

Xiaoyu BIE | Résumé

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Education

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|---|-------------------------------|
| Inria & University Grenoble-Alpes <i>PhD student in Computer Science</i> Supervisors: Xavier Alameda-Pineda, Laurent Girin Research areas: deep probabilistic generative model, human motion, speech analysis | France 2019–present |
| CentraleSupélec, University Paris-Saclay <i>M.Sc. in Signal and Image Processing (ATSI)</i> | France 2017–2018 |
| Institut d'Optique, University Paris-Saclay <i>Diplôme d'Ingénieur in Applied Optics</i> | France 2016–2018 |
| Huazhong University of Science and Technology <i>B.Sc. in Optical & Electronic Information</i> | China 2012–2016 |

Experience

INRIA

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| RobotLearn team (previous Perception team) <i>PhD Student</i> | Grenoble, France Dec. 2019 – present |
| <ul style="list-style-type: none">Deep generative model, specifically the dynamical VAE modelsUnsupervised speech enhancement with dynamical VAE based speech modeling and Variational EM optimizationHuman motion prediction (GCN, Transformers, etc) and generation (dynamical VAEs) | |

CEA-LIST

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| Library of Vision, Modelization and Localisation <i>Research Engineer</i> | Palaiseau, France Nov. 2018 – Nov. 2019 |
| <ul style="list-style-type: none">Automatic mapping of underground pipework using augmented reality technologySoftware programming with C++ and compilation with CMake, environment Linux | |

Baidu Inc.

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| Autonomous Driving Group (ADU) <i>R&D Intern</i> | Beijing, China Avr. 2018 – Aug. 2018 |
| <ul style="list-style-type: none">Development and optimization of a particle filter based localization system (a sequential Monte Carlo method) for autonomous vehicles, using semantic landmarks from a multi-cameras systemSoftware programming with C++ and compilation with CMake, environment Linux | |

French National Centre for Scientific Research (CNRS)

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| Charles Fabry Laboratory <i>Research Intern</i> | Palaiseau, France Jun. 2017 – Aug. 2017 |
| Study of non-local means denoising algorithm in orthogonal state contrast(OSC) imaging | |

Awards

2021: Bosch AIoT Scholarship

2021: Travel Grant to Interspeech 2021

2019: Recipient of the MIAI Ph.D. Fellowship, France

Computer skills

Python, Pytorch, C++, Matlab, Latex

Languages

Chinese: Native

English: Proficient

French: Fluent

Community Service

Reviewer

Conferences: ACM MM'20-21

Publications

Preprint

[U1]: **Xiaoyu Bie**, Simon Leglaive, Xavier Alameda-Pineda and Laurent Girin, "Unsupervised Speech Enhancement using Dynamical Variational Auto-Encoders", arXiv preprint arXiv:2106.12271.

[U2]: Wen Guo*, **Xiaoyu Bie***, Xavier Alameda-Pineda and Francesc Moreno, "Multi-Person Extreme Motion Prediction", arXiv preprint arXiv:2105.08825, 2021.

Conference papers

[C1]: **Xiaoyu Bie**, Laurent Girin, Simon Leglaive, Thomas Hueber and Xavier Alameda-Pineda, "A Benchmark of Dynamical Variational Autoencoders applied to Speech Spectrogram Modeling", **Interspeech**, 2021.

Journal papers

[J1]: Laurent Girin, Simon Leglaive, **Xiaoyu Bie**, Julien Diard, Thomas Hueber and Xavier Alameda-Pineda, "Dynamical Variational Autoencoders: A Comprehensive Review", **Foundations and Trends in Machine Learning**, 2021, Vol. 15, No. 1-2, pp 1–175. DOI: 10.1561/22000000089.