Fire in Microgravity

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Research led by mechanical engineering professor Indrek Wichman featured on cover of American Scientist

In space, flames don’t extinguish under the same low-oxygen conditions that would put them out on Earth, setting the stage for dangerous flare-ups.

The finding is the current cover feature in the national publication, American Scientist, January-February, 2016.

The research is led by Indrek Wichman, a professor in the Michigan State University Department of Mechanical Engineering. The research team also includes:

- Sandra L. Olson, a spacecraft fire safety scientist at NASA Glenn Research Center at Lewis Field in Cleveland,
- Fletcher J. Miller, an associate professor of mechanical engineering at San Diego State University, and
- Ashwin Hariharan, who received a master's degree in mechanical engineering from MSU, is a thermal systems engineer at Ford Motor Company in Allen Park, Mich.

Wichman said the research described in the article deals with a series of projects on Space Fires he has engaged with NASA from the middle 1990s to the present.

"Project funding hovers in the $30 – 50 million range due to NASA's internal commitment to its subcontractors, its engineering teams, astronauts and its overall space mission," he said. “The current project includes PIs from top universities across the USA.”

Learn more about smolder survival and the life cycles of flamelets in space, as well as simulating microgravity conditions on earth, in the American Scientist article, "Fire in Microgravity."

American Scientist is an award-winning bi-monthly publication about science, engineering and technology. It has been published by Sigma Xi, The Scientific Research Society, since 1913.

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