# Si-Qi LIU | Curriculum Vitae

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## **Education**

MSc in Computer Science, Keble College, University of Oxford, UK

Graduated with distinction. Supported by COSF B&J Lloyd Family Trust scholarship. Oct.2015–Feb.2017

Diplôme d'Ingénieur (M.Eng), CentraleSupélec, France

Top French Grandes Ecole in Engineering, ranked 1st on Metz campus, GPA 3.9/4.0. Jun.2013–Feb.2017

Licence II, Université de Technologie de Compiègne, France

Overall GPA 3.99/4.0, Supported by AMESON scholarship.

2011-2013

## **Experiences**

Google DeepMind London

Research Engineer Mar.2017–Present

- o My research focused on the intersection of multi-agent, continuous control and deep reinforcement learning;
- o Built research infrastructure supporting large-scale experiments across DeepMind.

Google Research Mountain View

Research Intern, Research & Machine Intelligence (Hosted by Kevin Murphy)

Jul.2016–Nov.2016

o Our work (https://arxiv.org/abs/1612.00370) has been published with a spotlight talk at ICCV 2017;

Google New York

Software Engineer Intern, Adwords-Optimisation

Jun.2015-Sep.2015

o Built large-scale distributed evaluation pipeline for CTR/conversion rate prediction models.

#### Collabora, The Document Foundation

Consultant Software Engineer (part-time)

Feb.2015-May.2015

Google

Software Engineer Intern, Search-Knowledge

Jun.2014-Sep.2014

Zurich

- o Built models for entity resolution in search gueries and web documents:
- Work presented at the Google EMEA intern summit;

#### LibreOffice

Google Summer of Code contributor

Jul.2013-Jan.2014

o Built LibreOffice Impress remote control for iOS, featured in LibreOffice 4.2 and LibreOffice developer conference;

## **Publications**

### Improved Image Captioning via Policy Gradient optimization of SPIDEr

Spotlight, ICCV 2017, International Conference on Computer Vision Siqi Liu, Zhenhai Zhu, Ning Ye, Sergio Guadarrama, Kevin Murphy

### **Emergent Coordination Through Competition**

Poster, ICLR 2019, International Conference on Learning Representations Sigi Liu, Guy Lever, Josh Merel, Saran Tunyasuvunakool, Nicolas Heess, Thore Graepel

#### **Hierarchical Visuomotor Control of Humanoids**

Poster, ICLR 2019, International Conference on Learning Representations

Josh Merel, Arun Ahuja, Vu Pham, Saran Tunyasuvunakool, Siqi Liu, Dhruva Tirumala, Nicolas Heess, Greg Wayne

## The Body is not a Given: Joint Agent Policy Learning and Morphology Evolution

Poster, AAMAS 2019, International Conference on Autonomous Agents and Multiagent Systems

Dylan Banarse, Yoram Bachrach, Siqi Liu, Chrisantha Fernando, Nicolas Heess, Pushmeet Kohli, Guy Lever, Thore Graepel

### Observational Learning by Reinforcement Learning

*Poster*, AAMAS 2019, International Conference on Autonomous Agents and Multiagent Systems Diana Borsa, Nicolas Heess, Bilal Piot, *Sigi Liu*, Leonard Hasenclever, Remi Munos, Olivier Pietquin

## Reinforcement Learning Agents acquire Flocking and Symbiotic Behaviour in Simulated Ecosystems *Poster.* ALIFE 2019. Artificial Life

Peter Sunehag, Guy Lever, Siqi Liu, Josh Merel, Nicolas Heess, Joel Z Leibo, Edward Hughes, Tom Eccles, Thore Graepel

### A Generalized Training Approach for Multiagent Learning

Oral, ICLR 2020, International Conference on Learning Representations

Paul Muller, Shayegan Omidshafiei, Mark Rowland, Karl Tuyls, Julien Perolat, *Siqi Liu*, Daniel Hennes, Luke Marris, Marc Lanctot, Edward Hughes, Zhe Wang, Guy Lever, Nicolas Heess, Thore Graepel, Remi Munos

# V-MPO: On-Policy Maximum a Posteriori Policy Optimization for Discrete and Continuous Control *Poster*, ICLR 2020, International Conference on Learning Representations

H Francis Song, Abbas Abdolmaleki, Jost Tobias Springenberg, Aidan Clark, Hubert Soyer, Jack W Rae, Seb Noury, Arun Ahuja, *Sigi Liu*, Dhruva Tirumala, Nicolas Heess, Dan Belov, Martin Riedmiller, Matthew M Botvinick

## Languages

French: Bilingual Proficiency (EU C2 Proficiency)

English: Bilingual Proficiency, TOEFL 115/120

Chinese: Native Speaker

Japanese/German: Elementary Proficiency

## Student Associations

### Rézo, CentraleSupélec

Vice-President 2013–2015

- o Provides web services and network infrastructure for students in Metz area;
- o Organised meet-ups around software engineering topics (git, ROS, Django, Python, Android/iOS);

### UTCoupe, Université de Technologie de Compiègne

Vice-President 2012–2013

 $\circ\,$  Participated in the French Robotics Cup, ranked  $18^{th}$  out of 144 teams:

### ClubChine, Université de Technologie de Compiègne

Founder, President 2011–2012

### Lumière d'Afrique, CentraleSupélec

Volunteer 2013–2014

o Fund-raising for solar-powered lighting installation in schools and hospitals in Cameroon;

## Other Projects

### txt2calories: Nutrition Estimation via Natural Languages

Computational Linguistics Group, University of Oxford (supervised by Phil Blunsom) Feb.2016–Jul.2016

### Metabolise: Fitness Tracking with Nutrition Estimation from Text

3<sup>rd</sup> place at hackathon HackCambrdige, Cambridge, UK

Jan.2016

## im2food: Object Detection for Food with Convolutional Neural Networks

Machine Learning and Interactive Systems Lab, CentraleSupélec Jan.2015–Jun.2015

## **Gesture-based Remote Controller for Drones**

Machine Learning and Interactive Systems Lab, CentraleSupélec Dec.2013–Sep.2014