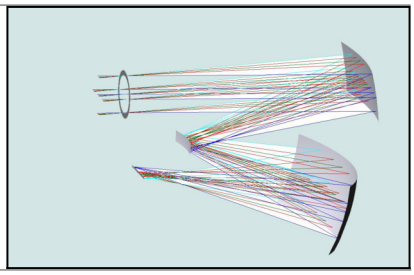
INSTITUT d'OPTIQUE GRADUATE SCHOOL | Continuing Education
Formation Continue

CO3 | Optical Design with CodeV®



NIVEAU : INTERMÉDIAIRE

Publics : Engineers who need to design imaging optical systems with the CodeV software

Prérequis : Basic knowledge in geometrical optics (centered systems in paraxial optics, notions of entrance and exit pupils...) and basic notions on the aberrations of real optical systems

Responsable(s) pédagogique(s) : Hervé Sauer - Enseignant-chercheur à l'Institut d'Optique

Langue de la formation : Français

Capacité maximum : 10

Prix : 2150€ HT - **Durée :** 5 days - 35 h

Objectifs

- Be able to to use the practical bases of CodeV software
- Analyze optical systems performances
- Optimize optical system using basic methods
- Handle standard imaging optical systems

Prochaines sessions

- 03 juin 2019 au 07 juin 2019 - Palaiseau

Thèmes abordés

Optical system analysis
Optimization of optical systems with simple or more complex constrains
Introduction to tolerancing
Rough set out of more advanced CodeV features

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Le programme

Basics and first steps

- Introductory lecture on object/image conjugation, entrance and exit pupils, aberrations, diffraction, ...
- CodeV hands-on workshop with a simple example (Cooke triplet)

Optical systems

- Study of aberrations and optical system quality criteria on different examples
- Setting of mirrors, aspheric surfaces, obscurations, tilts and decenters, multiconfigurations...

More advanced elements and training

- Optimization: basics, methods, and practical tutorial (example of eyepiece design with complex constrains)
- Training tutorial (on a catadioptric system)
- Introduction to tolerancing and some other advanced CodeV options
- Last tutorial subject at the trainee's choice

Méthodologie et évaluation

Mixed lectures and tutorials in a computer facility room
Example based teaching
Supervised software usage, largely guided at beginning, and more free later when user skills increase