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Aircraft System Technologies**

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Summary

Proceedings of the

1st International Workshop on Aircraft System Technologies

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Following the demand of many scientists, experts, and leading companies, the Hamburg University of Technology organized the **1st International Workshop on Aircraft System Technologies AST 2007**. The proceedings of the event comprise more than 35 high-quality contributions which were selected from a call for papers.

The contributions presented at the workshop address the fields of *Airframe Systems and Equipment*, *Cabin and Comfort*, *Information and Communication* as well as *Materials and Production*.

In the first chapter, dealing with *Airframe Systems and Equipment*, topics such as health monitoring, high lift systems, aircraft power supply, and cooling systems are discussed. Additional papers report on special topics, i.e., testing environments, optical measurements, and hydrogen flying.

The second chapter is devoted to *Cabin and Comfort*. Starting with investigations on the well-being of the cabin crew during long-haul flights, technical aspects and methodologies are discussed in order to reduce noise impact. Moreover, new air-conditioning concepts, a comfort-improved climate control, and convection are dealt with, followed by a report on maintenance of cabin systems.

Papers on integrated modular avionics (IMA) are reporting on an important topic in the chapter on *Information and Communication*. Afterwards, contributions on more electric aircraft, optimal avionics systems, in-flight entertainment, and wireless technologies are presented. Special topics are latest investigations on eye detection for cockpit access, surface management planning and automation of airport traffic, as well as overcoming the media breaks in AIS.

Finally, a number of papers deal with the latest developments in the field of *Material and Production*. It starts with a report on the durability of fibre reinforced composites, followed by two contributions on the non-destructive testing of CFRP material and on the fatigue life of bonded joints in composite materials respectively. Next, some more production oriented topics are addressed, such as the automated assembly of large-scale fuselage parts, the precision of machined CFRP, and an energy-absorbing concept for the aircraft cabin interior. Additionally, an uncertainty management for CAE and a sensitivity analysis of flight loads are presented.

For practicing engineers and scientists, working in one of these areas, the proceedings will be a valuable source of information.