

Nicolas Girard

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Nationality: French

Education

- Nov 2017-Present **Ph.D student (Advisor: Yuliya Tarabalka) - TITANE team, Inria, Sophia-Antipolis**
Geometric Deep Learning for Understanding and Structuring Large-Scale Satellite Images
- 2016 - 2017 **M.S. in Image Analysis - Ecole nationale supérieure des Mines de Saint-Etienne**
Image modeling, processing, analysis and color science. Geometry for spatial pattern modeling and analysis and Morphology - School project building a mobile application for the 3D reconstruction of the user's head using Unity3D, OpenCV and DLib in partnership with DigitEYEzer
- 2014 - 2017 **M.S., Ingénieur Civil des Mines - Ecole nationale supérieure des Mines de Saint-Etienne**
National Graduate Engineering School : admitted through national competitive examination for admission to the French "Grandes Écoles" (French graduate engineering schools). Studied mathematics, physics, computer science, data science, machine learning, image analysis, big data, economics, business management, project management
- 2015 - 2016 **Exchange student - Kumamoto University, Japan**
Computer science and electronics. Information theory, wireless technologies, computer security, new technologies in Japan, multi-dimensionnal signal processing and conception of FPGAs (Verilog) and computer architecture
- 2012 - 2014 **Two-year undergraduate program - Lycée Pierre De Fermat**
Intensive courses in Mathematics, Physics and Computer Science (CPGE MPSI-MP* in French)
- 2011 - 2012 **Baccalauréat - Lycée Pierre De Fermat**
French secondary school diploma with major in Mathematics

Work experience

- Apr 2017 - Sep 2017 **Research internship at Thales**
Design of a human-computer interaction system using machine learning for Head Pose Estimation and Eye Gaze Estimation
- Aug 2016 - Nov 2016 **Creation of a website's prototype**
Applied Information Architecture principles to structure the new website
- Jun 2016 - Aug 2016 **Second-year internship at DigitEYEzer**
Development of AngularJS applications
- Apr 2015 - Apr 2016 **Chief Information Officer - my school's Junior Association**
Management and development of IT tools for the internal and external communication of the organization. Also worked on web development projects for clients.

2009 - 2014

3D artist - Pyrene Production

Punctual freelance work spread over 4 years making several 3D animations with Blender

Publications

- 2018 Nicolas Girard, Yuliya Tarabalka, "End-to-end learning of polygons for remote sensing image classification", *IGARSS, Valencia, Spain, 2018*
- 2018 Armand Zampieri, Guillaume Charpiat, **Nicolas Girard**, Yuliya Tarabalka, "Multimodal image alignment through a multiscale chain of neural networks with application to remote sensing", *ECCV, Munich, Germany, 2018*
- 2018 Nicolas Girard, Guillaume Charpiat, Yuliya Tarabalka, "Aligning and updating cadaster maps with aerial images by multi-task, multi-resolution deep learning", *ACCV, Perth, Australia, 2018*
- 2019 Nicolas Girard, Guillaume Charpiat, Yuliya Tarabalka, "Noisy supervision for correcting misaligned cadaster maps without perfect ground truth data", *IGARSS, Yokohama, Japan, 2019*
- 2019 Guillaume Charpiat, **Nicolas Girard**, Loris Felardos, Yuliya Tarabalka, "Input similarity from the neural network perspective", *NeurIPS, Vancouver, Canada, 2019*

Teaching

- 2019 Taught 53 hours of advanced algorithms to 2nd year undergraduate students from the IUT Réseaux et Télécommunication of Université Côte d'Azur.

Reviewer

- ICCV 2019
- JSTAR
- ISPRS Journal of Photogrammetry and Remote Sensing
- CVIU
- IEEE Transactions on Image Processing
- IEEE Geoscience and Remote Sensing Letters
- IEEE Transactions on Geoscience and Remote Sensing

Extra information

LANGUAGES

French: native proficiency

English: full working proficiency (obtained the maximum score of 990 on the TOEIC)

Spanish: limited working proficiency

Japanese: elementary proficiency

OTHER INTERESTS

Traveling: round-the-world trip with my family from 2005 to 2009 (www.globetour.fr)

Sports: rock climbing, hiking, mountain biking, canoeing.

Has an ultralight aviation pilot license

Hobbies: video editing, 3D modeling/animation, Speedcubing