



German Aerospace Center (DLR)

Empowering the Aviation of Tomorrow

Pioneering sustainability and decarbonization through lightweight materials are leading to significant reductions in fuel consumption. Jens Kosmann shares insights on future trends and demonstrates the use of optical measurement technology for validating composite materials and improving process efficiency. DLR uses image correlation in characterizing the damage tolerance of jointed CFRP specimen to ensure the highest quality solutions for the future of the aerospace industry, prioritizing safety in air travel.

“I work on improving the quality and sustainability of aircraft structures. To do this, I use optical measurement systems to improve the determination of material characteristics.”

Jens Kosmann, Aerospace Researcher at DLR

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Challenges

- Reducing the carbon footprint of the aviation industry while meeting stringent safety regulations.
- Developing sustainable lightweight aircraft structures.
- Meeting the challenges posed by new fuels such as cryogenic hydrogen.

Solution

- Using modern metrology technology to improve material characteristics.
- Analysis of construction methods, structures, and materials.

Benefits

- Ensuring the same level of mobility and safety.
- Increased productivity and efficiency in aerospace.
- Creating value through a sustainable and environmentally sensitive product lifetime.