
USF I-Corps Teams: Fall 2022 Cohort



Team 1: Augmented Reality Interactive Smart eBook

Augmented Realty Interactive Smart eBook



Dr. Hong Huang

Founder of two start-up I-tech companies

Editor for Journal of Information and Learning Sciences

Interdisciplinary backgrounds: specialties in Biochemistry, Genetics, Computer science, Game based learning



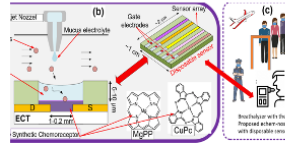
Mr. Jiaxuan Lyn

Expertise: 3D modeling, Animation, Computer Programming

Roles: Augmented Realty Data modeling¹³

- PI: Hong Huang, Ph.D. / College of Arts & Sciences / Tampa
- EL: Jiaxuan Lyu / USF Student / Tampa

Disposable Electrochemical Nose (Echem-Nose)



Bactrack.com

- # interviews: 12
- F2f interviews: 11
- Phone interview: 1

PI: Arash Takshi, PhD
(Associate Professor, EE department)



Leader: Mohammad Shakhawat Hossain
(PhD student, EE department)



Team 02
University of South Florida

- PI: Arash Takshi, Ph.D. / College of Engineering / Tampa
- EL: Mohammad Shakhawat Hossain / USF Graduate Student / Tampa

Team 3: Lone Wolf Wound Control

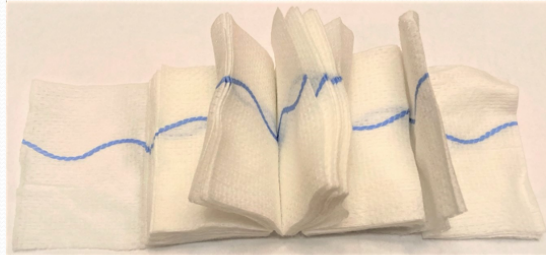
2022 Fall cohort of USF I-CORPS Fellows

Team #3 – Lone Wolf Wound Control



FINAL PRESENTATION on the topic of: Chitosan based antimicrobial and antiviral hemostatic wound dressings, granules, and powders for emergency wound biomedical needs.

Total Number of Interviews Conducted during the Discovery Process = 21



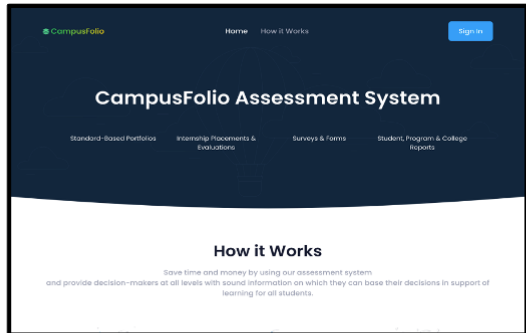
Dr. Clifford Merz, PI, EL, M

USF College of Marine Science
St. Petersburg, Florida 33701
Office: (727) 553-3729/Mobile: (727) 409-0770
Email: cmmerz@usf.edu

November 14, 2022

- PI: Clifford Merz, Ph.D. / College of Marine Science / St. Petersburg

Team 4. CampusFolio Assessment System



- Higher Education institutions around the world are required to use an assessment system to collect and analyze candidate assessment data for program improvement and accreditation purposes.
- CampusFolio is an online platform to simplify and automate institutional assessment for accreditation.



UNIVERSITY of
SOUTH FLORIDA



Zafer Unal
Professor, Assessment Site Visitor



Darran Town
Assessment Director



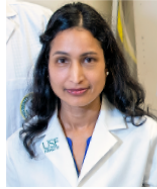
Andrew Warchol
Assessment Coordinator

- PI: Zafer Unal, Ph.D. / College of Education / St. Petersburg
- EL: Darran Town / College of Education / Tampa
- EL: Andrew Warchol / College of Education / Tampa

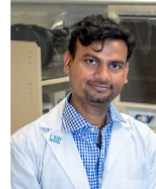
Team 5: Probiotic Yogurt Drink

TEAM # 5 PROBIOTIC YOGURT DRINK

Customer interview:36



Shalini Jain, PhD
Entrepreneurial Lead
Neurosurgery and Brain Repair
Expertise: Probiotics



Hariom Yadav, PhD
Principal Investigator
Center for Microbiome Research
Expertise: Microbiome



- PI: Hariom Yadav, Ph.D. / Morsani College of Medicine / Tampa
- EL: Shalini Jain, Ph.D. / Morsani College of Medicine / Tampa

Team 6: RISE

RISE©

- Wellbeing intervention **developed specifically for nurses** to address the harmful effects of burnout and stress
- **The goal** is to foster hope and healing, promote self-care, build social connection, and reduce symptoms of stress/burnout
- Psychoeducational group involves learning, self-reflection, skill development, and peer support
- Focuses on the **RISE© themes** (Resilience, Insight, Self-Compassion, and Empowerment)
- **RISE©** has been studied in a randomized controlled trial, **showing positive results.**



RISE©



Steven Medina, PI



Rawan Al-Wahaibi, EL



RESILIENCE · INSIGHT · SELF-COMPASSION · EMPOWERMENT

**An evidence-supported
stress and burnout
intervention for nurses**

Total Interviews: 25

- PI: Steven Medina / AdventHealth Research Institute / Community
- EL: Rawan Al-Wahaibi / USF Graduate Student / Tampa

Team 7: Wearable Sensori-Motor Integrator (WSMI)

Wireless Signal to Processor

EMG electrodes Attached to Elastic sleeve

TEAM #7: SMI

ACCORDING TO TECH NAVIO:

Incremental growth (\$M)

2020 2025

154.77

A WEARABLE SENSOR TO TREAT THE EFFECTS OF FOCAL DYSTONIA

TEAM #7

Team S.M.I.

31 INTERVIEWS



Dr. Stephanie Carey
Principal Investigator

Experienced research professor in both the Department of Mechanical Engineering and the Department of Medical Engineering. She is the research coordinator for the CARRT lab.



Ryan Austin
Entrepreneurial Lead

Biomedical Engineering Master's student with a Concentration in Biomedical Imaging and Bioelectronics.



Dr. David Charlot
Business Mentor

Physicist and bioengineer with 15 years' experience using deep technology to solve problems in human health. President and CTO of Blazing Audio.

UNIVERSITY of SOUTH FLORIDA

- PI: Stephanie Carey, Ph.D. / College of Engineering / Tampa
- EL: Ryan Austin / USF Graduate Student / Tampa
- M: David Charlot, Ph.D. / Community

Team 8: Automated Quality Solutions

Team 8- Automated Quality Solutions

A rapid and feasible method for detection of brake disc and brake pads wear and assess the remaining useful life using machine vision and accessible tech.

A whole F1 brake system can therefore set you back as much as \$66,000

F1 Budget Drop

\$145m → \$140m → \$135m

F1's biggest spenders – chiefly the top three teams Mercedes, Red Bull and Ferrari – have had to dramatically reduce their budgets and adapt their working practices to meet the limits

The Team

Dr. Nancy Diaz-Elsayed
Principal Investigator
Expertise: IoT Devices and Sustainability

Purvee Bhatia
Entrepreneurial Lead
Expertise: Machine Vision and Machine Learning

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- PI: Nancy Diaz-Elsayed, Ph.D. / College of Engineering / Tampa
- EL: Purvee Bhatia / USF Graduate Student / Tampa