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Variational analysis and aerospace engineering. Mathematical challenges for the aerospace of the future. Based on the presentations at the workshop, Erice, Italy, 2015. (English)

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Publisher's description: This book presents papers surrounding the extensive discussions that took place from the 'Variational analysis and aerospace engineering' workshop held at the Ettore Majorana Foundation and Centre for Scientific Culture in 2015. Contributions to this volume focus on advanced mathematical methods in aerospace engineering and industrial engineering such as computational fluid dynamics methods, optimization methods in aerodynamics, optimum controls, dynamic systems, the theory of structures, space missions, flight mechanics, control theory, algebraic geometry for CAD applications, and variational methods and applications. Advanced graduate students, researchers, and professionals in mathematics and engineering will find this volume useful as it illustrates current collaborative research projects in applied mathematics and aerospace engineering.

The articles of this volume will not be indexed individually.

MSC:

- [93-06](#) Proceedings, conferences, collections, etc. pertaining to systems and control theory
- [00B25](#) Proceedings of conferences of miscellaneous specific interest
- [93C95](#) Application models in control theory
- [49J40](#) Variational inequalities
- [49S05](#) Variational principles of physics (should also be assigned at least one other classification number in Section 49-XX)

Cited in 1 Document

Software:

[ANSYS](#); [FreeFem++](#); [HyPSim](#); [Matlab](#); [SNOPT](#); [TAPENADE](#)

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