

# Curriculum Vitae

## Yuki M. Asano

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### RESEARCH INTERESTS

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computer vision, self-supervision, multi-modal learning (video, audio, text), privacy/bias in computer vision

### PROFESSIONAL EXPERIENCE

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#### University of Amsterdam

*Assistant Professor in Computer Vision and Machine Learning at the QUVA Lab*

Amsterdam, NL

*Oct. 2021 –*

### EDUCATION

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#### University of Oxford

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

Oxford, UK

*Oct. 2017 – Sep. 2021*

- Supervisor: Andrea Vedaldi; Examiners: Philip Torr, Phillip Isola

#### University of Oxford

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

Oxford, UK

*Oct. 2015 – Sep. 2016*

#### University of Hagen

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

Hagen, Germany

*Oct. 2012 – Aug. 2017*

#### Ludwig Maximilian University of Munich

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

Munich, Germany

*Oct. 2011 – Sep. 2014*

### PUBLICATIONS

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According to Google scholar, my publications have  $\approx 340$  citations and my h-index is 6.

#### Main Conferences/Journals

##### **PASS: An ImageNet replacement for self-supervised pretraining without humans**

YM. Asano, C. Rupprecht, A. Zisserman, A. Vedaldi

*Proceedings of the Neural Information Processing Systems Track on Datasets and Benchmarks (NeurIPS-Data)*, 2021

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

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

*International Conference on Computer Vision (ICCV)*, 2021.

##### **On Compositions of Transformations in Contrastive Self-Supervised Learning**

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

*International Conference on Computer Vision (ICCV)*, 2021.

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

YM. Asano, JJ. Kolb, J. Heitzig, JD. Farmer

*accepted to Proceedings of the National Academy of Sciences (PNAS)*, 2021.

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

M. Patrick\*, PY. Huang\*, YM. Asano\*, F. Metze, A. Hauptmann, JF. 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.

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\*Denotes joint first-authorship

## **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<sup>\*</sup>, G. Biermann<sup>\*</sup>

*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.

## **Workshops**

### **Memes in the Wild: Assessing the Generalizability of the Hateful Memes Challenge Dataset**

H. Kirk, Y. Jun, G. Wachtel, N. Broestl, R. Li, P. Rauba, X. Bai, M. Doff-Sotta, A. Shtedritski, YM Asano

*Workshop on Online Abuse and Harms, ACL* 2021

### **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<sup>\*</sup>, M. Patrick<sup>\*</sup>, C. Rupprecht, A. Vedaldi

*ICLR'21 Embodied Multimodal Learning Workshop*

## **Preprints**

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

T. Afouras<sup>\*</sup>, YM. Asano<sup>\*</sup>, F. Fagan, A. Vedaldi, F. Metze

*arXiv: 2104.06401*, 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<sup>\*</sup>

*arXiv: 2102.04130*, 2021.

## **TEACHING**

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### **Teaching Assistant / Practicals**

10/19 – 01/21, Deep Learning and Machine Vision for AIMS cohort 2019, 2020 (Andrew Zisserman, Andrea Vedaldi)

01/20 – 01/20, Multiple View Geometry (Victor Adrian Prisacariu, Andrew Zisserman)

01/20 – 03/20, Design and Analysis of Algorithms (Daniel Kroening)

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

01/18 – 03/18, Mathematics and Data Science for Development (Neave O’Cleary)

### **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

## **SUPERVISION**

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2021 MSc thesis, Adrian Ziegler, TUM (ongoing)

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

## **TALKS**

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09/2021 Paper talk at International Workshop on Agentization, George Mason University and the Proteus Foundation

06/2021 Invited talk at Imagine group at ENPC ParisTech

05/2021 Invited talk at Computer Vision Center, Universitat Autònoma de Barcelona

05/2021 3x Paper talks at ICLR: 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 Paper talk at NeurIPS: one poster  
05/2020 2x Paper talks at ICLR: one spotlight, one poster  
06/2019 Robotics and Autonomous Systems CDT Conference  
11/2018 Paper talk at EMNLP workshop 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

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08/2021 *The Future is Self-supervised* (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

## WORK EXPERIENCE

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|---|-----------------------|
| <b>Facebook AI Research:</b> Intern & Contractor; worked with A. Joulin | Jun. 2020 – Feb. 2021 |
| <b>TransferWise:</b> Machine Learning Intern & Contractor               | Mar 2017 – Jan. 2019  |
| <b>Rakuten:</b> Cloud Infrastructure Engineering Intern                 | Aug. 2015 – Sep. 2015 |
| <b>Siemens Technology Accelerator:</b> Working student                  | Apr. 2015 – Aug. 2015 |
| <b>180 Degrees Consulting Munich e.V.:</b> President & Founder          | Dec. 2016 – Jun. 2017 |
| <b>SOS Children's villages International:</b> Project lead              | Mar 2017 – Jun. 2017  |
| <b>McKinsey &amp; Company:</b> Fellow Intern                            | Apr. 2015 – Aug. 2015 |

## AWARDS AND FUNDING

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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), USD80K  
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 best 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, <2% acceptance rate

## REVIEWING

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2021 NeurIPS Track on Datasets & Benchmarks, TPAMI, CVPR (outstanding reviewer), ICCV (outstanding reviewer)  
2020 ACCV, NeurIPS workshops (3x): Self-supervised Learning, Theory and Practice; Preregistration of Experiments

## OTHER ACADEMIC EVENTS

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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

## MEDIA/RESEARCH COMMUNITY

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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

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**Languages:** German (native), Japanese (native), English (fluent, IELTS 8.5/9), French (basic)

**Nationality:** German & Japanese

**Hobbies:** Hiking, Tree & Plant identification, (Ultra)-running