



# Emile BARBIER--RENARD,

PhD in signal and image processing

Looking for a postdoctoral position  
in SAR 3D reconstruction

## EXPERIENCES

### CONTACTS

 [contact@barbierrenard.fr](mailto:contact@barbierrenard.fr)

 +33 6 51 86 61 19

### CERTIFICATIONS

**Fraunhofer FHR**

International Summer School  
on Radar/SAR

**Nvidia**

Fundamentals of Accelerated  
Computing with CUDA Python

### LANGUAGES

**French** • Native

**English** • C1

**Spanish** • A2

**Italian** • A2

### HOBBIES

**Dance**

Rock n' Roll, Lindy Hop,  
Jazz Roots, anything  
that swings!

**Cello**

Training in Reims  
Conservatory  
(2006-2016) then  
independent practice

2022-2025

**Télécom Paris • PhD student • 3 years, ongoing**  
Multi-view 3D reconstruction in SAR imaging using inverse  
rendering [Python, Pytorch, Cuda]

- "Reconstruction 3D depuis des couples SAR ascendant/descendant,"  
30e Colloque sur le traitement du signal et des images, 2025
- "Multiview 3-D Surface Reconstruction From SAR Images by Inverse Rendering,"  
IEEE Geosci. Remote Sens. Lett. 2025, DOI: 10.1109/LGRS.2025.3572303
- PhD students representative in laboratory and school councils

2022

**Laboratoire Hubert Curien • Intern • 6 months**  
Segmentation of copy detection patterns with morphological neural  
networks [Python, Tensorflow]

- "Logarithmic Morphological Neural Nets robust to lighting variations," co-author,  
DGMM 2022, DOI: 10.1007/978-3-031-19897-7\_36

2021

**Technodigit • Intern • 2 months**  
Prototyping surface rendering (splating) for large point clouds  
[C++, GLSL]

## FORMATIONS

2022-2025

**PhD • Ecole Doctorale de l'Institut Polytechnique de Paris**

2021-2022

**Master's degree • Université Jean-Monnet**

"Advanced Imaging & Material Appearance" • Highest honour [Matlab]

2019-2022

**Engineering degree • Télécom Saint-Etienne**

- Imaging and Computer Science [Python, Matlab, C++, Javascript, Java]
- "WIKIPEDIA — Category X, Degree Y," art piece for Biennale Internationale du Design  
de Saint-Etienne 2021 (delayed until 2022) [Python, JavaScript, NodeJS]

**PERSONAL PROJECT:**  **MetroLag**

[metrolag.barbierrenard.fr](http://metrolag.barbierrenard.fr)

Real life competitive "capture the flags" game  
using public transports, assisted by a custom  
website and server [NodeJS, JavaScript]