

INNOVATION IN ACTION

EPIIC Team Stories_#2

MEET LIDA Z. DAVID:

Resilience Between Humans and Machines

"The best cockpit is not the most automated one, but the most intelligently collaborative."

LIDA Z. DAVID

HUMAN FACTORS ENGINEER Ph.D
AIRBUS DEFENCE AND SPACE GMBH

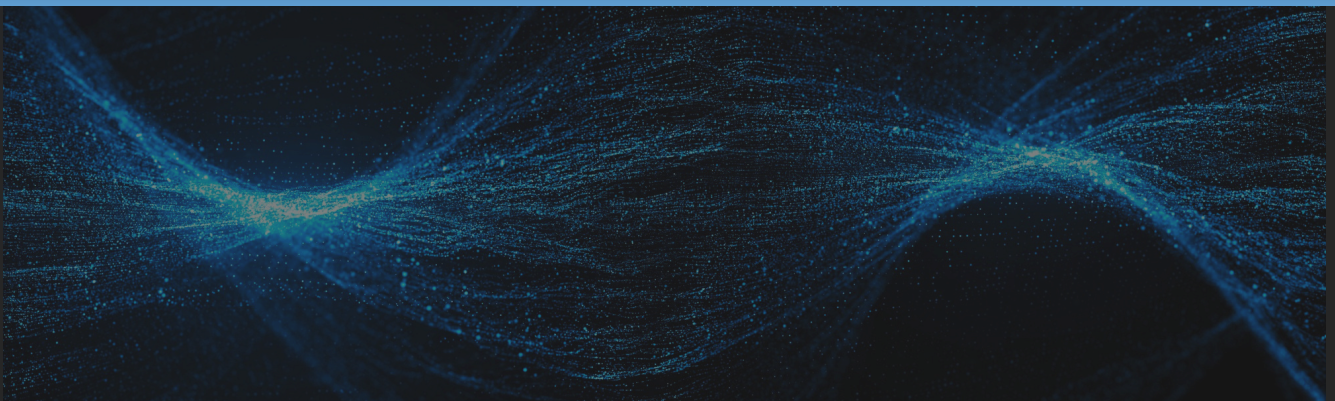


A Journey Shaped by Human–System Interaction

Lida's journey into aviation and safety-critical systems began at the intersection of psychology, human-centred design, and systems thinking. Today, as a Human Factors Engineer at Airbus Defence and Space, she works where people and technology meet, focusing on how humans and autonomous systems can collaborate effectively in complex, high-stakes environments.

Driven by curiosity about how teams operate under pressure, she completed a Ph.D. in Resilience Engineering. Her research explored how action teams in aerospace and other safety-critical domains respond to disruptions and maintain operations during critical situations.

Using temporal analysis techniques, she identified patterns in team coordination to better understand and strengthen resilience. Before her industry role, she worked as a lecturer at the University of Twente in Cognitive Psychology and Ergonomics, where she taught and developed courses in Human Factors. She also serves as Communications Officer on the Executive Board of the Resilience Engineering Association, supporting collaboration between academia and industry.



From Accident Investigation to Systems Thinking

Her path into aviation was shaped during her master's studies, when she investigated a tragic aircraft accident that became her first scientific publication.

By analysing cockpit interactions, black box data, and official reports, she realized that what was labeled as "human error" was in fact a systemic failure involving people, technology, and environment.

This experience shaped her systems thinking perspective: in safety-critical domains like aviation, responsibility cannot be reduced to a single individual. Instead, resilience must be built into the system itself.

Designing Human–Machine Collaboration in the Cockpit

Her current work focuses on a central question: how can technology truly support humans in future fighter aircraft?

She researches and integrates human factors into system design, ensuring that cockpit technologies and automation support rather than constrain the operator. The goal is to create systems where humans and technology enhance each other's performance.

Her responsibilities include improving decision-making and task allocation, supporting collaboration between pilots and virtual assistants, as well as shaping adaptive human–machine interfaces based on pilot needs and feedback.

Within the EPIIC project, she contributes to designing cockpit systems where a virtual assistant can support pilots in real time—adapting displays, highlighting threats, and reducing cognitive load in high-pressure situations.

Building the Future Through Collaboration and Learning

What excites her most is working at the frontier of emerging technologies, where ideas are still being shaped into operational systems. She finds meaning in turning research into real-world applications that improve safety and performance in demanding environments.

EPIIC has also been a strong learning experience, bringing together engineers, designers, psychologists, software developers, and pilots. This multidisciplinary collaboration has shown how innovation emerges only when different perspectives are combined.

The project has strengthened her ability to connect theory with practice, particularly by applying insights from her Ph.D. research on team resilience in real aerospace systems.

Life Beyond Engineering

Outside of work, she is drawn to adventure and the outdoors. Growing up in Greece, she developed a strong connection to the sea through beach volleyball, windsurfing, and spearfishing. In winter, she switches to snowboarding and other active pursuits. Travel and cultural exploration remain constant sources of inspiration

