Programming

Experienced Linux system administrator (self-hosting my cloud services and webpages). Python, C, C++, ARM assembler, FPGA (verilog) programming

Mentorship

Science workshops for preschoolers (Germany, 2015), for young children (Japan, 2016–2017), and for high school students (UK, 2019–2023); Mentorship for university applicants (African Society of Cambridge University, 2021–2022)

Research & Publications

For an introduction to my research, including publications, please refer to jan-heck.net/research.

Experience

January 2020 — February 2023	Undergraduate Teaching for the Cavendish Laboratory, University of Cambridge I supervised groups of second year undergraduate students in their practical laboratory work; advising on experimental techniques, reviewing student reports and giving feedback.
November 2021 — December 2022	Admissions Interviewer for Christ's College, University of Cambridge I interviewed prospective undergraduate students, assessing their analytical reasoning skills in one-on-one discussions, and gave recommendation reports to the Director of Studies. I interviewed the 2021 applicants and was asked to return for 2022.
January 2021 — October 2023	Associate Student Investment Partner at Creator Fund As part of Creator Fund's Cambridge team, I engaged with founders of university startups and spinouts. I evaluated technological potential, authored due diligence reports and deliberated decisions in investment committees. I initiated and facilitated the investment in a Cambridge spinout developing photonic materials (review on landscape.vc). I began as Student Analyst, and became Associate Student Investment Partner in my second year.
June 2022 — December 2022	Conference Organising Committee of the Cavendish Graduate Conference 2022 In the organising committee of the Cavendish Laboratory's annual graduate conference, I evaluated the submitted talks and posters, and organised the committee's decision on the most suitable and engaging programme for our conference's audience of over one hundred.
October 2022 — March 2023	Cambridge Judge Business School attending EnterpriseTECH I was awarded a scholarship and admitted to the University of Cambridge Judge Business School's EnterpriseTECH programme, centered on entrepreneurial skills for researchers.
October 2021 — February 2022	MedTech Foundation attending the MedTech Innovation Programme I got accepted for the Cambridge MedTech Foundation Innovation Programme , working on medical device development and commercialisation. In my team, I led the ideation and concept development of a novel metabolic sensor.
August 2019 — June 2020	Research Assistant in the group of Prof. Phillip Stanley-Marbell Research on an uncertainty-propagating processor architecture (details under NDA). Related to Prof. Stanley-Marbell's startup, Signaloid , and resulting in a publication .
July 2014 — August 2014	Research Intern at Royal Holloway College, University of London I studied and applied methods of quantum field theory to theoretical particle physics, delivering calculations of the cross section of an electron–positron collision.
Before 2014	Internships during and after high school For several summers during my high school years, and in the year before starting university, I worked: as a programmer; in circuit design and quality control; in the chemical analytics department of a power plant; and more. Feel free to contact me for the complete list.

I hold a permanent **right to work** in all of the EU (nationality) and the UK (settled status).