

PhD School 2016: Optical Design - CTU Prague

Prof. T. Lasser , EPFLausanne (Switzerland)

Schedule

Thursday 2016-06-16

| Time | Content | Details | |
|------------------|----------------------------|--|-----|
| 01 9.00 - 9.30 | Opening | | |
| 02 9.30 -11.00 | Basics of technical optics | Paraxial imaging, simple components, ABCD matrices | Las |
| 11.00 - 11.15 | Introduction into Zemax | Basic definitions and handling | |
| 03 11.15 - 12.30 | Zemax exercises | ZEMAX - How to start? | Las |
| 12.30 - 13.30 | Lunch | | |
| 04 13.30 - 14.45 | Geometrical aberrations | Ray tracing, fundamentals of aberration theory, | Las |
| 05 14.45 - 15.30 | | | |
| 15.30 - 15.45 | Break | | |
| 06 15.45 - 17.15 | | Zemax exercises | all |

Friday 2016-06-17

| Time | Content | Details | |
|------------------|-----------------------|--------------------------|-----|
| 07 9.00 -11.00 | Basics of wave optics | Diffraction, PSF, phase | Las |
| 11.00 - 11.15 | Break | | |
| 08 11.15 - 12.30 | Wave aberrations | ZEMAX – wave optics | Las |
| 12.30 - 13.30 | Lunch | | |
| 09 13.30 - 14.30 | Zemax exercise | Wave aberrations | Las |
| 10 14.30 - 15.30 | Fourier optics | OTF, imaging, resolution | Las |
| 15.30 - 15.45 | Break | | |
| 11 15.45 - 17.15 | ZEMAX | Zemax exercises | all |
| 12 17.15 - 18.00 | | | |

Monday 2016-06-20

| Time | Content | Details | |
|------------------|---------------------------|--|-----|
| 13 9.00 -11.00 | Optical system layout | Achromat, types of systems, correction | Las |
| 11.00 - 11.15 | Break | | |
| 14 11.15 - 12.30 | Zemax exercise | Optical system correction | Las |
| 12.30 - 13.30 | Lunch | | |
| 15 13.30 - 14.30 | Physical optics modeling | Microscopy & imaging | Las |
| 16 14.30 - 15.30 | Zemax exercise | | all |
| 15.30 - 15.45 | Break | | |
| 17 15.45 - 17.15 | Special topics | advanced coherent Imaging I | Las |
| 18 17.15 - 17.30 | Closing remarks, feedback | | all |

Tuesday 2016-06-21

| Time | Content | Details | |
|------------------|---------------------------|---|-----|
| 19 9.00 -11.00 | Your needs & problems | Participants PhD project What and why to use optical design? | Las |
| 11.00 - 11.15 | Break | | |
| 20 11.15 - 12.30 | Zemax exercise | Optical systems | Las |
| 12.30 - 13.30 | Lunch | | |
| 21 13.30 - 14.30 | Physical optics modeling | Optics competition Who has the best design? | Las |
| 22 14.30 - 15.30 | Zemax exercise | | all |
| 15.30 - 15.45 | Break | | |
| 23 15.45 - 17.15 | Special topics | advanced coherent Imaging II | Las |
| 24 17.15 - 17.30 | Closing remarks, feedback | | all |