

The Changelog

Alumnus Spotlight

On November 21st, we had our annual Co-op and Careers panel for the SE Freshmen Seminar students. This year we had four alumni on the panel, below are their bios. Every fall semester we look for panelists, and we welcome all local alumni to contact us to update their information so we can invite them to participate in future events!

Name: Stephen DeVay

Title: Scrum Master/IT Program Manager, Constellation Brands

Bio: At Constellation Brands, I am responsible for managing a program, and it's associated projects. Beyond this I work to help transition teams over to Agile Methodologies, including both Scrum and Kanban. Outside of work, I am politically active including serving as a Campaign Manager in this past election. The collaborative nature of SE helped prepare me for the collaborative nature of the work I do as I work to help people learn new ways of working.

Name: Jeff Kelley

Title: Scrum Master at Paychex

Bio: As the scrum master my job is to protect the current sprint, manage and improve our processes, and estimate and plan future sprints. Outside of work I primarily spend time with my wife and 2 year old son, play video games, and practice photography. Software Engineering is more than just writing good code, it's code design, requirements gathering, testing, delivery, UI/UX, etc. The software engineering curriculum at RIT taught me all of these skill and put me ahead of my peers from other universities. It also let me enter the workforce with a broader knowledge of the software development lifecycle and helped inform me how my code may effect that lifecycle after I hit the commit button.

Name: Jesse Jurman

Title: Software Engineer for Constant Contact

Bio: I am an SE alumni, and when I was at RIT I was a member, mentor, and project lead for the Society of Software Engineers, where I built cool stuff and made a network of friends that I still interact with today across many companies. Today I am a full stack developer, and build out systems in the backend and frontend for the Constant Contact web app. Outside of that, I like to do open source development and work on building small web apps and personal projects.

Name: Andres Ruiz

Title: Senior Front-End Engineer at SmugMug

Bio: I'm a Senior Front-End Engineer for SmugMug an e-commerce and web platform for photographers. My job is to build interfaces for our customers to build their photography businesses on our platform. This involves lots of Javascript, CSS, and a bit of PHP in the back-end. When I'm not coding, I enjoy biking in the summer and snowboarding in the winter. Outside of that, I love landscape photography, using it as an excuse to travel, explore and capture new and interesting areas.

The core SE classes and electives offered gave me a good foundation and habits from which I've built my career. The lessons learned in group projects have translated directly to being a better coworker.

Submitted Research/Grants

In October, the department had five proposal submissions. Dan Krutz, Assistant Professor, submitted one grant to the NSF, titled SEEDing the STEM Worker of Tomorrow Through Example-Driven Labs; he submitted two to LMI, titled Using Concolic Analysis for Malware and Vulnerability Detection and Intelligent Concurrency Execution in Prescient Self Adaptive Systems; and one to SIGCSE titled Understanding and Addressing Challenges for Women in Computing Education. Christian Newman, Assistant Professor, also submitted a proposal to NSF/Kent State University titled Supporting Automated Evolution of Large-Scale Software.

In November, Andy Meneely submitted a proposal to NSA/NCSU titled Security Lablet: Impact through Research, Scientific Methods, and Community Development.



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Office Happenings

There will be some changes in the SE office, specifically regarding our Academic Advising staff. Our Academic Advisors are hired centrally through the college and University Advising Office. These two offices have decided that we could use an additional part-time advisor to make sure our students are being served at an appropriate student:staff ratio. Be on the lookout for future announcements regarding what these changes will look like.

The Places We've Been

Yasmine El-Glaly, Lecturer, traveled to ACM ASSETS in Baltimore, Maryland, October 30th to November 1st:

I have been to ACM ASSETS, the premier conference on computers and accessibility. The conference this year, 2017, was in Baltimore, MD. There was a great group of researchers from all over the world presenting their innovative designs, technologies, and applications that support individuals with disabilities (e.g. visual impairment, deafness), and professionals who work with these populations. RIT and NTID had a great presence this year in ASSETS. For the research work I presented, it was about a system that facilitates collaboration and teamwork between hearing and hard of hearing students in small-group setting. The research was co-authored with Anthony Peruma, a dedicated smart graduate student in the SE department. Our work received very positive feedback and we plan on continuing working on this project.

Research Assistant Story

We asked our graduate students involved in research to tell us a bit about what they are doing. Below is a submission by Anthony Peruma, a second year graduate student.

As the adage goes - variety is the spice of life; I believe the same should hold true when you're starting off as a research assistant. Why? Simple! Software engineering is a vast field and you need to find your niche. I have had the privilege of working with some of the leading faculty members of the Software Engineering Department - Mirakhorli, Krutz, Mkaouer and El-Glaly. Working with different faculty members exposed me to many different areas of software engineering and provided insight on the different strategies and techniques for conducting, evaluating and reporting on research activities.

My research work has given me the opportunity to interact with multiple areas in software engineering - from architecture vulnerabilities to software accessibility challenges. I've mined software repositories collecting terabytes of data, built multiple tools, conducted participatory design & focus group studies and also spammed developers with online surveys! However, research is not all about coding! In fact, coding is the easy part! The interesting (and yes, sometimes hard) part is critically understanding the existing works in the field and looking for opportunities for new contributions or to extend existing studies. It may take weeks of brainstorming and countless cups of coffee just to decide on a research area and how to approach it. Needless to say, there will be long nights, plenty of rework and a whole lot of insanity (and did I mention coffee? Lots of coffee...). But the key is to stay focused, patient and, more importantly, manage your time (coffee helps too, but you already know that!). The end result of all the hard work is not just a tool or a paper, but a significant contribution to the field; something that no one else has done. You were the first!

My first brush with research was when I worked on an empirical study on software vulnerabilities related to architectural security tactics. Findings from this study showed the existence of vulnerabilities related to security tactics in major open source applications and also highlighted the need for appropriate security related design considerations in order to avoid vulnerabilities.

Further contributions include proposing new test smells along with a test smell detection tool and an empirical study on over 1000 Android apps. Findings from this research showed a widespread occurrence of bad unit testing practices with little or no effort by developers in correcting these issues. I've conducted research on Android permissions, including the characteristics of developers making permission related changes and the consumer's reaction to the permissions in an app.

I also had the privilege of working with the National Technical Institute for the Deaf's (NTID) Research Center for Teaching and Learning in proposing and building an inclusive discussion support system for hard of hearing (D/HH) and hearing students. This work was accepted at a premier conference in the field of computing accessibility (ASSETS). By working with hearing and D/HH faculty, students and life experts, we were able to demonstrate that our system yielded positive results and demonstrated the clear benefits of such a system. I was also part of a Imagine 2017 team that demonstrated the need for developers to build accessible software. Building on this, I created a set of classroom ready educational modules that demonstrates how to create accessible mobile applications.

So how did I get to work on these research projects? As a Software Engineering Masters student, the focus in almost all courses is research and projects. Hence, some of the research projects I have worked on initially started off as class projects. Once we realized the potential of our research, we continued to build upon our results and submitted our work to an appropriate conference. So my advice to current/future students: do not work on a class project merely for the sake of a good grade; use this as a platform to showcase and sharpen your research and analytical skills. Just one significant contribution could open doors to more, along with the opportunity to work with other faculty members (and yes, you might even get paid!). Oh, and it also makes your CV look nice and shiny!

Need more information or tips? I'm happy to help (over a cup of coffee). Happy Researching!

About This Newsletter

We have four members on the SE Social Media Committee: Kenn Martinez, Lecturer, Andy Meneely, Associate Professor, Chelsea O'Brien, Office Manager, and Bob St. Jacques, Lecturer. Please let us know if you would like to contribute to future newsletters by emailing contact@se.rit.edu.