CAO Anh Quan, Ph.D. Student

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Education

2021 – Now	**Ph.D., Inria/PSL Research University** in Computer Vision Thesis: Unsupervised 3D scene understanding from image
2019 – 2020	**M.Sc., Ecole Polytechnique** in Artificial Intelligence and Advanced Visual Computing GPA: 3.99/4.0 (16.9/20) – rank (1 or 2)/10
2018 – 2019	**M.Sc., Telecom Paris/University Paris-Saclay** in Data Science GPA: 4.0/4.0 (17.1/20) – rank 1/30 (coursework), with honors
2017 – 2018	**Master 1, University of Science and Technology of Hanoi** in Computer Science GPA: 15.40/20 – rank 1/20
2013 – 2016	**B.Sc., University of Science and Technology of Hanoi** in Computer Science GPA: 16.1/20 – rank 1/40

Working experiences

2/2024 – 5/2024	Applied Scientist Intern. **Amazon** Topic: Improve CLIP fine-tuning on custom dataset using data generated from M-LLM. Supervisor: Maximilian Jaritz, Matthieu Guillaumin and Loris Bazzani.
9/2022 – 11/2022	Visiting Ph.D. Student. **Technical University of Munich (TUM)** Topic: Uncertainty estimation in 3D scene understanding Supervisor: Raoul de Charette, Angela Dai
2021 – Now	Ph.D. Student. **Inria, Paris** Thesis: Unsupervised 3D scene understanding from image Supervisor: Raoul de Charette
Summer 2020	Research Intern. **Valeo.ai** Topic: Cross-attention for partial point cloud registration Supervisors: Gilles Puy, Alexandre Boulch, Renaud Marlet
Summer 2019	Research Intern. **Safran** Topic: Analyze multivariate time series on sensor data of the helicopter engines Supervisors: Sin-seok Seo and Dohy Hong
3/2014 – 5/2018	Co-founder **Color me (http://colorme.vn) - KEE education company** Lead team of developers, develop ERP and online learning system. Teach several design courses
Summer 2016	Research Intern. **LIPN, CNRS** Speed up the distributed EM algorithm using Locality Sensitive Hashing Supervisor: Mustapha Lebbah

Publications

arXiv 2023	**PaSCo: Urban 3D Panoptic Scene Completion with Uncertainty Awareness** Project page: https://astra-vision.github.io/PaSCo/ Anh-Quan Cao, Angela Dai, and Raoul de Charette

Publications (continued)

ICCV 2023   **SceneRF: Self-Supervised Monocular 3D Scene Reconstruction with Radiance Fields**
Project page: `https://astra-vision.github.io/SceneRF/`
Anh-Quan Cao and Raoul de Charette

BMVC 2022   **Class-Prototypes for Contrastive Learning in Weakly-Supervised 3D Point Cloud Segmentation**
Project page: `https://github.com/cv-rits/COARSE3D`
Rong Li, Anh-Quan Cao and Raoul de Charette

CVPR 2022   **MonoScene: Monocular 3D Semantic Scene Completion**
Project page: `https://cv-rits.github.io/MonoScene`
Anh-Quan Cao and Raoul de Charette

ICCV 2021   **PCAM: Product of Cross-Attention Matrices for Rigid Registration of Point Clouds**
Project page: `https://github.com/valeoai/PCAM`
Anh-Quan Cao, Gilles Puy, Alexandre Boulch and Renaud Marlet

Other research activities

2022   **Co-supervisor** of MSc. student: Rong Li

Vision and Sports Summer School. Prague, Czech Republic, `http://cmp.felk.cvut.cz/summerschool2022/index.html`

Guest Lecturer on 3D deep learning, MaSSP 2022 summer school (https://en.masspvn.com/)

Reviewer, WACV 2023 (3 papers), ACM MM (1 paper), CVPR 2023 (3 papers)

2021   **PRAIRIE AI summer school**. Online, `https://project.inria.fr/paiss/`

Scholarship / awards

2019   **Master scholarship**, 100% tuition fee and living expense from Google, Inria and Ecole Polytechnique

2017   **Erasmus Mundus Exchange Scholarship**, Université Sorbonne Paris Nord.

2016   **Top 5 Startup with colorme.vn**, Kawaii Bussiness Startup Competition - Japanese Embassy in Vietnam

Research Internship Prize, funding for student with the highest GPA to do internship in France, University of Science and Technology of Hanoi

2013 – 2016   **Scholarship for outstanding student**, University of Science and Technology of Hanoi

References

Dr. Raoul de Charette
🏢 Researcher at Inria
🌐 `https://cv-rits.github.io/`
✉ raoul.de-charette@inria.fr

Dr. Gilles Puy
🏢 Research scientist at Valeo.ai
🌐 `https://sites.google.com/site/puygilles`
✉ gilles.puy@valeo.com

Prof. Angela Dai
🏢 Assistant professor at TUM
🌐 https://www.3dunderstanding.org/
✉ angela.dai@tum.de
💬 Visiting project supervisor

Prof. Renaud Marlet
🏢 Senior researcher at ENPC
🌐 http://imagine.enpc.fr/~marletr/
✉ renaud.marlet@enpc.fr