A Panel Discussion Session on Industrial Applications of Structural and Multidisciplinary Optimization

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Abstract
In the past 20 years, structural and multidisciplinary optimization has evolved significantly in several aspects:

- Topology optimization has become one of the most active research areas of the field. It's potential of impacting design concept early in the product development process generated broad excitement across all major industries in the past decades.
- Commercial software have evolved significantly, both for structural and multidisciplinary optimization. They play an important role in bringing emerging technology to broad industries.
- Computing power has evolved significantly in the past 20 years, making it increasingly feasible for applying topology and structural optimization for very large practical FEA models. This is even true for many complex MDO problems.
- As a result of the above applications of structural and multidisciplinary optimization technology have been expanding rapidly across broad industries ranging from aerospace, automotive, electronics and heavy industry etc. and we have seen growing interest even from creative communities such as architecture and industrial design.

While WCSMO has emerged as the premier event for the SMO research community, it is evident that there has been limited industrial participation to this key event. As a result there is a lack of direct connection between most researchers of the SMO community and industry practitioners. The local organizing committee of WCSMO-10 decided to take the initiative to organize this 'Industrial Panel Session' with the objective to promote exchanges between academia and industry. We invited the following leading experts who have made major impact in bringing optimization technology into product development process at large corporations. This 1.5 to 2 hour session should start with each panelist making a short (5-10 minutes) presentation about their application successes, challenges and vision. Then the panelists should work together to lead a lively discussion/dialog with the audience. We hope that this session could make a major contribution in bringing a practical perspective to researchers from academia, and in encouraging interest in seeking collaboration with industry. The invited panelists represent a broad range of industries and should cover many aspects of applications ranging from impact of topology optimization to design innovation to MDO implementation within large corporations.

Panelists:
Aerospace: Kumar Bhatia (Boeing), Felipe Viana (GE)
Automotive: Lothar Harzheim (Opel), Ren-Jye Yang (Ford)
Architecture: Alessandro Beghini (SOM)
Heavy Industry: Julian Norato (Caterpillar)