



## Future Aircraft Sizing Tool (FAST)

TECHNOLOGY NUMBER: 2024-318



### OVERVIEW

Open-source MATLAB-based software for aircraft design and analysis

- Simplifies and enhances accuracy of both conventional and electrified aircraft design
- Useful for aerospace engineering, research, education, aircraft design consultancy

### INNOVATION

The Future Aircraft Sizing Tool (FAST) represents a significant advancement in the field of aircraft design software. Developed under NASA's Electrified Powertrain Flight Demonstration project, this MATLAB-based, open-source tool facilitates the design and analysis of both conventional and electrified aircraft. With minimal input required from users, FAST breaks down the complexity typically associated with aircraft design, making it accessible to a broad audience including aerospace engineers, researchers, and enthusiasts. Its versatility in supporting any propulsion architecture allows for innovative exploration in both conventional and sustainable aviation. The potential applications of FAST are extensive, including the optimization of new aircraft designs, education, research, and consultancy in aerospace design projects. This tool is poised to advance the field by making sophisticated design capabilities available to a wide range of users.

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### Category

MOSS - Michigan Open Source  
Software

### Learn more



**Project Links**

- [FAST project website](#)
- [FAST code repository](#)
- [FAST YouTube channel](#)

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**Department/lab**     [Gokcin Cinar](#)

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**Target audience**     • Aerospace engineering instructors, students, researchers

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**Seeking**             • Users

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