Optical Engineering +Applications
SPIE Optics+Photonics

21 - 25 August 2011
San Diego Convention Center
San Diego, California United States

Optical System Alignment, Tolerancing, and Verification V

Conference OP311

Part of program track on **Optical Design and Systems Engineering**

This conference is no longer accepting submissions.
Late submissions may be considered subject to chair approval. For more information, please contact Matthew Novak, mattn@spie.org

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The topics of tolerancing, alignment, and verification are crucial in the development of successful optical systems. This conference will continue to emphasize that the assembly of actual optical systems requires alignment of different system components. The precision level of the alignment depends on the assigned tolerance error budget, and so alignment and tolerances are interrelated. Verification involves validating optical system performance, including assurance that performance remains operator-independent during system use. This conference seeks to further the state-of-the-art in alignment and tolerancing, including verification of subsystems and at the system level, by providing a forum where these essential topics can be discussed. The conference also seeks to provide the audience with past and current insights in these topics. This fifth conference continues to build on the successful conferences held at SPIE Optics and Photonics from 2007-2010.

Papers are solicited in the following areas:

- theories of alignment and tolerancing
- approaches to tolerancing and error budgets
- tolerance desensitization and nominal design
- modeling and simulation for alignment, tolerancing, and verification
- alignment techniques, equipment, and tools
- optical alignment examples
- alignment in traditional lens systems
- alignment of micro optics
- alignment of coherent and high power optical systems
- optical alignment of nanostructures
- case studies and alignment pitfalls
- alignment and tolerancing of aspheres
- loosening tolerances using active elements
- alignment in electro-optical systems
- alignment in metrology applications
- alignment of fiber optic systems
- active optical system alignment and tolerancing
- system verification approaches
- examples and applications of system verification
- tools and techniques for verification.