

Fabien Baradel

Doctoral Researcher in Computer Vision & Machine Learning

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EDUCATION

INSA Lyon Lyon, France
PhD in Computer Vision & Machine Learning October 2019 - June 2020 (expected)
· Thesis: "Structured deep learning for video analysis" advised by Christian Wolf and Julien Mille.

ENSAI Rennes, France
MSc in Statistics, "Diplôme d'ingénieur" 2013 - 2016
· Major in data science, *summa cum laude* (top of class), high honors.
· Erasmus semester at University of Warwick, UK.
· BEng in Applied Economics at University of Paris Dauphine, France (double degree agreement).

University of Grenoble Alps Grenoble, France
BSc in Applied Mathematics 2010 - 2013
· *Summa cum laude* (top of class), high honors.

WORK EXPERIENCE

INSA Lyon - LIRIS Lyon, France
Doctoral Researcher October 2016 - present
· Conducting research on deep learning methods for computer vision.
· Publishing in top-tier conferences on topics related to human action understanding and causal reasoning.
· Integration of research methods into robotic platform.
· Animation of weekly reading group meeting. & co-supervision of master student interns.
· Active collaboration with Natalia Neverova (Research Scientist at Facebook AI Research).

Google Grenoble, France
Student Researcher April 2019 - March 2020
· Worked on self-supervised learning from unlabelled video data with Cordelia Schmid and Chen Sun.

Xerox Research Europe Center Grenoble, France
Research Intern March 2016 - September 2016
· Worked on unsupervised domain adaptation advised by Boris Chidlovskii and Gabriela Csurka.

LICIT - IFSTTAR Lyon, France
Research Intern Summer 2015
· Developed a machine learning method for road traffic forecasting supervised by Romain Billot.

ACADEMIC VISITS

Simon Fraser University Vancouver, Canada
Vision & Media Lab with Greg Mori February 2018 - June 2018
· Worked on video classification from a human-object interactions perspective.

University of Guelph Guelph, Canada
Machine Learning Research Group with Graham Taylor Summer 2017
· Developed an attention-based method for recognizing fine-grained human actions.

PUBLICATIONS & PATENTS

Learning Video Representations using Contrastive Bidirectional Transformer

Chen Sun, **Fabien Baradel**, Kevin Murphy and Cordelia Schmid.

Under review, arXiv preprint:1906.05743, 2020.

CoPhy: Counterfactual Learning of Physical Dynamics

Fabien Baradel, Natalia Neverova, Julien Mille, Greg Mori and Christian Wolf.

In International Conference in Representation Learning (ICLR), 2020. (**spotlight presentation**)

Object Level Visual Reasoning in Videos

Fabien Baradel, Natalia Neverova, Christian Wolf, Julien Mille and Greg Mori

In IEEE European Conference on Computer Vision (ECCV), 2018.

Human Activity Recognition with Pose-driven Attention to RGB

Fabien Baradel, Christian Wolf and Julien Mille

In British Machine Vision Conference (BMVC), 2018.

Glimpse Clouds: Human Activity Recognition from Unstructured Feature Points

Fabien Baradel, Christian Wolf, Julien Mille and Graham Taylor

In IEEE Computer Vision and Pattern Recognition (CVPR), 2018.

Human Action Recognition: Pose-based Attention draws focus to Hands

Fabien Baradel, Christian Wolf and Julien Mille

In IEEE International Conference on Computer Vision (ICCV), Workshop "Hands in Action", 2017.

Discrepancy-based networks for unsupervised domain adaptation: a comparative study

Gabriela Csurka, **Fabien Baradel**, Boris Chidlovskii and Stéphane Clinchant

In IEEE Internat. Conf. on Comp. Vision (ICCV), Workshop "Task-CV", 2017.

Conditional adaptation network for image classification

Fabien Baradel, Boris Chidlovskii and Gabriela Csurka

US Patent - 15450620, 2017.

TEACHING EXPERIENCE

Science-U

Lecturer

Lyon, France

2018 - 2019

- "Introduction to machine learning", MSc Computer Science, 30h

University Lyon 1

Teaching Assistant

Lyon, France

Fall 2017

- "Regression modeling" - MSc Data Science - TP 12h
- "Probability & Statistics", BSc Computer Science & Maths, TP 20h

EPITA

Lecturer

Lyon, France

Fall 2017

- "Mathematics", Undergraduates, 24h

ENSAI

External Speaker

Rennes, France

January 2017

- "Introduction to deep learning with tensorflow", MSc Data Science, 6h

TALKS

Counterfactual learning for physical dynamics

Invited talk at ICML 2020 workshop Object-Oriented Perception, Reasoning, and Causality. *July 2020*

Visual reasoning in videos

GDR ISIS-IA on Reasoning from Visual Signal.

October 2018

Pose and attention for action recognition

GDR ISIS on Pose and Gesture.

December 2017

MISCELLANEOUS

Press coverage CVPR Daily 2018.

Reviewer ECCV 2020, CVPR 2019-2020, ICCV 2019, ICML 2019, FG 2019, NIPS 2018, IJCV.

Summer schools DLRLSS 2017, PAISS 2019.

Programming Python, PyTorch, Tensorflow, R, Java, latex, git, bash.

Github github.com/fabienbaradel

Languages French (native), English (professional proficiency).

Sports Ski-touring, hiking, triathlon.