

PostDoc: Metamaterial Wave Computer



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General information

Reference : UMR6164-MARDEL-002

Workplace : RENNES

Date of publication : Friday, November 4, 2022

Type of Contract : FTC Scientist

Contract Period : 12 months

Expected date of employment : 1 March 2023

Proportion of work : Full time

Remuneration : Between 2800 and 4408 € gross per month (depending on experience)

Desired level of education : PhD

Experience required : Indifferent

Missions

Conduct an ambitious academic project on the implementation of a metamaterial-based wave processor for applications in artificial intelligence.

Activities

- Conception, prototyping and evaluation of metamaterial-based wave processors.
- Implementation of mathematical operations and signal-processing algorithms on wave processors.
- Writing of scientific publications.
- Presentations at international conferences.

Skills

- PhD in wave physics, electrical engineering, or related discipline (photonics, acoustics, ...).
- Strong knowledge of wave physics.
- Experience in the field of metamaterials (in a board sense).
- Experience with reconfigurable and/or non-linear wave systems (desired).
- Experience with wave chaos (desired).
- Experimental experience in the microwave domain (desired).
- Knowledge in the field of artificial intelligence (desired).
- Ability to synthesize results in written and oral formats.
- Ability to conduct oral presentations.
- Good command of the English language (reading, writing, speaking).
- Ability to write, formulate scientific projects, publish and exploit scientific results.
- Ability to conduct collaborative work and team work.
- Autonomy, organisational skills and briefing skills.

Work Context

Collaborative work environment on the local scale (collaboration with students and lab technicians) as well as on the international scale (collaborations with École Polytechnique Fédérale de Lausanne).

The position is under the hierarchical responsibility of Dr. Philipp del Hougne (CR CNRS).

The position is part of the research line on Intelligent Wave Systems which is led by Dr. Philipp del Hougne. This research line is part of IETR's eWaves group.

Additional Information

Consult <https://sites.google.com/view/pdelhougne/home> for details on our recent works related to metamaterial-based wave processors.

Please contact Dr. Philipp del Hougne (philipp.del-hougne@univ-rennes1.fr) for further details about the opening.