Curriculum Vitae

Yuki M. Asano

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Research interests

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

Professional Experience

Qualcomm AI: External Machine Learning Consultant — Since May 2023

University of Amsterdam: 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

Facebook AI Research: Intern & Contractor; Host: A. Joulin — Jun. 2020 – Feb. 2021

TransferWise: Machine Learning Intern & Contractor — Mar 2017 – Jan. 2019

Rakuten: Cloud Infrastructure Engineering Intern — Aug. 2015 – Sep. 2015

Siements Technology Accelerator: Working student — Apr. 2015 – Aug. 2015

180 Degrees Consulting Munich e.V.: President & Founder of NGO — Dec. 2016 – Jun. 2017

SOS Children's villages International: Project lead — Mar 2017 – Jun. 2017

McKinsey & Company: Fellow Intern — Apr. 2015 – Aug. 2015

Education

University of Oxford — Oxford, UK

DPhil in Autonomous Intelligent Machines and Systems @ Visual Geometry Group (VGG) — *Oct. 2017 – Sep. 2021*

- Supervisor: Andrea Vedaldi; Examiners: Philip Torr, Phillip Isola
- Result: *'no corrections'* (highest award possible)

University of Oxford — Oxford, UK

MSc Mathematical Modelling and Scientific Computing (overall: Pass, thesis: Distinction) — *Oct. 2015 – Sep. 2016*

University of Hagen — Hagen, Germany

BSc Business Administration and Economics (overall: 1.4, GPA = 3.6/4) — *Oct. 2012 – Aug. 2017*

Ludwig Maximilian University of Munich — Munich, Germany

BSc. Physics (overall: 1.2, GPA = 3.8/4) — *Oct. 2011 – Sep. 2014*

Teaching

04/2023: Self-supervised and Vision-Language Learning (MSc in AI, 2 ECTS, https://uvadl2c.github.io/)
Overall student feedback: 87.0% (very) satisfied; score: 4.3 ± 0.8 out of 5

11/2022: Deep Learning 1(MSc in AI, 6 ECTS, https://uvadlc.github.io/)
Overall student feedback: 92.1% (very) satisfied; score: 4.5 ± 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

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 Efrstatios 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

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

Keynotes:
01/2024 Invited talk at BMVA Symposium on vision and language
12/2023 Invited talk at NeurIPS Self-supervised Learning in Theory and Practice Workshop
04/2022 Invited talk at AwesomeIT conference, Amsterdam
09/2022 Invited talk at ELLIS Video Understanding Symposium
Research talks:
09/2023 Invited talk at Google DeepMind, London (J. Carreira)
07/2023 Invited talk at Google Brain, Ghana (J. Hickey)

07/2023 Invited talk at University of Ghana (JD. Abdulai)
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 Tempere (E. Rathu)
02/2023 Invited talk at Computer Vision Center, Universitat Autonoma 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 the Machine Intelligence Laboratory, University of Cambridge (R. Cipolla, S. Albanie)
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 Autonoma 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

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:
2024 ICLR
2023 CVPR, NeurIPS, WACV, NeurIPS workshop
2022 ECCV, ECCV workshop, NeurIPS workshop

Reviewer:
2023 ICCV (outstanding reviewer), IJCV
2022 CVPR, ICML (outstanding reviewer), ECCV, ECCV workshop, 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

Organization of Workshops

12/2023 NeurIPS workshop on *Causal Representation Learning*
S. Magliacane, C. Eastwood, **YM. Asano**, C. Shi, A. Mastakouri, S. Lachapelle, C. Uhler, B. Schölkopf
10/2023 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

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

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

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

Other

Languages: German (native), Japanese (native), English (fluent, IELTS 8.5/9), French (basic)
Nationality: German & Japanese
Hobbies: Hiking, Tree & Plant identification, (Ultra)-running

Publications

According to Google scholar, my publications have ≈1800 citations and my h-index is 15. *: joint first-authorship

Main Conferences/Journals

30 Self-Ordering Point Clouds
P. Yang, CGM. Snoek, **YM. Asano**
International Conference on Computer Vision (ICCV) [oral], 2023.

29 Time Does Tell: Self-Supervised Time-Tuning of Dense Image Representations
M. Salehi, E. Gavves, CGM. Snoek, **YM. Asano**
International Conference on Computer Vision (ICCV), 2023.

28 Small Visual Language Models can also be Open-Ended Few-Shot Learners
MM. Derakhshani, I. Najdenkoska, M. Worring, CGM. Snoek, **YM. Asano**
ArXiv, 2023.

27 Semantic Counting from Self-Collages
L. Knobel, T. Han, **YM. Asano**
ArXiv, 2023.

26 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) [Spotlight], 2023.

25 Self-Guided Diffusion Models
VT. Hu, DW. Zhang, **YM. Asano**, GJ. Burghouts, CGM. Snoek
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023.

24 Skip-Attention: Improving Vision Transformers by Paying Less Attention
S. Venkataramanan, A. Ghodrati, **YM. Asano**, F. Porikli, and A. Habibian
ArXiv, 2023

23 No time to waste: practical statistical contact tracing with few low-bit messages
R. Romijnders, **YM. Asano**, C. Louizos, M. Welling
International Conference on Artificial Intelligence and Statistics (AISTATS) , 2023

22 Towards Label-Efficient Incremental Learning: A Survey
M. Kilickaya, J. Weijer, **YM. Asano**
ArXiv, 2023

21 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

20 The Augmented Image Prior: Distilling 1000 Classes by Extrapolating from a Single Image
YM. Asano*, A. Saeed*
International Conference on Learning Representations (ICLR), 2023

19 VTC: Improving Video-Text Retrieval with User Comments
L Hanu, **YM. Asano**, J. Thewlis, C. Rupprecht
European Conference on Computer Vision (ECCV), 2022.

18 Less than Few: Self-Shot Video Instance Segmentation
P. Yang, **YM. Asano**, P. Mettes, CGM. Snoek
European Conference on Computer Vision (ECCV), 2022.

17 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.

16 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.

15 Prompt Generation Networks for Efficient Adaptation of Frozen Vision Transformers
J. Loedemann, T. Han, **YM. Asano**
ArXiv, 2022.

14 Self-Supervised Learning of Object Parts for Semantic Segmentation
A. Ziegler, **YM. Asano**
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022.

13 Measuring the Interpretability of Unsupervised Representations via Quantized Reversed Probing
I. Laina, **YM. Asano**, A. Vedaldi
International Conference on Learning Representations (ICLR), 2022

12 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.

11 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.

10 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

9 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.

8 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.

7 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.

6 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

5 Labelling unlabelled videos from scratch with multi-modal self-supervision.
YM. Asano*, M. Patrick*, C. Rupprecht, A. Vedaldi
Neural Information Processing Systems (NeurIPS), 2020

4 Self-labelling via simultaneous clustering and representation learning
YM. Asano, C. Rupprecht, and A. Vedaldi
International Conference on Learning Representations (ICLR) [Spotlight], 2020.

3 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.

2 Rising adoption and retention of meat-free diets in online recipe data
YM. Asano*, G. Biermann*
Nature Sustainability, 2(7):621–627, 2019

1 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.

Workshop papers

Efficient Neural PDE-Solvers using Quantization Aware Training
W. Dool, T. Blankevoort, M. Welling **YM. Asano**
International Conference on Computer Vision (ICCV) Workshop on Resource Efficient Deep Learning, 2023.

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