

**Turbomachinery Laboratory, Texas A&M University  
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# **MICRO TURBOMACHINERY Applications**

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# MICROTURBOMACHINERY

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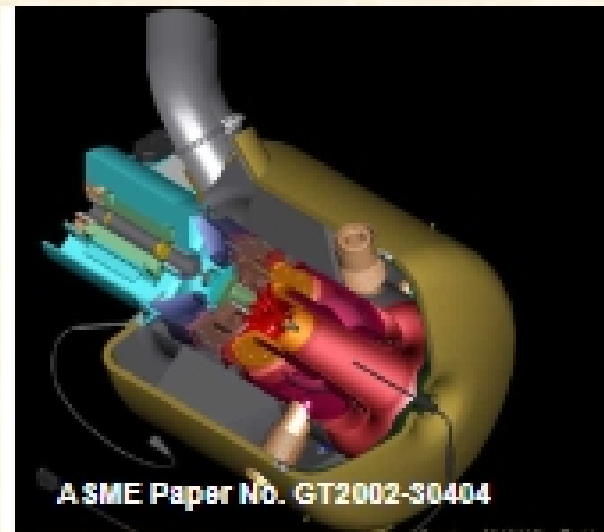
## Justification

**DOE, DARPA, NASA interests range from applications as portable fuel cells (< 60 kW) in microengines to midsize gas turbines (< 400 kW) for distributed power and hybrid vehicles.**

**Meso-scale or MEMS turbomachinery (< 100 W) for Next Generation Land Warriors, Micro vehicles & robots, Portable electronic devices and systems, Smart munitions**

# MICROTURBOMACHINERY as per IGTI

**Drivers:**  
deregulation in  
distributed  
power,  
environmental  
needs,  
increased  
reliability &  
efficiency



Distributed power  
(Hybrid Gas  
turbine & Fuel Cell),  
Hybrid vehicles

Automotive  
turbochargers,  
turbo expanders,  
compressors,

Max. Power ~  
250 kWatt