

# Curriculum Vitae

## Yuki M. Asano

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### RESEARCH INTERESTS

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computer vision, self-supervision, vision-language models, privacy, bias

### PROFESSIONAL EXPERIENCE

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<b>Qualcomm AI:</b> External Machine Learning Consultant	Since May 2023
<b>University of Amsterdam:</b> Assist. Professor in Computer Vision and Machine Learning	Since Oct. 2021
• Co-supervision of 6 PhD students with C.G.M. Snoek, M. Welling, E. Gavves	
<b>Facebook AI Research:</b> Intern & Contractor; Host: 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 of NGO	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

### EDUCATION

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<b>University of Oxford</b>	Oxford, UK
<i>DPhil in Autonomous Intelligent Machines and Systems @ Visual Geometry Group (VGG)</i>	<i>Oct. 2017 – Sep. 2021</i>
• Supervisor: Andrea Vedaldi; Examiners: Philip Torr, Phillip Isola	
• Result: 'no corrections' (highest award possible)	
<b>University of Oxford</b>	Oxford, UK
<i>MSc Mathematical Modelling and Scientific Computing (overall: Pass, thesis: Distinction)</i>	<i>Oct. 2015 – Sep. 2016</i>
<b>University of Hagen</b>	Hagen, Germany
<i>BSc Business Administration and Economics (overall: 1.4, GPA = 3.6/4)</i>	<i>Oct. 2012 – Aug. 2017</i>
<b>Ludwig Maximilian University of Munich</b>	Munich, Germany
<i>BSc. Physics (overall: 1.2, GPA = 3.8/4)</i>	<i>Oct. 2011 – Sep. 2014</i>

### PUBLICATIONS

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According to Google scholar, my publications have  $\approx 1400$  citations and my h-index is 14. \*: joint first-authorship

#### Main Conferences/Journals

##### **BISCUIT: Causal Representation Learning from Binary Interactions**

P. Lippe, S. Magliacane, S. Löwe, **YM. Asano**, T. Cohen, E. Gavves

*Conference on Uncertainty in Artificial Intelligence (UAI)*, 2023.

##### **Self-Guided Diffusion Models**

VT. Hu, DW. Zhang, **YM. Asano**, G.J. Burghouts, CGM. Snoek

*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

##### **Causal Representation Learning for Instantaneous and Temporal Effects in Interactive Systems**

P. Lippe, S. Magliacane, S. Löwe, **YM. Asano**, T. Cohen, E. Gavves

*International Conference on Learning Representations (ICLR)*, 2023

##### **The Augmented Image Prior: Distilling 1000 Classes by Extrapolating from a Single Image**

**YM. Asano\***, A. Saeed\*

*International Conference on Learning Representations (ICLR)*, 2023

**VTC: Improving Video-Text Retrieval with User Comments**

L Hanu, **YM. Asano**, J. Thewlis, C. Rupprecht

*European Conference on Computer Vision (ECCV)*, 2022.

**Less than Few: Self-Shot Video Instance Segmentation**

P. Yang, **YM. Asano**, P. Mettes, CGM. Snoek

*European Conference on Computer Vision (ECCV)*, 2022.

**CITRIS: Causal Identifiability from Temporal Intervened Sequences**

P. Lippe, S. Magliacane, S. Löwe, **YM. Asano**, T. Cohen, E. Gavves

*International Conference on Machine Learning (ICML)*, 2022.

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

T. Afouras\*, **YM. Asano\***, F. Fagan, A. Vedaldi, F. Metze

*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

**Self-Supervised Learning of Object Parts for Semantic Segmentation**

A. Ziegler, **YM. Asano**

*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

**Measuring the Interpretability of Unsupervised Representations via Quantized Reversed Probing**

I. Laina, **YM. Asano**, A. Vedaldi

*International Conference on Learning Representations (ICLR)*, 2022

**Bias Out-of-the-Box: An Empirical Analysis of Intersectional Occupational Biases in Popular Generative Language Models**

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

*Neural Information Processing Systems (NeurIPS)*, 2021.

**Keeping Your Eye on the Ball: Trajectory Attention in Video Transformers**

M. Patrick\*, D. Campbell\*, **YM. Asano\***, I. Misra, F. Metze, C. Feichtenhofer, A. Vedaldi, JF. Henriques

*Neural Information Processing Systems (NeurIPS)* [Oral], 2021.

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

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

*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

*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.

**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.

**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*

## TEACHING

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**04/2023: Self-supervised and Vision-Language Learning** (MSc in AI, 2 ECTS, <https://uvadl2c.github.io/>)  
*Ongoing*

**11/2022: Deep Learning 1** (MSc in AI, 6 ECTS, <https://uvadlc.github.io/>)  
Overall student feedback: 92.1% (very) satisfied; score:  $4.5 \pm 0.7$  out of 5

### 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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ongoing:

PhD, Michael Dorkenwald with Cees Snoek  
PhD, Mohammadreza Salehidehnavi with Cees Snoek and Efstratios Gavves  
PhD, Pengwan Yang with Cees Snoek  
PhD, Winfried van den Dool with Max Welling  
PhD, Rob Romijnders with Max Welling  
PhD, Phillip Lippe with Efstratios Gavves, Taco Cohen, Sara Magliacane  
MSc thesis, Lukas Knobler  
MSc thesis, Apostolos Panagiotopoulos  
MSc thesis, Alfonso Taboada  
MSc thesis, Luc Weytingh  
MSc thesis, Kaya ter Burg  
MSc thesis, Sunny Soni

2022:

MSc thesis, Jochem Loedeman  
MSc thesis, Anton Kozackov  
BSc thesis, Anne van der Weijden  
BSc thesis, Philip de Wolf  
OxAI interdisciplinary team on de-biasing in NLP [result: ACL’22 workshop paper]

2021:

MSc thesis, Adrian Ziegler, TUM (top-grade), [result: CVPR’22 paper]  
OxAI interdisciplinary team on investigating bias in computer vision [result: ICLR’21 workshop paper]  
OxAI interdisciplinary team on investigating hateful memes [result: ACL’21 workshop paper]  
OxAI interdisciplinary team on investigating bias in NLP [result: NeurIPS’21 paper]

2020:

MSc thesis, Carlos Roberto Medina Temme, EPFL (top-grade)  
OxAI interdisciplinary team working with Ada Lovelace Institute

## AWARDS AND FUNDING

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- 2022 “Best lecture” at VISUM summer school
- 2021 Awarded ELLIS membership
  - 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

## INVITED TALKS

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- 06/2023 Invited talk at Helsing AI, Germany (A. Bordes)
- 05/2023 Invited talk at Computer Vision and Graphics Seminar, MIT (A. Torralba)
- 05/2023 Invited talk at Computer Vision Group, University of Tampere (E. Rathu)
- 02/2023 Invited talk at Computer Vision Center, Universitat Autònoma de Barcelona (D. Karatzas)
- 02/2023 Invited lecture at Machine Learning Course, University of Edinburgh (H. Bilen)
- 02/2023 Invited talk at Machine Learning and Computer Vision Group, University of Bristol (D. Damen, M. Wray)
- 02/2023 Invited talk at AIMS seminar, University of Oxford (M. Osborne)
- 12/2022 Invited talk at Computer Vision Group, University of Bern (P. Favaro)
- 10/2022 Invited talk at AWS Research, Tel-Aviv (R. Litman)
- 09/2022 Invited talk at ELLIS Video Understanding Symposium
- 09/2022 Invited talk at the Machine Intelligence Laboratory, University of Cambridge (R. Cipolla, S. Albanie)
- 04/2022 Invited talk at AwesomeIT conference, Amsterdam
- 04/2022 Invited talk at BMVA Symposium, Manchester
- 03/2022 Invited talk at LMSS Seminar at INRIA, Rennes (L. Amsaleg)
- 12/2021 Invited talk at Qualcomm-UvA Deep Vision Seminar at University of Amsterdam (E. Gavves)
- 11/2021 Invited lecture at FACT-AI MSc course at University of Amsterdam (F. Santos)
- 10/2021 Invited talk at CMIC & WEISS at medical imaging group University College London
- 09/2021 Invited talk at International Workshop on Agentization, George Mason University and the Proteus Foundation
- 06/2021 Invited talk at Imagine group at ENPC ParisTech (D. Picard)
- 05/2021 Invited talk at Computer Vision Center, Universitat Autònoma de Barcelona (D. Karatzas)
- 03/2021 Invited talk at Zalando Data Science Community Knowledge Exchange
- 01/2021 Invited talk at Torr Vision Group and FiveAI (P. Torr)
- 10/2020 Invited talk at UnitaryAI
- 06/2019 Invited talk at Robotics and Autonomous Systems CDT Conference
- 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
- 08/2017 Transdisciplinary methods research group, Potsdam Institute for Climate Impact Research

## SERVICE TO THE ACADEMIC COMMUNITY

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### PhD Jury member:

- 2023 Vladimir Iashin (Tampere University)
- Mohamed Sayed (Univeristy College London)

### Committee:

- 2022 Member in the Ethical Committee for Student Projects at University of Amsterdam, Information Sciences

### Area Chair:

2023 CVPR, NeurIPS

2022 ECCV, ECCV workshop 1x, NeurIPS workshop 1x

**Reviewer:**

2023 ICCV

2022 CVPR, ICML (outstanding reviewer), ECCV, ECCV workshops (1x), IJCV, NeurIPS, ACM Multimedia, IJCV

2021 CVPR, (outstanding reviewer), ICCV (outstanding reviewer), NeurIPS Track on Datasets & Benchmarks, TPAMI, IJCV, NeurIPS workshops (3x): SSL Theory and Practice, Pregistration of Experiments, ImageNet PPF

2020 ACCV, NeurIPS workshops (2x): SSL Theory and Practice; Pregistration of Experiments

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## ACADEMIC DEVELOPMENT

University Teaching Qualification (BKO) courses (5 days) + Inclusive Learning Environment Trajectory (1 day)

Academic Leadership (8 days), University of Amsterdam

Superb Supervision (4 days), University of Amsterdam

Entrepreneurship (0.5 day), Said Business school, University of Oxford

Looking behind the label: mental ill-health in the workplace (0.5 day), University of Oxford

Core writing skills (0.5 day), University of Oxford

Public Engagement (0.5 day), University of Oxford

Presentation Skills (0.5 day), University of Oxford

Beyond Communication: Effective Two-way Engagement (0.5 day), University of Oxford

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## SUMMER/WINTER SCHOOL LECTURES

12/2022 Lecturer at Intelligent Sensing Winter School of Queen Mary Univ. of London (virtual)

09/2022 Lecturer at IPM-AI summer school (virtual)

07/2022 Lecturer at VISUM Summer school by INESC TEC (elected “best lecture”)

05/2022 Lecturer at ASCI Computer Vision Summer School, Amsterdam

08/2021 Organiser and Lecturer: Introductory 10-day workshop titled *Self-supervised learning and ethics* for the German National Academic Foundation (Studienstiftung) summer academy, co-organized with C. Rupprecht

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## ORGANIZATION OF WORKSHOPS & COMMUNITY

*ongoing* Organizing a focus group on privacy in computer vision with leading researchers in the field

*ongoing* ICCV workshop on *Big Model Adapting for Computer Vision (BigMAC)*

**YM. Asano**, T. Han, M. Caron, P. Isola, S. Belongie

10/2022 ECCV workshop on *Self-Supervised Learning*

**YM. Asano**, C. Rupprecht, D. Larlus, A. Zisserman

12/2022 NeurIPS workshop on *Self-Supervised Learning: Theory and Practice*

I. Misra, P. Xie, X. Wang, G. Varol, Y. Song, **YM. Asano**, P. Luc

08/2020 ECCV workshop on *Self-Supervised Learning*

**YM. Asano**, C. Rupprecht, and A. Joulin, A. Vedaldi

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## MEDIA

*ongoing*: Organizer of the Deep Vision Seminar at the UvA with more than 2200 members on MeetUp

2021 Community blogposts about our PASS dataset and paper: ImportAI, Synced, Deep Learning Weekly

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

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## OTHER

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

**Nationality:** German & Japanese

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