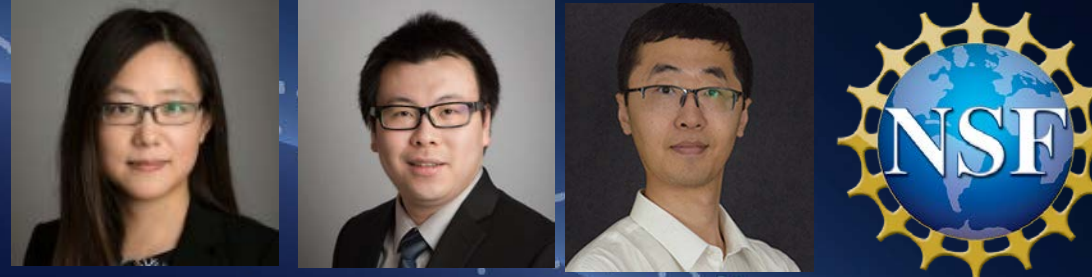


# #2132923/2132773: NRI/Collaborative Research: Robotic Disassembly of High-Precision Electronics (Award Date: 02/01/2022)

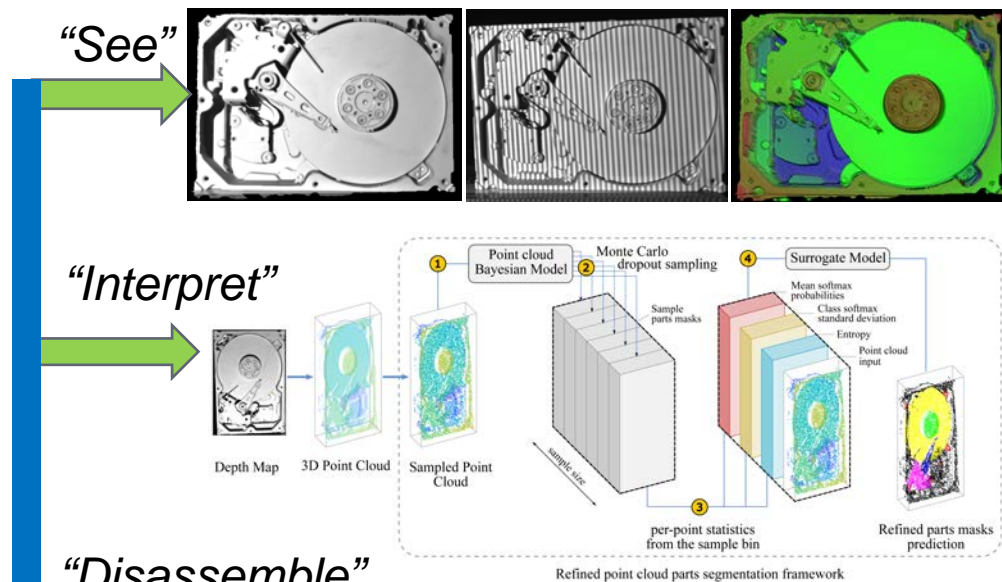


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## Challenges

- Increasing quantities of discarded high-precision electronics
- Many valuable components are not recycled due to high labor cost
- Disassembly requires high robotic dexterity and accuracy to accomplish

**Solution:** A novel robotic system that can accurately see, interpret, and disassemble high-precision electronics.



## Scientific Impacts

- Addressing the mapping and AI-driven point cloud interpretation for complex surfaces
- Novel lightweight robotic hand design and high-precision manipulation algorithm for flexible disassembly

## Broader Impacts

- Address labor shortages in the recycling industry.
- Reduce waste from discarded electronics.
- Promote environmental and manufacturing sustainability.
- Broaden participation, including participation by young people and underrepresented groups.

