

Editorial

Thank you for viewing the second issue of volume 5 of the *Journal of Aviation Technology and Engineering* (JATE). As an open-access online publication, we are dedicated to providing the global aviation, technology, and engineering communities with timely and pertinent research results at no charge. Readership of the JATE continues to grow. The number of downloads is now in excess of 60,000 full-text article impressions, over 18,500 of which have been downloaded in the past year alone. To view the global impact of the JATE, please visit our JATE real-time readership map.

The caliber of research quality is evidenced in the five peer-reviewed articles published herein. JATE volume 5, issue 2 commences with “Pilot Source Study 2015: US Regional Airline Pilot Hiring Background Characteristic Changes Consequent to Public Law 111-216 and the FAA First Officer Qualifications Rule.” This is the first in a series of articles regarding this newly implemented legislation and is authored by a team of seven researchers and scholars. In this portion of the study, 19 Part 121 regional airlines were examined with regard to the change in pilot characteristics due to recent government-mandated changes.

Next, a team of researchers from Purdue University provides “Statistical Models of Runway Incursions Based on Runway Intersections and Taxiways.” Statistical analyses were utilized to determine the relationship between airport geometry factors and the number of runway incursions at specific US airports. The busiest airports with and without intersecting runways were studied. As predicted, runway incursions occurred more frequently at airports with intersecting runways.

Nihad Daidzic of AAR Aerospace Consulting, LLC illustrates that mathematical models and predictions have an integral part in aircraft development, design, and optimization in “Estimation of Performance Airspeeds for High-Bypass Turbofans Equipped Transport-Category Airplanes.” Critical performance speeds were estimated via airspeed-dependent turbofan thrust and a new fuel model in concert with an airplane polynomial drag model. Notably, results from this research study can be applied to instances when fitted, measured drag and thrust data is given in arbitrary polynomial forms.

Researchers from the University of Calgary present “Quantitative Risk Evaluation of Obstacle Limitation Surfaces for Final Approaches at Airports.” Acknowledging the trend toward a safety management system approach to design and operations safety, the authors note that airport operators are aware of the importance of a proper evaluation of the level of safety provided by obstacle limitation surfaces. This research utilized flight path data from an air traffic control radar. Additionally, data was used to derive a methodology to assess the probability of aircraft deviating from their approach path.

A team of four researchers from Purdue University round out JATE volume 5, issue 2 with “An Exploratory Study: Correlations Between Occupational Stressors, Coping Mechanisms, and Job Performance among Chinese Aviation Maintenance Technicians.” Concern for the potential negative impact on work performance caused by stress drove this research. A mixed-methods exploratory research study examined the relationships among occupational stress, coping mechanisms, and job performance. Aviation maintenance technicians from multiple Chinese airlines were asked to complete an electronic research questionnaire. Results were presented along with a recommendation for future research identifying causal relationships.

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On behalf of the JATE associate editors and members of the editorial board, we thank you for your readership.

Best regards,

John H. Mott, Executive Editor

Mary M. Fink, Managing Editor

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