Jules Mabon

jmabon.fr | GitHub   Email: julesmabon@gmail.com

PhD graduate

Recently defended my Phd in Signal and Image processing with success, focussing on image analysys combining modern deep learning approaches with stochastic geometry, applied to remote sensing. I am looking for a postdoc, preferably in the field of image analysis applied to biological imagery.

Technical Skills

Languages	:	French (native), English (fluent), German, Spanish (notions)
Programming	:	Python (++), LaTex/TikZ/Beamer (++), C, Java
Dev Tools	:	Visual Studio Code, Git
Other Tools	:	Blender, Photoshop, Illustrator

Experience

PhD in Signal and Image processing   Oct 2020 – Jan 2023
Inria d'Université Côte d'Azur   *Sophia-Antipolis, France*

- Directed by Josiane Zerubia (AYANA team, Inria) and Mathias Ortner (Airbus Defense and Space)
- On *Learning Stochastic geometry models and convolutional neural networks. Application to multiple object detection in aerospatial data sets.*

Research internship   Apr 2019 – Sep 2019
EMBL-EBI, Uhlmann group   *Cambridge, UK*

- On detection and tracking of individual Mycobacteria smegamtis in time lapse microscopy images of growing colonies, using graphical models and convolutional neural networks.

R&D Internship   May 2018 – Aug 2018
NU!   *Paris, France*

- Research, development and documentation on object recognition and change detection for a "connected fridge".

Master's degree in Engineering   Sep 2016 – Sep 2019
Ecole Centrale de Lille   *Lille, France*

- Common core: Aero/Hydrodynamics, Thermodynamics, Signal processing, Project management, Materials science
- DAD (Decision & Data Analysis) specialization: Probability and statistics optimization, machine learning
- Applied Mathematics at Université de Lille: Functional analysis, Stochastic process, Itô integrals, Statistical physics

Main Publications

Conference papers

- *Learning point process models for vehicles detection using CNNs in satellite images*, J. Mabon, M. Ortner and J. Zerubia, IEEE SITIS, Nov 2023, Bangkok, Thailand 📄
- *Apprentissage contrastif de modèles de processus ponctuels pour la détection d'objets*, J. Mabon, M. Ortner and J. Zerubia, GRETSI, Aug 2023, Grenoble, France 📄
- *Point process and CNN for small object detection in satellite images*, J. Mabon, M. Ortner and J. Zerubia, SPIE Image and Signal Processing for Remote Sensing XXVIII, Sep 2022, Berlin, Germany 📄
- *CNN-based energy learning for MPP object detection in satellite images* J. Mabon, M. Ortner and J. Zerubia, MLSP 2022 - IEEE MLSP, Aug 2022, Xi'an, China (remote) 📄

Other

- **Member** (2021-2022) then **secretary** (2022-2023) of the **ADSTIC**: association of PhD students in the SophiaTech campus, organizing social, sportive and scientific events, as well as acting as an intermediary with the doctoral school.
- **Visual arts**: paper & digital drawing, photography, 3D animation etc... (some examples on my website).