

TopWing PRACE project published in Nature

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The optimal topology of large structural systems has until now been concerned with the design of individual parts and not that of complete assemblies. However, due to recent advances in numerical algorithms tailored for large scale structural optimization this limitation has now be circumvented. Through a PRACE grant, TopWing, it was possible to test and validate the numerical setup on a real-world design problem, i.e. the design of the supporting structure of an entire wing from a Boeing 777 type aircraft. Besides presenting the optimized wing structure and the HPC resources used for its computations, this talk will focus on the authors general experience with HPC systems, both national and European, including our hopes and wishes for the near future.