

# CRSN 152-01: IDEASS Lab

## Resource Recovery for a Regenerative Future

2021-2022 Project Topics | Instructor: Tamara Ball 

### **Myceliall Solutions (MYSO)**

Student Lead: Scott Macdonald  
skmacdon@ucsc.edu



Myceliall Solutions (MYSO) is an undergraduate-led team researching how mycoremediation can be leveraged to create sustainable solutions that relieve inept recycling strategies. They observe how fungi (1) sequester environmental pollutants via biological uptake and (2) enzymes degrade polymers.

### **RePlay PLA**

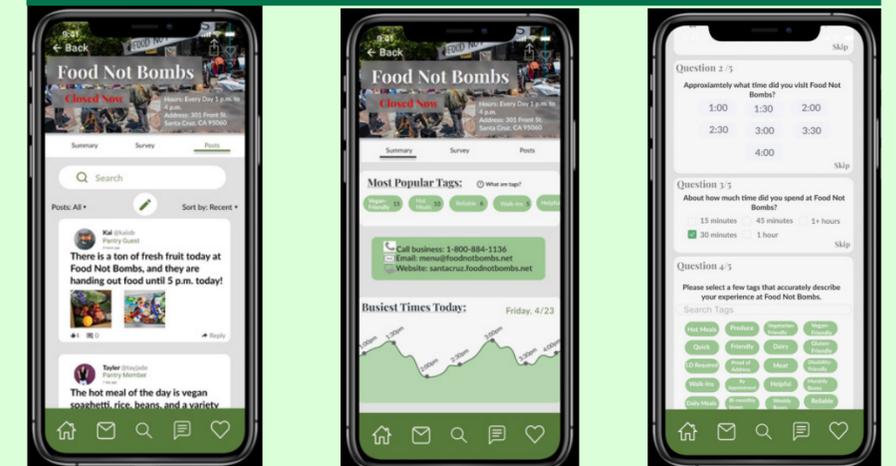
Student Lead: Marc Van Thillo  
mvanthil@ucsc.edu



RePlay PLA is determining methods to both enhance and degrade crystalline structures of polymers in post consumer plastics made from poly-lactic acid (PLA) to create cradle-to-cradle solutions for upcycling this material. Currently, they are exploring pre-treatment by ultrasound bath or exposure to ionic liquids to create feedstock filament for 3D printing.

### **MyPantry**

Student Lead: Kai O'Brien  
kimobrie@ucsc.edu



MyPantry is developing a mobile application, outreach and marketing plan to network and increase access to food assistance programs. The project addresses social stigmas faced by any individual or family units who would otherwise benefit from frequenting food assistance programs. Site: [my-pantry.org](http://my-pantry.org)

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#### **WAYS TO GET INVOLVED:**

- Campus outreach/event planning
- Design & paint fabulous fungi shed mural
  - Create logo
- Advanced composting
  - Enzyme DNA sequencing

### ***RePlay PLA***

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mvanthil@ucsc.edu

#### **WAYS TO GET INVOLVED:**

- Chemistry polymer characterization techniques
- 3D printing with recovered materials
- Material recovery
- Business strategy

### ***MyPantry***

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#### **WAYS TO GET INVOLVED:**

- App development
- Customer discovery
  - Graphic design
  - Marketing
  - User testing
- Networking
- Social media coordination