**Job Description**
*Doctoral Position*

# DC6: Multispectral metasurfaces for IR signature reduction in stealth application.

**Doctoral position at** Indra Sistemas, S.A., in Madrid, Spain.

**Main supervisor:** Dr. Victoria Tormo [INDRA]

**Co-supervisors/mentors:** Prof. Carsten Rockstuhl [KIT] and Prof. Ana Díaz-Rubio [UPV]

**Objectives:**

- To design and optimize metasurfaces that provide effective infrared signature control while maintaining high transmission in the visible and infrared spectral ranges.
- To investigate and integrate advanced functional materials—including transparent conductive oxides, transparent ceramics, and carbon-based nanostructures—into metasurface designs to achieve simultaneous control of optical and electromagnetic responses.
- To fabricate and experimentally characterize metasurface prototypes using nanofabrication technologies to validate their performance under laboratory conditions.

This position is part of the MetaTune Doctoral Network "Reconfigurability using inversely designed metasurfaces", which has been funded under the Horizon Europe Marie Skłodowska-Curie Actions (MSCA) program.

**Acquire knowledge:** During the thesis, the candidate will acquire a solid understanding of the technological needs and performance requirements of the defense and security sectors related to infrared signature management and advanced optical materials. In parallel, the candidate will gain in-depth knowledge of metasurface design, material integration, and experimental validation of functional photonic devices.

| Design | Materials | Fabrication | Characterization |
|---|---|---|---|
| ●●●○○ | ●●●●○ | ●●○○○ | ●●●○○ |

**→ Go to the project webpage for more information**

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**What METATUNE Offers:**

- Work contract at Indra Sistemas SA for 36 months funded through the MSCA network, with the additional benefits for employees (public and universal health system, free schools, etc.).
- One 4-month stay at Karlsruhe Institute of Technology and one 3-month stay at the Polytechnic University of Valencia are foreseen in the research plan.
- Opportunity to pursue a PhD degree at a leading European university within a collaborative, international network.
- Training program including research-specific and transferable skills courses.
- Active participation in workshops, conferences, and network-wide events to build professional and scientific connections.
- Stimulating, multidisciplinary, and international research environment within a prestigious European training network.

**Starting date:** November-December 2026.

**Deadline for online application:** May 31, 2026 (but candidates are encouraged to apply as soon as possible).

**Mandatory Requirements:**

- You must have a finalised **master's degree** in fields related to the research topic: Telecommunications Engineering, Applied Physics, Optics, Electrical Engineering, Material Engineering.
- You should **not have a doctoral degree** at the time of recruitment.
- You must not have resided or carried out your main activity (work, studies, etc.) in Spain for more than **12 months in the 36 months** immediately before the recruitment (this is a requirement from the funding authority).
- Strong skills in the **English** language.

**→ Apply Now!**