

# Yuki M. Asano

[yuki@robots.ox.ac.uk](mailto:yuki@robots.ox.ac.uk) | [linkedin.com/in/yuki-m-asano/](https://www.linkedin.com/in/yuki-m-asano/) | [yukimasano.github.io/](https://github.com/yukimasano)

## EDUCATION

---

### University of Oxford

Oxford, UK

*DPhil in Autonomous Intelligent Machines and Systems; Visual Geometry Group (VGG)*

*Oct. 2017 – Sep. 2021*

- Four year program: 1 year of course work followed by 3 years of PhD research
- Focus: Self-supervised learning, representation learning, multi-modal learning
- Supervisor: Andrea Vedaldi

### University of Oxford

Oxford, UK

*MSc Mathematical Modelling and Scientific Computing (overall: Pass)*

*Oct. 2015 – Sep. 2016*

- Thesis: Low Dimensional Embedding of Technology Space and Implementation of a Variational Autoencoder for Patents (grade: Distinction), supervised by Doyne Farmer, written at Institute for New Economic Thinking

### University of Hagen

Hagen, Germany

*BSc Business Administration and Economics (overall: 1.4, GPA = 3.6/4)*

*Oct. 2012 – Aug. 2017*

- Thesis: Social Learning in an Agent-Based Ramsey-Cass-Koopmans Model supervised by J. Heitzig, and A. Endres, written at Potsdam Institute for Climate Impact Research

### Ludwig Maximilian University of Munich

Munich, Germany

*BSc. Physics (overall: 1.2, GPA = 3.8/4)*

*Oct. 2011 – Sep. 2014*

- Semester at the University of Tokyo (Oct. 2013 – Mar. 2014)
- Thesis: Monte-Carlo Study in Proton Computed Tomography (supervised by G. Dedes)

## PUBLICATIONS

---

### Main Conferences/Journals

#### Support-set bottlenecks for video-text representation learning.

M. Patrick\*, PY. Huang\*, M. Asano\*, Fl. Metze, A. Hauptmann, J. Henriques, A. Vedaldi  
*International Conference on Learning Representations (ICLR)* [Spotlight], 2021

#### Labelling unlabelled videos from scratch with multi-modal self-supervision.

YM. Asano\*, M. Patrick\*, C. Rupprecht, A. Vedaldi  
*Neural Information Processing Systems (NeurIPS)*, 2020

#### Self-labelling via simultaneous clustering and representation learning

YM. Asano, C. Rupprecht, and A. Vedaldi  
*International Conference on Learning Representations (ICLR)* [Spotlight], 2020.

#### A critical analysis of self-supervision, or what we can learn from a single image

YM. Asano, C. Rupprecht, and A. Vedaldi  
*International Conference on Learning Representations (ICLR)*, 2020.

#### Rising adoption and retention of meat-free diets in online recipe data

YM. Asano\*, G. Biermann\*  
*Nature Sustainability*, 2(7):621–627, 2019

#### Monte Carlo Study of the Precision and Accuracy of Proton CT Relative Stopping Power Maps

G. Dedes and YM. Asano, N. Arbor, D. Dauvergne, J. Letang, E. Testa, S. Rit, K. Parodi  
*Medical Physics*, 3298-3298, 2015.

### Preprints

#### Self-supervised object detection from audio-visual correspondence

T. Afouras\*, YM. Asano\*, F. Fagan, A. Vedaldi, F. Metze  
*arXiv: 2104.06401*, 2021.

---

\*Denotes joint first-authorship

## Space-Time Crop & Attend: Improving Cross-modal Video Representation Learning

Mandela Patrick, YM. Asano\*, B. Huang, I. Misra, F. Metze, JF. Henriques, A. Vedaldi

*arXiv: 2103.10211*, 2021.

## How True is GPT-2? An Empirical Analysis of Intersectional Occupational Biases

H. Kirk, Y. Jun, H. Iqbal, E. Benussi, F. Volpin, FA. Dreyer, A. Shtedritski, YM. Asano\*

*arXiv: 2102.04130*, 2021.

## Multi-modal self-supervision from generalized data transformations

M. Patrick\*, YM. Asano\*, P. Kuznetsova, R. Fong, JF. Henriques, G. Zweig, and A. Vedaldi

*arXiv: 2003.04298*, 2020.

## Emergent inequality and endogenous dynamics in a simple behavioral macroeconomic model

Yuki M. Asano, Jakob J. Kolb, Jobst Heitzig, J. Dooyne Farmer

*arXiv: 1907.02155*, 2019.

## Workshops

### Privacy-preserving Object Detection

P. He, C. Griffin, K. Kacprzyk, A. Joosen, M. Collyer, A. Shtedritski, YM. Asano

*ICLR'21 Synthetic Data Generation Workshop*

### SeLaVi: self-labelling videos without any annotations from scratch

YM. Asano\*, M. Patrick\*, C. Rupprecht, A. Vedaldi

*ICLR'21 Embodied Multimodal Learning Workshop*

## WORK EXPERIENCE

---

<b>Facebook AI Research:</b> Summer Research Intern & Contractor	Jun. 2020 – Feb. 2021 <i>Paris (remote)</i>
<b>TransferWise:</b> Machine Learning Intern & Contractor	Mar 2017 – Jan. 2019 <i>Talinn/London</i>
<b>Rakuten:</b> Cloud Infrastructure Engineering Intern	Aug. 2015 – Sep. 2015 <i>Tokyo</i>
<b>Siemens Technology Accelerator:</b> Working student	Apr. 2015 – Aug. 2015 <i>Munich</i>
<b>180 Degrees Consulting Munich e.V.:</b> President & Founder	Dec. 2016 – Jun. 2017 <i>Munich</i>
<b>SOS Children's villages International:</b> Project lead	Mar 2017 – Jun. 2017 <i>Innsbruck/Munich</i>
<b>McKinsey &amp; Company:</b> Fellow Intern	Apr. 2015 – Aug. 2015 <i>Scandinavia &amp; Russia</i>

## TEACHING

---

### Teaching Assistant

1/18 – 03/18, Mathematics and Data Science for Development (Neave O'Leary)

### Practicals

10/19 – 01/19, Deep Learning and Machine Vision for AIMS cohort 2019 (Andrew Zisserman, Andrea Vedaldi)

10/19 – 12/19, Machine Learning at CS Dept. (Phil Blunsom, Ani Calinescu)

### Certified Instructor workshops for the Nvidia Deep Learning Institute

3x Fundamentals of DL, at the University of Oxford Big-Data Institute and the Wellcome Centre for Human Genetics

### Other Tutorials

01/2019 Introduction to (Deep) NLP at the Oxford Institute for New Economic Thinking

07/2018 Introduction to Machine Learning at Santa Fe Institute Complex Systems Summer School

07/2018 Introduction to CNNs and RNNs at Santa Fe Institute Complex Systems Summer School

## TALKS

---

05/2021 Invited talk at Computer Vision Centre, Universitat Autònoma de Barcelona  
05/2021 ICLR virtual talks: one spotlight, two workshop posters  
03/2021 Invited talk at Zalando Data Science Community Knowledge Exchange  
01/2021 Invited talk at Torr Vision Group and FiveAI  
10/2020 Invited talk at UnitaryAI  
12/2020 NeurIPS virtual talk: one poster  
05/2020 ICLR virtual talks: one spotlight, one poster  
06/2019 Robotics and Autonomous Systems CDT Conference  
11/2018 EMNLP workshop poster talk on Noisy User-generated Text  
03/2018 Networks seminar, Mathematical Institute, University of Oxford  
01/2018 Balliol College interdisciplinary student seminar, University of Oxford  
11/2017 Networks seminar, Mathematical Institute, University of Oxford  
10/2017 Complexity Economics meeting, Institute for New Economic Thinking (Young Scholars)  
08/2017 Transdisciplinary methods research group, Potsdam Institute for Climate Impact Research

## ORGANIZATION OF WORKSHOPS & TUTORIALS

---

08/2021 *The Future is Unsupervised* (10 days) Introductory tutorial and project work organization for the German National Academic Foundation summer academy in Leysin, co-organized with C. Rupprecht  
08/2020 Self-Supervised Learning – What is next? ECCV workshop, organized with C. Rupprecht, A. Joulin, A. Vedaldi

## REVIEWING

---

2021 CVPR, ICCV main conference  
2020 NeurIPS workshop on Self-supervised Learning, Theory and Practice  
NeurIPS workshop on Pre-registration of Experiments  
ACCV, main conference  
2019 CVPR, helped C. Rupprecht with reviews for main conference

## SUPERVISION

---

2021 MSc thesis, Adrian Ziegler (TUM)  
OxAI interdisciplinary team on investigating bias in computer vision  
OxAI interdisciplinary team on investigating bias in NLP  
2020 MSc thesis, Carlos Roberto Medina Temme (EPFL)  
OxAI interdisciplinary team working with Ada Lovelace Institute

## OTHER ACADEMIC EVENTS

---

2019 Alan-Turing Institute Data Study group: Object detection for microscopic cell tracking for DSTL, London  
International Computer Vision Summer School (ICVSS), Sicily  
2018 Santa Fe Complex Systems Summer School, Santa Fe  
2016 Alan-Turing Institute Data Study group: worked on multi-spectral airborne imaging with Syngenta, London

## AWARDS AND FUNDING

---

2021 2x Google Academic Research Credits Program (PI, Co-PI), USD2K  
2020 AWS Machine Learning Research Award (Co-PI with Christian Rupprecht and Andrea Vedaldi), USD90K  
Qualcomm Innovation Fellowship Winner 2020 (PI), USD40K  
2019 International Computer Vision Summer School: best team essay on assistive technology  
2018 Edgell Sheppee Fund from Engineering Science Dept., Oxford  
Balliol College Graduate Project Grant  
2017 Full PhD funding by the Engineering and Physical Sciences Research Council, 1 successful EU applicant per year  
Open Data Science Conference East Scholarship  
2016 Brasenose College Annual Fund  
2015 MSc bursary of the University of Oxford Mathematical Institute for promising applicants  
National Academic Foundation study abroad scholarship for studying at Oxford  
2014 Ministry of Science in Japan scholarship, awarded to <1% of international undergraduate students  
DAAD, German Academic Exchange Service scholarship for studying at the University of Tokyo  
National Academic Foundation scholarship, for outstanding academic achievement, awarded to <0.4% of students

2013 Max Weber scholarship (elite network Bavaria), awarded to <1% of Bavarian students  
EliteAkademie scholarship (three 4 week trainings on leadership + 3 weeks in East Asia), <2% acceptance rate

## MEDIA/RESEARCH COMMUNITY

---

2021 Blogpost from Facebook AI about applying our method in Instagram Reels  
2020 Advisor for projects at OxAI, a society to educate, build and connect an interdisciplinary AI community  
Blogpost from Facebook AI about our GDT paper  
Interviewed for the CTDS podcast  
Community video analyses (1 2) about our ICLR 2020 paper  
Community blogposts (1, 2) about our ICLR 2020 spotlight paper

## OTHER SKILLS

---

**Languages:** German (native), Japanese (native), English (fluent, IELTS 8.5/9), French (basic)  
**Programming:** Python [PyTorch, caffe, Keras, numpy, networkX, scikit-learn, pandas, joblib, matplotlib,..], Matlab, C++, R, PostgreSQL, MySQL  
**Other Tools:** Git, AWS, SLURM, PyCharm, DataGrip