



# Emile BARBIER--RENARD, PhD in signal and image processing

Looking for a postdoctoral position  
in SAR 3D reconstruction

## EXPERIENCES

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 (splatting) for large point clouds [[C++](#), [GLSL](#)]

## FORMATIONS

2022-2025

**PhD • Institut Polytechnique de Paris doctoral school**

2021-2022

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

"Advanced Imaging & Material Appearance" • Highest honours [[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



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

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

## 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  
independant practice