## **General Aviation**

Papers Presented at the AIAA Aviation Forum 2019

Dallas, Texas, USA 17-21 June 2019

ISBN: 978-1-5108-9312-2

## Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

The contents of this work are copyrighted and additional reproduction in whole or in part are expressly prohibited without the prior written permission of the Publisher or copyright holder. The resale of the entire proceeding as received from CURRAN is permitted.

For reprint permission, please contact AIAA's Business Manager, Technical Papers. Contact by phone at 703-264-7500; fax at 703-264-7551 or by mail at 34922 Uwptkug'Xcmg{'Ftkxg."Uwkg'422, Reston, VA 20191, USA.

## TABLE OF CONTENTS

AIRCRAFT PERFORMANCE METHODS II
AIAA-2019-3274: An Introduction to Inertial-Coupling-Moment-Induced Aircraft Pitch Instability
AIRCRAFT CERTIFICATION AND EMISSIONS
AIAA-2019-3344: A Model-Based System Engineering Approach to Normal Category Airplane
Airworthiness Certification
AIAA-2019-3345: Analysis of Exhaust Emissions of an Aircraft Diesel Engine Using Jet-A
AIAA-2019-3346: How Do We Know an Alternative Aviation Gasoline Meets the Needed Form, Fit,
And Functions
GENERAL AVIATION SAFETY
AIAA-2019-3443: Assessing Potential Biases in Risk Perception for General Aviation Pilots
AIAA-2019-3444: Investigation of Feasibility of Using Low-Cost AHRS Devices to Detect General
Aviation Hazardous States
Arpan Chakraborty, Nicoletta Fala, Karen Marais
AIAA-2019-3445: Efficiency Improvement of Instrument Reading Identification from Recording  Images
Brian C. Kuo, Pei-Chung Chen, Fu-Yuen Hsiao, Feng-Yu Chang
Author Index