

Wearable Sensors for Low-Power On-Demand Health Monitoring
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PURPOSE (Aims/Objectives)

- Measure human kinematics using commercial RFID tags
- Develop new RFID tag sensors



DESIRED END RESULT
(Critical Success Factors)

Wireless, battery less tags applied to human subjects

Predict head kinematics (pitch/yaw/roll) with ± 2 degree accuracy

CUSTOMERS (Stakeholders)

Collaborator: Scott Wood (NASA JSC), Andrew Montgomery

How did the collaboration come together? Blanket emails asking for interest in developing sensing systems

Who benefits? NASA benefits from monitoring human assets in space

CURRENT STATUS

Is this project finished/ongoing?
Ongoing and funded by NASA through LA BoR

Are you seeking new collaborators to continue this work?
Artificial intelligence, Kinesiology, Neuromotor

Design and Construction of an Open-Source 3D Bioprinter

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PURPOSE (Aims/Objectives)

To train students on design and construction of instruments for space biology research such as extrusion-based 3D bioprinters

CUSTOMERS (Stakeholders)

- Caleb Stewart and Harjus Birk @ LSUHSC Shreveport Neurosurgery
- Multiple meetings to identify common areas of research
- Benefits include introducing 3D bioprinting at LSUHSC, give experience to LATEch Senior Design students

DESIRED END RESULT (Critical Success Factors)

The 3D Bioprinter will

- Be affordable and replicable
- Provide a clean environment
- Enable multi-material printing
- Control temperature of precursor material
- Freeform Reversible Embedding of Suspended Hydrogels (FRESH) printing

CURRENT STATUS

Is this project finished/ongoing?
Just starting

Are you seeking new collaborators to continue this work?
Biomaterials, and neurobiology