

## SC12 | Optronic systems



NIVEAU : INTERMÉDIAIRE

**Publics :** Engineers from companies or administrations working in the field of defense, surveillance, aerospace and wishing to master the analyse and the design of optronic systems

**Prérequis :** Basic knowledge corresponding to EF2 - Basics of optics

**Responsable(s) pédagogique(s) :** Isabelle Ribet - Experte Onera, enseignante à l'Institut d'Optique

**Langue de la formation :** Français

**Capacité maximum :** 12

**Prix :** 2560€ HT - **Durée :** 2x3 days - 42 h

### Objectifs

- ▶ Have an overview of the design of an optronic system (passive or active)
- ▶ Understand the key parameters associated to this design
- ▶ Discover the state-of-the art of the different components
- ▶ Be able to specify, design and evaluate optronic systems (passive or active)

### Dates et lieu des prochaines sessions

- ▶ 08 novembre 2021 au 10 novembre 2021 et 24 novembre 2021 au 26 novembre 2021 - Palaiseau

### Thèmes abordés

Building blocks

- ▶ Sources, propagation media
- ▶ Optical systems, detectors

Infrared systems

- ▶ Thermal camera, near infrared imaging

Laser systems

- ▶ Laser range finder, Lidar
- ▶ Target designation

Image intensifiers



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### Le programme

#### Radiometry of optical systems

- ▶ Radiometry basics
- ▶ Optical systems
- ▶ Atmospheric transmission
- ▶ Exercices

#### Detectors

- ▶ Infrared technologies
- ▶ Image intensifiers

#### Design and evaluation of optronic systems

- ▶ Design of optronic systems
- ▶ Evaluation of optronic systems
- ▶ Laser systems
- ▶ Infrared systems
- ▶ Image processing

#### Labworks

- ▶ Infrared camera
- ▶ MTF measurements
- ▶ Laser range finder

### Méthodologie et évaluation

Lectures and exercices

Interactive demonstrations and Labworks