

# Introduction

Welcome to the inaugural issue of the Journal of Aviation Technology and Engineering (JATE). This issue of JATE is significant in multiple respects. First, it marks the startup of a scholarly, peer-reviewed publication that attempts to bridge what the editors perceive as a gap between the fields of technology and engineering in the particular area of aviation. As members of an editorial staff with backgrounds in both of these fields, we can certainly attest that publications that attempt to address the two as a cohesive whole and on a level that practitioners of both find satisfactory are few and far between.

Second, it provides a fresh example of an open-access journal. Open-access is not a new concept, but we believe that this specific implementation of open-access scholarly publishing is important to allow the rapid dissemination of aviation-related research within both the academic and practicing communities, and to provide a means of access to research-based publications for those colleges and universities in developing nations that would not otherwise have the funding to afford costly institutional subscriptions.

Within this first issue, the reader will find six excellent articles that represent many of the areas found in the Journal's statement of scope. The first, by Chien-tsung Lu, Stewart Schreckengast, and Jim Jia of Purdue University, examines safety management systems in view of the recent NPRM extending SMS requirements to certificated airports, and how such systems might be implemented. The prototype system described in the article will enable operators to quickly satisfy many of the portions of the proposed regulation.

The next article, by Tara Harl of St. Cloud State University, considers a topic of historical and developmental nature that is virtually unexplored in the literature: that of the black aviation professional. Using qualitative research tools, Dr. Harl is able to shed new light on diversity issues that were once considered off-limits in our profession.

Professors Ruishan Sun, Yunfei Chen, Xinyi Liu, Tianchi Peng, and Lu Liu of the Civil Aviation University of China have written an interesting article integrating the human cognitive reliability model with event tree analysis to determine the risks associated with inadequate separation of aircraft in flight. Quantification of these risks is essential if we wish to better understand and design for the human-machine environment.

An intriguing case study using the process of action research, one of the many tools available to the qualitative researcher, to assess a professional graduate studies program in aviation technology is the focus of the article by Mitchell Springer and Erin Bowen of Purdue University. As programs of this nature continue to develop and grow in number, innovative means of assessing program design and determining program quality are required, and this article describes how this may be done.

Small Aircraft Transportation Systems (SATS) are examined in an article by David Ferrel, Tom Carney, and Scott Winter of Purdue University. Purdue is in the process of implementing a SATS to provide additional transportation options for University personnel, and a study of the perceptions of risk among potential users of the system is a key piece of the implementation strategy. In conducting this study, the authors obtained data that is readily extensible to a more general population.

Finally, Jonathan Collette, airport noise abatement program manager for the City of Philadelphia, presents an interesting analysis of noise data collected in the Philadelphia region and attempts to correlate complaints with both physical and socioeconomic factors, verifying conclusions at which previous researchers had arrived, but also calling for more detailed multivariate statistical analysis to examine the interrelationships of the factors considered in the study.

Once again, the editors thank you for your interest in our new journal and hope that you both enjoy and benefit from the articles within.

**Brent D. Bowen, Henry R. Lehrer, and John H. Mott**  
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