

Supersonic Radial Turbine

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- Mechanical Engineering

Keywords:

- Aircraft
- Compact
- Engines
- Mechanical Engineering
- Power
- Turbine

Researchers at Purdue University have developed a technology that extracts power from supersonic flows by means of an axial inflow and radial outflow called a supersonic radial outflow expansion system. This technology comes from years of research and optimization and can efficiently and compactly transform energy from high speed flows. Compared to conventional subsonic turbines, this type of expansion device is ultra-compact and can boost efficiencies by more than 10% in pressure gain combustion applications.

Advantages:

- Extracts power at high efficiency in harsh conditions
- Boosts efficiency by more than 10% in pressure gain combustion applications
- Ultra compact compared to conventional subsonic turbines

Potential Applications:

- Aircraft engines
- Steady power engines
- Military engine manufacturers

People:

- Perez, Guillermo Paniagua (Project leader)
- Braun, James
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Intellectual Property:

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