

## Editorial

On behalf of the editors, welcome to the second issue of the second volume of the *Journal of Aviation Technology and Engineering (JATE)*. The seven articles within this issue were selected because of their focus on areas of current interest within aviation research—finance and safety improvements through human factors and technical issues.

First, Carrie N. Giles from Minnesota State University looked at standard operating procedures within airlines in order to better understand noncompliance. The addition of a human factors component specifically addressing operating procedure noncompliance to the recurrent training that pilots receive was successful in reducing noncompliance in some, but not all, areas of deficiency.

A group of researchers from Embry-Riddle Aeronautical University, the University of North Dakota, Arizona State University, Westminster College, and Southern Illinois University follow with an update to the 2010 Pilot Source Study (Phase II). This study used the same research design to examine the link between a pilot's background and success in initial pilot training with a regional air carrier.

Next, faculty member Mary E. Johnson and graduate student Alan Gonzalez from Purdue University examine the possible effect that a carbon emission charge system could have on airlines. Because carbon emissions are measured indirectly from the amount of fuel consumed during a flight, less fuel efficient airlines could potentially be disproportionately impacted.

Fuel efficiency is also an issue in the work prepared by graduate student Ronald F. Brender and faculty member Thomas Q. Carney. The researchers examine differences in the fuel consumption, speed, and cylinder head temperature between aircraft operating at best economy and best power.

Yair Wiseman and Alon Barkai from Bar-Ilan University, Israel, test potential methods to increase the amount of space on solid state flight data recorders. While file compression has drawbacks, the authors are able to develop an algorithm that compresses data in real time and places a minimal load on computer memory.

Ayeni K. Bakare and Sahalu B. Junaidu from Ahmadu Bello University, Nigeria, develop a process for integrating radar systems with GPS-based collision avoidance systems using MATLAB. Results from the simulation show it may have the potential to alert pilots and controllers to collision hazards earlier than air traffic controllers operating alone.

Finally, graduate student Steven Leib and faculty member Chien-tsung Lu from Purdue University examine the safety culture within a major airport in Taiwan. Although Taiwan is not an ICAO member, safety management policies were very consistent with ICAO standards.

The editors thank you for your interest in both aviation research and our journal. We hope you enjoy these articles and the breadth of research covered in this issue.

**Jennifer E. Kirschner, Brent D. Bowen, Henry H. Lehrer, and John H. Mott**