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# RTO Technical Publications:

## a quarterly listing

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**20020089467** Research and Technology Organization, Systems Concepts and Integration Panel, Neuilly-sur-Seine, France  
**Collaboration for Land, Air, Sea, and Space Vehicles: Developing the Common Ground in Vehicle Dynamics, System Identification, Control, and Handling Qualities** *La Collaboration dans le Domaine des Vehicules Terrestres, Aeriens, Maritimes et Spatiaux: L'Etablissement d'une approche Commune de la dynamique des Vehicules, l'Identification des Systemes, et les Qualites de Controle et de Pilotage*

November 2002, 180p; In English; CD-ROM contains full text document in PDF; Original contains color illustrations  
Report No.(s): RTO-TR-061; AC/323(SCI-053)TP/51; ISBN 92-837-1090-8; Copyright Waived; Avail: CASI; C01, CD-ROM; A09, Hardcopy; A02, Microfiche

This technical report is the culmination of the SCI-053 Task Group - Vehicle Dynamics, System Identification, Control and Handling Qualities. It summarizes the discussions of tank, truck, aircraft, helicopter, ship, submarine and satellite experts held over a three-year period. It addresses the various technical areas identified in the name of the task group, exploring the similarities and differences between the vehicle types and identifying areas where collaboration between experts would be the most valuable. Twenty-three specific technical issues are identified as initial areas with high potential for valuable collaboration. Overall, the report provides the vehicle expert of one environment a sufficient background on the other vehicle environments, so that meaningful discussions towards these technical collaborations can be initiated.

Author

*Controllability; Aerospace Vehicles; Military Vehicles; Mathematical Models; Systems Engineering; Water Vehicles*

**20020089604** Research and Technology Organization, Applied Vehicle Technology Panel, Neuilly-sur-Seine, France  
**Active Control of Engine Dynamics** *Le Controle Actif pour la Dynamique des Moteurs*

November 2002, 402p; In English, 14-18 May 2001, Brussels, Belgium, Research and Technology Organization, France, Von Karman Inst. for Fluid Dynamics, Belgium; CD-ROM contains full text document in PDF; Original contains color illustrations

Report No.(s): RTO-EN-020; AC/323(AVT-083)TP/57; ISBN 92-837-1081-9; Copyright Waived; Avail: CASI; C01, CD-ROM; A18, Hardcopy; A04, Microfiche

Active control can alleviate design constraints and improve the response to operational requirements in gas turbines. The Course presented the state-of-the-art including experimental, theoretical knowledge and practical information. Topics treated: stability characteristics; active control approaches; robustness and fundamental limits; combustion systems processes; combustor dynamics; compression system dynamics models; diagnostics and control of compression instabilities; sensor and actuator architectures; R&D needs of future prospects. The course has shown that for combustion systems, as well as in actuator and sensor technologies the active control approach is a viable option even at full scale with potential for aero engines and air breathing missiles.

Author

*Active Control; Gas Turbine Engines; Fluid Dynamics; Dynamic Characteristics; Combustion Physics*