



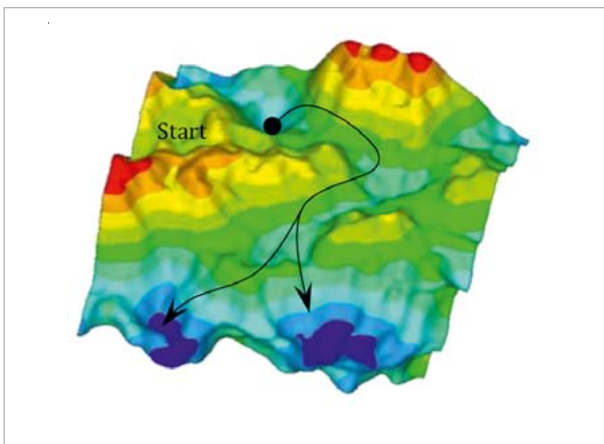
# Robust Design Optimization of Optical Systems

**Integration of VirtualLab in optiSLang enables high performance optimization and robustness analysis in optics.**

Dynardo and LightTrans have partnered to integrate the leading optics design software VirtualLab Fusion into the robust design optimization software optiSLang. The combination of both tools enables a fast and reliable design of optical systems, design understanding, optimization and robustness analysis in a fully automated manner. The coupled optimization and robustness analysis to obtain a design that is optimal and robust in terms of input tolerances is called Robust Design Optimization.

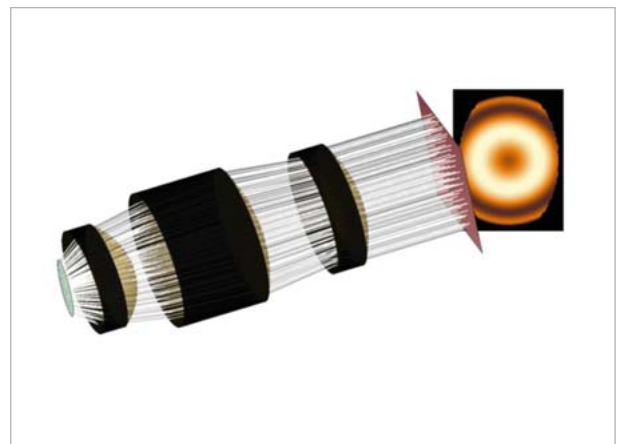
## optiSLang

optiSLang is an integration, automation and robust design optimization platform. Complex workflows with several (e.g. optical, mechanical) CAx tools can be integrated and used for automated analysis. It provides an interactive postprocessing to analyze and visualize the results.



## VirtualLab

VirtualLab provides ray and field tracing engines that quickly simulate optical systems including macro-, micro- and nano-scaled components. Accuracy and speed of the simulation can be adjusted to the actual design task.



## Features and benefits of the solution

- ray and field tracing simulation
- design of refractive, diffractive elements, freeform surfaces and gratings
- wide range of optical applications
- analysis of complex workflows including several solvers (e.g. for opto-mechanical studies)
- analysis of experimental data
- design understanding and data exploration
- multi-objective optimization (Pareto design)
- robustness analysis with respect to input tolerances
- coupled and fully automated Robust Design Optimization



**optiSLang**

