



October 28, 2024

To: **Regional Vice Presidents
Branches and Facilities**

Humans and Artificial Intelligence (AI) – Working Together?

In early September, IFATCA organized a TechTalk dedicated to Human-Machine Teaming. The session featured presentations highlighting some of the first practical applications of Air Traffic Management tools that integrate Artificial Intelligence (AI) and Machine Learning (ML). These examples demonstrated systems that can detect conflicts and suggest resolutions, aiming to eventually allow the system to autonomously resolve straightforward conflicts by communicating directly with the aircraft, without requiring the involvement of an Air Traffic Control Officer (ATCO). You can access the recording of the TechTalk via this link,

<https://ifatca.org/techtalk-human-machine-teaming-in-atm/>

On October 28 and 31, Eurocontrol will be hosting two webinars focused on AI and the critical role humans play in the system. These sessions will feature world-renowned experts in these areas. Sponsored by the EUROCONTROL Work Programme, the webinars are free of charge for anyone interested in registering.

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Supporting Human-AI Teaming: Transparency, Explainability, and Situation Awareness
28 October 16:00-17:00 CET (Central European Time); 11:00-12:00 Eastern Time in Canada

With **Dr. Mica R. Endsley** President of SA Technologies and a former Chief Scientist of the U.S. Air Force

System autonomy and AI are being developed for a wide variety of applications where they will likely work in tandem with people, forming human-AI teams (HAT). Situation awareness (SA) of autonomous systems and AI has been established as critical for effective interaction and oversight of these systems. As AI capabilities grow, and more effective teaming behaviors are expected of AI systems, there will also be an increased need for shared SA between the human and AI teammates. Methods for supporting team SA within HAT are discussed in terms of team SA requirements, team SA mechanisms, team SA displays and team SA processes. A framework for understanding the types of information that needs to be shared within HAT is provided, including a focus on taskwork SA, agent SA, and teamwork SA. AI based on learning systems creates new challenges for the development of good SA and mental models. AI transparency and explainability are discussed in terms of their separate roles for supporting

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SA and mental models in HAT. The SA Oriented Design (SAOD) process is described as a systematic methodology for developing transparent AI displays for HAT and an example of its application to automated driving in a Tesla is provided. Situation awareness (SA) is critical for effective interaction with AI systems. Human-AI team performance requires taskwork SA, agent SA, and teamwork SA. SA is best supported by AI display transparency that is current and prospective. Explainable AI is primarily retrospective and directed at building mental models.

Link to the registration

page: <https://learningzone.eurocontrol.int/ilp/customs/Reports/RequestForm/Direct/Registration?courseId=22179173>

So what do people actually do?

31 October 14:00-15:30 CET (Central European Time); 9:00-10:00 Eastern Time in Canada

With **Dr. Immanuel Barshi**, Senior Principal Investigator in the Human Systems Integration Division at NASA Ames Research Center.

It is often said that to err is human. It's true that failures can be traced to human limitation, but what's more important is that all successes, all safe operations are the result of human capabilities. This talk highlights the resilience people bring to aviation operations and discusses ways to change the common narrative that people are the creators of safety rather than only the source of error and failure.

Link to the registration

page: <https://learningzone.eurocontrol.int/ilp/pages/description.jsf?menuId=1106#/users/@self/catalogues/1700/courses/22612739/description>

Take note of the times as they are in Central European Time (CET), which is five (5) hours ahead of EDT.

If you have questions or would like more information about ATS technology or CATCA technology roles, please contact any member of the CATCA Technology Committee or email techcommittee@catca.ca

On behalf of the Executive Board,

Nick von Schoenberg
President

Scott Loder
Executive Vice President

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