



UNIVERSIDAD TÉCNICA
FEDERICO SANTA MARÍA

Postdoctoral Position – META-ORCA Project

(Metasurface Optimized Radome for Communications and Advanced Protection)

Job position:

The META-ORCA project, a collaborative R&D initiative between **Universidad Técnica Federico Santa María (USM)** and **Pontificia Universidad Católica de Valparaíso (PUCV)**, Chile, with an industrial partner leader in ship building and international collaborators in Spain and Australia, is seeking a Postdoctoral Researcher. The selected candidate will work under the supervision of Dr. José Manuel Poyanco (USM) and collaborators from PUCV.

General information:

1. **Position title:** Postdoctoral Researcher in Metasurfaces and Metaradomes for Advanced Electromagnetic Protection
2. **Research project:** META-ORCA aims at developing a new generation of 'metaradomes' by integrating engineered metasurfaces into radome structures to enhance their electromagnetic performance and protection in demanding environments. The postdoc will work along the full R&D chain: electromagnetic design and simulation of metasurfaces (FSS, metabsorbers, polarizers, dielectric metasurfaces), full-wave EM modeling and optimization, contribution to prototype fabrication (advanced RF materials, 3D printing, composite structures), laboratory testing and characterization, and close collaboration with academic and industrial partners for technology transfer.
3. **Objectives:** To design, simulate, fabricate, and characterize metasurface-based radome structures with enhanced electromagnetic and protective performance for maritime and defense applications.
4. **Requirements:** PhD (defended or close to completion) in Electrical Engineering, Telecommunications, Physics or related fields. Strong background in applied electromagnetics, RF/microwave engineering, antennas and/or metamaterials/metasurfaces. Experience with full-wave EM tools (e.g., CST, HFSS, FEKO).
5. **Desirable skills:** Experience with FSS, radomes, EM absorbers or related structures. Hands-on work with RF/material measurements and anechoic chambers. Programming skills (Python/MATLAB) for data processing and optimization.
6. **Location:** Universidad Técnica Federico Santa María, Valparaíso, Chile (primary). Collaboration with Pontificia Universidad Católica de Valparaíso.
7. **Working time:** Full-time
8. **Duration:** Fixed-term (2 years, with possibility of extension)
9. **International collaboration:** The postdoc will have opportunities for research stays and collaboration with partner institutions in Spain and Australia.
10. **What we offer:** An interdisciplinary and applied project at the interface between academia and industry. A strong collaborative environment with teams from Chile, Spain, and Australia. Opportunities to co-author high-impact publications and attend international conferences. The chance to contribute to emerging technologies in advanced electromagnetic systems.

How to apply:

Application deadline: 21 february 2026

Please send:

- Your CV
- A short statement of research interests (1–2 pages) aligned with META-ORCA
- Contact information for 2–3 references

to jose-manuel.poyanco@usm.cl

Please use the subject: **"Postdoc META-ORCA – Application"**

Contact:

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