

Partnership boosts state aerospace industry

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By Joanna Steward, College of Arts and Sciences



Sara Waters, ASL operations engineer, and WSU postdoctoral researcher Shahryar Fotovati examine settings on the salt fog machine, which simulates extreme environments for materials testing.

SPOKANE, Wash---

A unique private-public partnership is working to improve the performance and lower the cost of composite aerospace parts made in Washington, increase innovation, and provide training for the next generation of the Washington aerospace workforce.

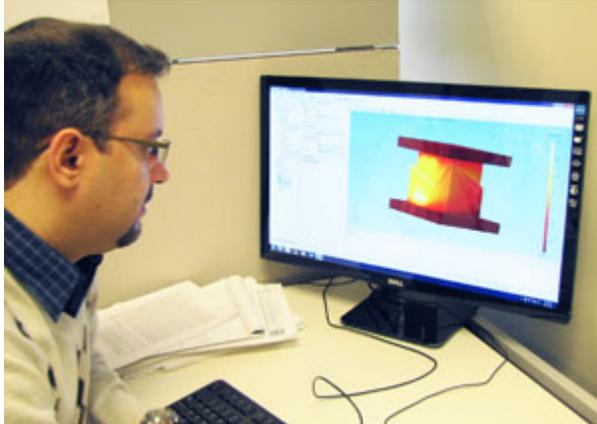
Researchers at Washington State University have joined forces with engineers at Spokane-based Triumph Composite Systems ("Triumph") to address a specific need in the technology and manpower required to sustain the state's growth in the aerospace industry.

The partnership is partially funded by a grant from Washington state's Joint Center for Aerospace Technology Innovation (JCATI), a multi-faceted organization established by the governor to improve aerospace research, innovation and education.

Santanu Chaudhuri, associate professor and senior scientist at WSU's Applied Sciences Laboratory (ASL), is leading efforts to improve manufacturing practices and materials solutions to reduce corrosion vulnerability of composite parts. "Our research will employ state-of-the-art computational modeling and accelerated testing to identify better ways to manufacture corrosion resistant composite thermoplastic parts."

Thermoplastic parts come in all shapes and sizes on a modern commercial aircraft: from small brackets and clips to large interior sidewall panels. Currently, special anti-corrosive coatings protect these parts from

contact with metal components. Chaudhuri and Triumph hope to improve the corrosion resistance of the composite materials and, therefore, the life of the composite part.



WSU ASL postdoctoral researcher Shahryar Fotovati works with complex computational modeling.

Training the future Washington aerospace industry workforce is an important benefit of the ASL–Triumph partnership. A 10–week internship program will provide WSU graduate and undergraduate students with invaluable first–hand experience in materials engineering, computational modeling and aerospace manufacturing under the mentorship of ASL researchers and Triumph engineers.

“It is of the utmost importance that Washington students have opportunities to interact with industry and research professionals,” said Jim Mundy, senior manager of new products and technology at Triumph. “Through partnerships like this, students will develop personal knowledge of the work environment and be better prepared to succeed after graduation.”

The [Applied Sciences Laboratory](#) (ASL), part of the WSU Institute for Shock Physics, is a Spokane–based contract research organization that integrates multidisciplinary activities in the physical sciences, life sciences and engineering to undertake a broad range of applied research projects for corporations and government agencies, including technology transfer for commercial applications.

[Triumph Composite Systems](#) (TCS) is an aerospace industry leader in the manufacturing of high–quality composite interior components. With a current library of over 20,000 part numbers with FAA–PMA approval and extensive in–house expertise, TCS is a dependable and reliable source for product testing and evaluation of plastic and composite products.

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