

**Department of Structural Engineering
University of California, San Diego
SE 290 Seminar**



Dr. Vladimir Balabanov
Boeing Associate Technical Fellow
Boeing Commercial Airplane
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"Anything Left to Do in Structural Optimization?"

Monday, May 22, 2017

1:00 pm - 1:50 pm, Pepper Canyon Hall, Room 122

<http://structures.ucsd.edu/node/2126>

Abstract

A point of view of engineers from industry towards any software will be presented. The more you consider this point of view the more chances are your software will be wide-spread in industry. Designing complex engineering systems is not a trivial task. Designing the complex systems that will best suit a particular purpose while requiring minimum resources is even more challenging. Vladimir will present several research areas in structural and multidisciplinary optimization that remain challenging: efficient multi-fidelity optimization, topology optimization, optimization of composites. Boeing utilization of these areas will be discussed. Not all the theories have been developed. These topics are currently the areas of active research and have plenty of opportunities for new developments. A lot of challenges remain. The presentation will conclude by an open discussion on remaining challenges and future research directions.

Biography

For more than 20 years Dr. Vladimir Balabanov has worked in the areas of structures, optimization methods and applications, approximations, design of experiments, probabilistic methods, and software development. Currently Vladimir works at Boeing Commercial Airplanes. He focuses on analyzing and optimizing stiffened composite panels, design and optimization of fiber-steered composite laminates, use of lamination parameters for design of composite structures. He utilizes optimization methods in combination with integration, and automation whenever possible – creating sophisticated curve fits, correlating computational models with test results, combing and integrating legacy tools to operate in automatic optimization environment. Through his career Vladimir realized the importance of communication in all areas of professional life. Now he is passionate about helping others to improve their communication skills.

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*Sponsored by Professor Kenneth Loh
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