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Date of Birth : 09-26-1993

Amélie Royer

Education

2015–2020 **PhD student at Institute of Science and Technology Austria**, Vienna, Austria.
IST Austria Excellence Scholarship recipient.

2015 **ICVSS Summer School**, *International Computer Vision Summer School*, Sicily.

2013–2015 **Research-oriented Master in Computer Science, with first class honours**, *University of Rennes 1 / Irisa*, Rennes, France.
In conjunction with studies at École Normale Supérieure de Rennes (ENS Rennes) (Rank: 1/22).

2012–2013 **Bachelor of Computer Science with first class honours and Bachelor of Mathematics with honours**, *University of Rennes 1*, Rennes, France.
In conjunction with studies at École Normale Supérieure de Rennes (ENS Rennes). Double degree in Computer Science (Rank: 1/22) and Mathematics (Rank: 17/109).

2010–2012 **Post-secondary preparatory classes**, *Lycée Georges Clémenceau*, Reims, France, *MPSI-MP**, *Main subjects :* Mathematics, Physics and Computer Science.
"Classes préparatoires aux grandes écoles", a 2-year preparation for national competitive entrance exams leading to French "Grandes écoles".

2008-2010 **French Baccalauréat in Science (High School diploma equivalent) with first class honours**, *Lycée Jean Jaurès*, Reims, France, *Main subjects :* Mathematics and Physics.
Obtained the French-German AbiBac: AbiBac is a german intensive course which delivers the Abitur (german High School diploma equivalent) in addition to the French Baccalauréat.

Publications

2020 **Amélie Royer**, Christoph H. Lampert. "*Localizing Grouped Instances for Efficient Detection in Low-Resource Scenarios*", Winter Conference on Applications of Computer Vision (WACV), 2020.

2020 **Amélie Royer**, Christoph H. Lampert. "*A Flexible Selection Scheme for Minimum-Effort Transfer Learning*", Winter Conference on Applications of Computer Vision (WACV), 2020.

2020 Krishnendu Chatterjee, Martin Chmelík, Deep Karkhanis, Petr Novotný, **Amélie Royer** "*Multiple-Environment Markov Decision Processes: Efficient Analysis and Applications*", International Conference on Automated Planning and Scheduling (ICAPS), 2020.

2018 **Amélie Royer**, Konstantinos Bousmalis, Stephan Gouws, Fred Bertsch, Inbar Mosseri, Forrester Cole, Kevin Murphy. "*XGAN: Unsupervised Image-to-Image Translation for Many-to-Many Mappings*", Presented at the Domain Adaptation for Visual Understanding Workshop at ICML/IJCAI/EJCAI, 2018.

2017 **Amélie Royer**, Alexander Kolesnikov, Christoph H. Lampert. "*Probabilistic Image Colorization*", British Machine Vision Conference (BMVC), 2017.

2016 **Amélie Royer**, Guillaume Gravier, Vincent Claveau. "*Audio word similarity for clustering with zero resources based on iterative HMM classification*", International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2016.

2015 **Amélie Royer**, Christoph H. Lampert. "*Classifier Adaptation at Prediction Time*", Conference on Computer Vision and Pattern Recognition (CVPR), 2015.

Professional Experience

2018 - 2020 **Teaching Assistantships**, *IST Austria*.
Teaching Assistantship for the Tensorflow course and Machine Learning course at IST Austria for classes of approximately 20 students.

2020 **Research Intern (5 months)**, *Google Brain*, Zurich, Switzerland.
Subject : Knowledge Distillation for transfer learning.
Recent work has shown great progress in the few-shot and transfer learning domains by leveraging deep/wide neural architectures and large, varied pre-training datasets (e.g., JFT). We investigated compression techniques to reduce the memory and computational requirements of these models, while preserving its performance on the target transfer tasks.

2017 **Research Intern (6 months)**, *Google Brain*, London, UK.
Subject : Semantic Style Transfer.
We tackled the problem of semantic style transfer: given two unpaired collections of images, we designed an adversarial generative framework that learns a mapping between the corpus-level style of each collection, while preserving semantic content shared across the input domains.

2015 **Research Intern (5 months)**, *Inria Bretagne Loire Atlantique*, Rennes, France.
Subject : Clustering by diverting supervised Machine Learning techniques.
During this internship, we studied a method for defining a similarity measure on various types of multimedia content, with few to no prior knowledge, by diverting usual supervised machine learning techniques and exploiting them in this unsupervised framework.

2014 **Research Intern (3 months)**, *Institute of Sciences and Technology (IST) Austria*, Vienna, Austria.
Subject : Learning a prior for lifelong visual object categorization.
The topic of the internship was to develop a system for automatically learning realistic prior distributions over object classes. We then applied it to the problem of classification, in the context of object hierarchies such as the ImageNet database.

2013 **Research Intern (2 months)**, *Inria Bretagne Loire Atlantique*, Rennes, France.
Subject : Event Retrieval in large video databases.
Our goal was to compare different video event retrieval methods based on a signal processing approach. In addition, we investigated a new method taking advantage of properties of high-dimensional vectors.

Outreach

2016 - 2020	Reviewer	*ECCV2020, also regular reviewer for the WiCV CVPR workshop*
2017	Organization	*IST Austria Young Scientist Symposium Organizing Committee Member*
2017	Others	*Wrote an entry for "Werden wir auf dem Mars leben? 33 Fragen an die Zukunft"*

Languages

French	Native Language	
German	Advanced	*European **B1** 2008, Zentrale MittelstufenPrüfung (**ZMP**) 2010*
English	Advanced	*Cambridge First (**FCE**) 2010, **TOEIC** (990/990) 2013*

Technical skills

Main usage	Python, Tensorflow, Jax, Keras
Programming	C, C++, Java, OCaml, Matlab, Qt, Pytorch
Others	Emacs, Git, Latex, SVN, Gimp

Interests

Arts	Traditional techniques, and digital painting
Reading	Interest in fantasy, criminal and historical novels