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Harriet B. Machie and Susan H. Stewart, Compilers
Langley Research Center, Hampton, Virginia
Preface

This report contains a listing of the NASA Langley Research Center’s publicly available scientific and technical research output for C.Y. 1998.

The intent of this report is to provide a greater awareness of the broad scope of results and the importance of the research and development work conducted by scientists and engineers at Langley. This current awareness is mandated by the National Aeronautics and Space Act of 1958, which provides for the widest practical dissemination of NASA research.

Introduction

The NASA Langley Research Center is one of the Nation’s leading laboratories for research and development in the sciences of aeronautics and space technology. Langley conducts basic and applied research in the areas of Airframe Systems, Aerodynamics, Atmospheric Science, and Structures and Materials.

This document contains a bibliography of Langley’s publicly available scientific and technical research output for 1998 which is processed through the Center’s Information Systems and Services Division, an integral part of NASA’s Agency-wide Scientific and Technical Information (STI) system. The results of Langley’s research are disseminated in a variety of NASA and non-NASA scientific and technical media and information systems. This document is intended to be a reference summary for researchers and a current awareness publication for the scientific, research, and academic community. Details of the availability of the research references in this document are found in the section, “Availability,” on page vii.


The citations are grouped by the Scientific and Technical Aerospace Reports (STAR) subject categories and listed alphabetically by author or innovator. The Langley organization to which the senior author or innovator is assigned and the Research and Technology Objectives and Plans (RTOP) number are noted below citations when appropriate and included in the indexes.

Patents listed are those which were issued in 1998 and owned by Langley Research Center.

Publication of some journal articles was not known at press time for the 1997 issue of this document. These articles are therefore listed in the 1998 issue.
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Lin, G-F.; Lan, C. E.; and Brandon, J. M.: Simulation of Aircraft-Pilot Coupling as Limit-
Cycle Oscillations. Presented at AIAA Atmospheric Flight Mechanics Conference,
Organization DC RTOP 522-32-11

98-4261.
Organization DC RTOP 522-33-11

Morelli, E. A.: Advances in Experiment Design for High Performance Aircraft. Presented at
AGARD Symposium on System Identification for Integrated Aircraft Development and Flight
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Murphy, P. C.: Closed-Loop System Identification Experience for Flight Control Law and
Flying Qualities Evaluation of a High Performance Fighter Aircraft. Presented at AGARD
Symposium on System Identification for Integrated Aircraft Development and Flight Testing,
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Murphy, P. C.; and Davidson, J. B., Jr.: A Control Law Design Method Facilitating Control
Power, Robustness, Agility, and Flying Qualities Tradeoffs: CRAFT. NASA TP-1998-
Organization DC RTOP 505-68-30

Ogburn, M. E.: Preliminary Study of Relationships Between Stability and Control
Characteristics and Affordability for High-Performance Aircraft. Presented at AIAA
AIAA Paper No. 98-4265.
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Smith, S. W.; and Piascik, R. S.: The Effect of $O_2$, $H_2O$, and $N_2$ on the Fatigue Crack Growth Behavior of an $\alpha+B$ Titanium Alloy at 24$^\circ$ C and 177$^\circ$ C. Presented at Fatigue Behavior of Titanium Alloys Conference, October 11-15, 1998, Chicago, Illinois.

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