Dear CSE Students:

Welcome to the second newsletter of the Spring 2019 semester.

**Message from the UG Advisor:** Hopefully your spring term is off to a good start. There are some exciting opportunities on the horizon. February brings us Engineering Expo and the Career Fair. The Career Fair is a great opportunity to make connections with employers and to learn about their staffing needs. These interactions are also a time to gather information about trends in the industry and to learn about internship opportunities. Spring Break will occur in mid-March. Summer and fall registration will begin about a week after spring break. Marjorie and I are available for walk-in or scheduled advising. Details are available on the CSE website.

**Message from the Grad Program Assistant:**
- If you are graduating this Spring, please make sure that you submit your Graduation Checklist via OASIS by February 1. If you are planning on attending the Commencement Ceremony, you must apply for the ceremony through the Commencement Office website. In addition, you must submit your Graduation Checklist and Plan of Work to me (via email or hard copy) before the end of the semester. If you were admitted Fall 2017 and after, you must take a Comprehensive Exam to be able to graduate. See me in ENB 342D if you have any questions/doubts.
- For those defending theses/dissertations this semester, be aware of the deadlines! Use this link to guide you through all of the important dates.

Attached are announcements for the following (please note that this listing does **not** imply University or Department endorsement):
- Brain Drone Racing at USF
- NIH Iron Hack
- NSF REU on Consumer Networking
- Firehouse Coding and Robotics Teaching Opportunity
- Hertz Hackathon
- Job Opportunity for Unity Programmers
- Software Engineer Entry Level at SunView Software, Inc.
- Meteorological Service of Canada Challenge: Increasing Fine-Scale Temperature Details from Weather Model Forecasts

Regards,

Ken Christensen
Professor and Associate Chair of UG Affairs
Brain-Drone Racing is a universal sport that allows people with disabilities (people in a wheelchair, upper or lower limb differences) to compete in the same race with able-bodied individuals, because the brain is only needed.

**Brain-Drone Race Event**
**Date:** Saturday, February 9, 2019  
**Location:** Corral Volleyball Court in the Yuengling Center, 4202 E Fowler Ave SUN 130, Tampa, FL 33620  
**Times:** 1:00 PM – 4:30 PM

**E-mail:** neuro.machineinteraction@gmail.com  
**Website:** www.neurosymbiosis.com  
**Instagram:** neuro.machineinteraction  
**Twitter:** @Nmil_usf  
**YouTube:** Neuro-Machine Interaction  
**LinkedIn:** Neuro-Machine Interaction Lab
NIH Hackathon at USF!

Helping the world, one disease at a time

25th-27th Feb 2019, University of South Florida, Tampa

Register at: https://goo.gl/forms/IM4i41iViGEQZ7C3

Location: USF Marshall Student Center, Room 2709
Registration deadline: Feb-15th, 2019
Admin and logistics contact at USF Genomics: genomics@health.usf.edu
Event and technical contact: Rays Jiang Jiang2@health.usf.edu

Why rare diseases?

- The large impact of rare diseases: About one in 10-20 people suffer from orphan diseases. 7000 rare diseases, each affecting relatively few people, but collectively impacting a large part of the human population.
- The heavy burden on patients and families: It takes up to 10 years, if ever, to get a diagnosis for many rare diseases. Patients will typically drain all financial and emotional resources during the process.
- The ‘unsolvable’ problem of rare diseases: Limited resources for each disease severely hamper research, diagnoses and treatments.
- An innovative solution of community-based problem solving: Join the NIH/USF IRON HACK biohackathon to creatively solve the problem by pulling together the effort of clinicians, researchers, genetic counselors and programmers. An NSF cloud platform has been awarded to connect communities across fields, states, and continents for a minimum duration of 12 months.

Who will be part of this community?

- Renowned scientists, clinicians and investigators in rare iron-related diseases – ataxia, blood and dermatological disorders. [Program with names of speakers for introductory remarks on each of the rare diseases will follow.]
- Clinicians, researchers, programmers, coordinators and motivated contributors with team-working skills.

How can you help?

Sign up for Iron Hack! You may join any of the existing projects on data visualization, pattern recognition and diagnostic tools; or propose your own project!

The team leads will follow up with the registrants to formalize concepts, wireframe the pipelines, evaluate experts’ feedback and implement prototypes.
Call for Applications

NSF Research Experiences for Undergraduates (REU) Site on Consumer Networking

Apply at - HTTP://REU.RNET.MISSOURI.EDU

HIGHLIGHTS:

- The participants will get a stipend of $5,000, room (if needed) and meal allowance, plus support for travel to/from the Site.
- Investigate interesting issues in the areas of: software-defined networking, visual cloud computing, social health networking, body area sensing and emotion recognition.
- Gain hands-on experience by carrying out projects.
- Work closely with experienced research faculty and graduate student mentors.
- Topical lectures to give the participants in-depth knowledge of consumer networking and related technologies.
- Seminars related to career development and graduate school preparation.
- Opportunities to present your work at various forums.

Eligibility:

Applicants must be citizens or permanent residents of the United States or its possessions.
Applicants must be an undergraduate student in good standing.
Applicants must be enrolled in the institutions including community colleges.

Requirements:

Non-local participants should live in campus housing -- arranged by this REU site.
Participants are expected to work 40 hours per week at the REU site.
Participants should follow research schedule -- arranged by this REU site and faculty mentor.
Once you accept an offer from this REU site, you are obligated to complete the 10-week summer program.
Coding and Robotics Teaching Opportunity

The FCC is seeking to hire two teachers to instruct children and teens in Coding and Robotics.

The classes will be offered this Spring, and also for a 2 week Summer Camp session this summer. The classes will be offered to 2 age groups, 9 – 12 years and 13 – 18 years. The classes will be small, with a maximum of 15 students. The class this Spring, date and time to be determined, will meet for 6 weeks, in weekly session of 3 hours each. There might be 2 classes offered in the Spring, offering 6 hours of teaching for those 6 weeks. The Spring classes will be scheduled in consultation with the teachers. The 2 summer camp classes will meet for 2 weeks, meeting daily from 9 AM to 3 PM.

The Firehouse has a mix of hardware; LEGO Mindstorm sets, Arduino kits, and 15 13” Macbook Pro laptops.

We would like to interview applicants soon. Competence in coding and experience in robotics is essential, as is the ability to work with young students and the ability to present complex concepts in electronics and programming with clarity to the students.

We are planning to use 2 teachers as a team in each class, as individual and hands on help is essential to effective teaching.

Pay will be $20/hour.

Please apply by sending a letter of interest and a resume of technical and teaching experience to:

Ms. Georgia Vahue
Executive Director, FCC
105 1st Ave NE
Ruskin FL 33570
5TH ANNUAL HERTZ HACKATHON

FEBRUARY 23RD + 24TH 2019 10:00AM

TXT "SIGN UP" TO 239.301.3889
OR VISIT FACEBOOK.COM/HERTZHACKATHON

LOCATION OF THE FUTURE

AI  VISUAL RECOGNITION  IOT

SPONSORS

amazon  IBM

salesforce  XTIVIA  SWFRTP
Job Opportunity for Unity Programmers

We are looking for 1-2 part time experienced Unity programmers to work with psychometricians who are developing a game based assessment. Work will be 20 hours per week with the project running from mid-February 2019 to February 2020. Pay is 20-25 dollars per hour depending on experience. Graduate student preferred but highly experienced advanced undergraduate will be given full consideration as well.

Send email describing interest, experience, and availability along with your resume to: Dr. Michael D. Coovert, m.coovert@gmail.com.
Position: Software Engineer – Entry Level

Company Name: SunView Software, Inc.

Experience: 0-1 Year

SunView Software is a leading provider of IT Service Management software that helps companies to better deliver, manage, and monitor IT services across the enterprise. SunView is using Artificial Intelligence and Machine Learning to drive smarter automation, predictive insights, and customer satisfaction.

We are currently seeking a highly motivated, self-starting individual to join our development team as an entry-level Software Engineer. The ideal candidate will gain hands-on experience successfully working with our development team of a commercial software package and seeing it through multiple releases.

Responsibilities:

- Work with the development team and meet project delivery dates by developing, publishing, and monitoring project schedules and timelines
- Actively work with the architect and other developers to design and implement product features
- Take an active role in process improvements in such areas as code review and unit testing
- Help ensure that testable builds are delivered to the test team daily
- Assist in supervising maintenance activities and ensure escalated support issues are addressed

Skills Required:

- Experience applying aspects of the Agile software processes helpful
- Hands-on experience using Visual Studio.Net, C#, and ASP.Net, preferred (C++ or Java experience a plus)
- Demonstrated expertise in problem solving
- Ability to work with a sense of urgency in a fast-paced, multi-tasking environment
- Strong verbal and written communication skills
- Bachelor’s degree in computer science or a related field preferred

This position requires the candidate to work on-site in our Tampa office. Relocation assistance is not available.

We offer our employees a competitive compensation and benefits package within a dynamic and thriving culture that rewards individuals who are committed to professional success. If you meet the above requirements and are interested in the position, please submit your resume along with salary requirements for immediate consideration.

Email: hrs@sunviewsoftware.com
Increasing Fine-Scale Temperature Details from Weather Model Forecasts

The field of meteorology constantly strives to achieve better weather forecasts by increasing the level of detail it can predict using sophisticated physics algorithms and supercomputers. Unfortunately, even with large supercomputers, there is an upper limit to the amount of physics-based models that can be computed in a timely manner. To improve on those limitations, meteorologists often use statistical techniques. We now seek to leverage more powerful AI techniques in order to achieve even better improvements in the forecasts.

This challenge is to increase the resolution (the level of detail) of 2D surface temperature forecasts obtained from Environment and Climate Change Canada (ECCC)’s weather forecast model, using as labelled images 2D temperature analysis at higher resolution.

Please visit https://www.mindsumo.com/contests/weather-model-forecast for more details.

Submissions due February 11, 2019

To complete this challenge, please provide the following:

- A detailed description of the methodology employed to solve the problem.
- All the scripts and source code used; or if source code refers to a software package or language, the versions used.
- The code should be clear and with enough comments to be easily understandable by the judges.
- The final model saved at the end of the training, as well as instructions to load and run this model.
- A plot of the score evolution through training (training set and validation set).
- The scores for each date and time of the test set and the average of these scores that will be used as the grade achieved by each participant. The lower the score (which is and equivalent rms error) the better.
- And anything else we might need to reproduce the answers of the participants.
- You can download the relevant files at this link. Due to the file size, it may take a moment to complete download.

Submissions will be graded on the following criteria:

- Meets Deliverables
- Creativity
- Clarity

To submit: https://www.mindsumo.com/contests/weather-model-forecast