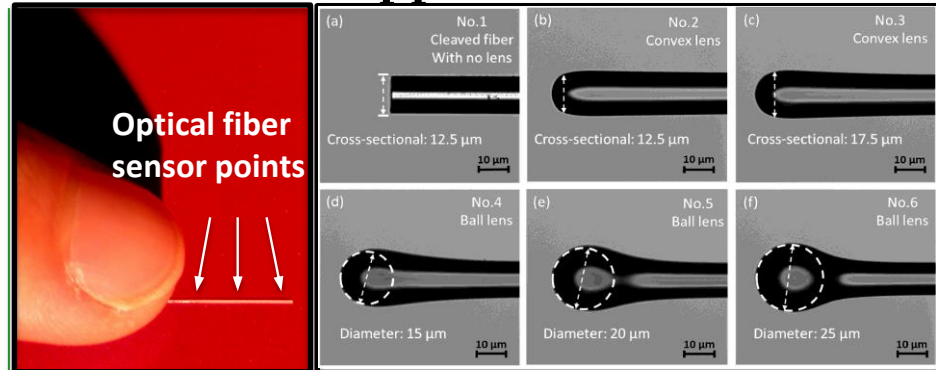


# Advanced Sensors Enable New Frontiers in Basic & Applied Research

## Research Thrust

- **Innovating Advanced Fiber Optic Sensor Systems**
  - Human hair-like sensors (small size, light-weight, immune to EMI)
  - Spatially-distributed, high-speed sensing (multiple sensors per fiber)
  - Diverse measurement capabilities (pressure, strain, temperature, inclination, chemical threats, flow, EM fields, etc.)
- **Micromachining Novel Sensors and Devices**
  - Femtosecond laser micro-machining of photonic devices
  - Lab-in-a-fiber
  - Optical waveguide fabrication
  - Optofluidics (microfluidics and optics)
- **Applying Sensors with Ultrahigh Sensitivity and Resolution in Basic & Applied Research**
  - Fiber optic sensors in harsh environment (e.g., steel industry)
  - Fiber optic sensors for military applications
  - Fiber optic sensors for structural health monitoring applications
  - Novel coaxial cable sensors for human health applications



## Principal Investigator

**Jie Huang,**  
Roy E. Wilkens Endowed Associate Professor  
Electrical and Computer Engineering  
Missouri S&T  
[jieh@mst.edu](mailto:jieh@mst.edu); (573) 341-4836



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