Acknowledgments

The Missouri Iowa Nebraska Kansas Women in Computing (MINK WIC) Conference, located at the Ewing Marion Kauffman Conference Center in Kansas City, MO, October 15-16, 2015, was made possible by the hard work and collaboration of many people. We attempt here to name everyone whose hard work has made it a success! We apologize for any omissions.

• A very special thanks to the Kauffman Foundation for providing our conference space. Also to Microsoft Research and ACM-W (Association of Computing Machinery’s Council on Women in Computing) for their continued sponsorship of regional Grace Hopper celebrations.

• Many thanks to our local sponsors: Microsoft Research Connections, Cerner Corporation, American Century Investments, ACM-W, Commerce Bank, NetApp, Garmin, Lexmark, Northwest Missouri State Univeristy, Target, Carnegie Mellon University, University of Missouri-Kansas City, and KCP&L.

• All the faculty and staff who encouraged many of their women students to attend MINKWIC.

• Those who gave of their time to judge the posters: Melani Conley (Southwest Baptist University), Sarah Diesburg (University of Northern Iowa), Fengjun Li (University of Kansas), Michelle Todd (Hannibal-LaGrange University), Brian Hare (University of Missouri-Kansas City), Baek-Young Choi (University of Missouri-Kansas City)

• Our excellent keynote speakers! Duy-Loan Le (Global Technology) and Alicia Dwyer Cianciolo (NASA)

• Our excellent workshop presenters! Sarah Withee (Commerce Bank), Andreae Pohlman (Microsoft) and Michael Rogers (Northwest Missouri State University)

• Our excellent panelists! Imposter Syndrome Panel: Amber Beerends (Cerner), Debbie Jasiczek (Garmin), Erin Wilson (Lexmark), Katie Gazdich (Carnegie Mellon University), and Tanya Sargeon (American Century Investments); Women Entrepreneurs and Tech Startups Panel: Jeanne Johnson (Microsoft), Amy Vikander (Civic Ready), Laura Gowans (SpiderOak), Denise Case (Northwest Missouri State University), Angela Hurt (Veracity Consulting, Inc.) and Chrys Sullivan (Useagility); Internships and Launching Your Career Panel: Hannah May (Northwest Missouri State University), Yuvonise Thurmond (KCP&L), Dr. Joy Hatch (Fort Hays State University), Katie Medler (Target), and Regan Katz (Southwest Baptist University)

• Our hard-working committee members and volunteers

• Last but not least, all the wonderful student participants and presenters who shared twenty-five different posters, papers and lightning talks with everyone. YOU ARE THE FUTURE!!!
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#MINKWIC15 Missouri Iowa Nebraska Kansas Women in Computing | 2015 Conference
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Thursday Keynote Speaker

Unleashing Your Potential: Innovation and Life

*Duy-Loan Le, Global Technology Executive and Board Director*

Duy-Loan Le is an immigrant who came to America, with no money and unable to speak the language, to preserve her freedom. She will share her view on innovation and how it helped to unleash her own potential to become the first and only woman in Texas Instruments’s 85-year history to be elected Senior Fellow, the highest rank on the technology side. Duy-Loan will discuss the many obstacles along the way and the important things in life to pay attention to as one advances her career.

**Duy-Loan Le** is a highly accomplished Semi-Conductor Industry Expert and Technology Consultant gifted in global technology definition and development. Most recently, as a Senior Fellow of Texas Instruments (TI), she directed product & technology development & qualification with world-wide engineering teams, led all aspects of product launch execution & high-volume manufacturing, and worked with foundries, partners, and suppliers to support TI’s global business & technical needs. In 2008, Mrs. Le helped to establish businesses in Vietnam and worked with local universities to update teaching curricula, create laboratories, and implement an annual national design contest to nurture future engineers. She holds 24 patents.

In 2002, Mrs. Le became the first Asian-American and the only woman in the company history to be named a TI Senior Fellow, the highest elected technical title. She began her career with TI as a memory design engineer at the age of 19 and was responsible for bringing up the multi-billion-dollar memory product line, with joint venture partners in five countries and three continents for the first time in TI’s history. One of the Digital Signal Processor (DSP) products under her development leadership was recognized in the 2004 Guinness World Records while two of the DSP products under her operational management generated more than $2Billion. Throughout her career, Mrs. Le has received several prestigious awards, including Pink’s Top 15 Women in Business, Women on the Move, Women of Vision: Leadership, Women In Technology International Hall of Fame (WITI), National Technologist Of The Year, Times People, Science Spectrum Trailblazer, Asian American Engineer of The Year, Outstanding Young Engineering Graduate Award, Outstanding Young Texas Exe Award from the University of Texas, Who’s Who in the World, Vietnamese and American National Gala’s (VANG) Golden Torch Award for Exemplary Citizenship, United States Congressional Recognition for Civic Leadership, California Senate Recognition for Outstanding Civic Leadership, Texas State Recognition for Leadership, and Houston’s Leader. She chairs the Compensation Committee for the Board of Directors at National Instruments Inc. and previously served on its Nomination & Governance Committee. Duy-Loan chairs the Technology Committee for the Board of Directors at eSilicon Corporation. Mrs. Le is recognized by the National Association of Corporate Directors as a NACD Board Leadership Fellow. Her extensive community service around the world is focused on education and Science-Technology-Engineering-Math (STEM). Duy-Loan Le is a Registered Professional Engineer and holds an MBA from Bauer College of Business, University of Houston and a BSEE from the Cockrell College of Engineering, University of Texas.
Friday Keynote Speaker

From the Sandhills of Nebraska to the Sand Dunes of Mars, Anything Can Happen If You Let It

Alicia Dwyer Cianciolo, NASA Engineer

Sometimes unleashing our personal potential means getting out of our own way to overcome fears of the unknown and summon the courage to take risks.

Having just had my 20 year high school reunion, I wonder what my reaction might have been if someone back then would have told me that by now I’d be working at NASA for 15 years, have participated in almost every mission to the planet in the past decade, and be planning to send people to Mars. What’s more, that I would be married with four children, one of whom wants to go! For a shy kid from Nebraska, for whom just getting the nerve to make a phone call resulted in long bouts of procrastination, this path was not exactly planned.

I’ll share highlights of my not-so-straight journey from growing up in the Sandhills of Nebraska to landing rovers in the sand dunes of Mars, including specific instances of finding opportunity in unlikely places, daring mighty things, and attempting to make the impossible possible.

Anything can happen if you let it.

Ms. Cianciolo is an aerospace engineer at the NASA Langley Research Center in Hampton, VA. For the past 15 years she has been using computer simulations to design spacecraft trajectories at Mars and other destinations in the solar system including Venus and Titan, the moon of Saturn. She has worked to successfully place two orbiters around Mars: Mars Odyssey in 2001 and Mars Reconnaissance orbiter in 2005. She worked on the entry descent and landing simulations for the Mars Exploration Rovers 2004 and was a member of the landing team that delivered Curiosity to Mars’ Gale Crater in 2012. She is currently working to analyze atmosphere data from the MAVEN spacecraft and is a member of the Entry, Descent and Landing team for the InSIGHT lander mission scheduled to launch in March of 2016. In addition to robotic missions at Mars, she also evaluates entry technologies and designs the trajectories that may take humans to the surface of Mars in the 2030’s. She holds two pattens, numerous publications and several NASA awards including the Exceptional Achievement Medal for her work on Curiosity. She has a bachelor’s degree in Physics from Creighton University and a master’s in Mechanical Engineering from The George Washington University. Thanks to Internet, she is able to work from her home near St. Joseph, Missouri.
Understanding the Health of a Campus Network Using Big Data Analytic Tool  
Presenter: Helen Gebre-Amlak, University of Missouri - Kansas City, hhgc77@umkc.edu

Understanding the health of a network via offline outage and failure analysis is important to assess the availability of the network, and will help improve future network reliability. In this presentation, we will share the result of a university campus network outage and failure analysis (UMKC access network); this type of analysis has not been investigated previously due to the lack of effective methodologies. Splunk, one of the big log data analysis tools, was used to effectively handle the sheer amount of node outage and link failure log data and topology information. In the research, we investigate the network reliability characteristics using SNMP and syslog data, evaluating causes of failures, and their impact. Our study shows that the general characteristics of the different layers are very distinct from each other, and the wireless network is less reliable compared to the wired network, but it is also affected by the performance of the wired network.

Feature-based Search Engine for Open Source using Big Data Analytics  
Presenter: Malathy Krishnan, University of Missouri - Kansas City, mkdb9@mail.umkc.edu

The open-source codebase has increased enormously with no proper documentation. Hence, understanding the functionality of each project has become extremely difficult. In our research, a Big Data Analytics model is proposed for automatic discovery of components and features for open-source projects using Machine Learning. Open-source codebase is huge and semi/unstructured. Hence, Big Data Analytics is required for analysis and processing. Feature discovery can be defined as the functionalities implemented in the code-base. The components are identified based on the implementation of features. Machine learning is an ongoing process with which the model can become more intelligent as it learns from different codebases. The existing approaches of feature identification are semi-automatic and often require human intervention. Manually identifying the features for all open-source projects is practically impossible. Our research is a semantic approach to automatically discover the features and identify the components based on similarity of classes from a source code repository. The overall goal of the approach is to automate the entire process, reduce the time taken and the cost, increase accuracy of identifying the feature in any given codebase.

The initial step is to parse the given source code with RDF Coder to get the meta-data. This meta-data is then parsed to extract useful information like the class names, attributes, method, parameters, return type and packages. NLP (Natural Language Processing) is applied on the data to filter the plurals, extract the root word etc. This data is then sent to LDA (Latent Dirichlet Allocation) which gives more information on grouping the classes together based on similar topics(features). The output from LDA is sent to K-Means clustering algorithm, where similar classes are grouped together based on the topic discovery, to form different components. Each component with the details of the classes is then sent to TF-IDF to discover their functionality. The above machine learning algorithms are implemented in Spark, Scala and Java. Thus, for a given a code-base, the entire model results in a list of components grouped by similarity of classes and the feature list of each component.

As a case study illustrating the automatic discovery of components and features of Apache-Solr, we demonstrated the accuracy and scalability of our proposed model compared with manual evaluation by software architecture experts as a baseline. The entire process is automated and hence no manual intervention is required. Apache Spark is a fast and general engine for big data processing. It has been fully utilized to achieve a more scalable solution for handling large scale open-source projects. As manual analysis of codebases is practically impossible, this approach results in a much lesser cost.
As github is key-word based search of open-source codebase, this model will be a feature-based search. It can also be used in comparing various versions of the same system and identifying similar open-source systems. This is just a beginning for a complete automatic feature recovery and component identification of a given codebase, this approach can be used in many different applications to get more useful information about the project.

**Application Template for Decision Making and Disaster Impact mitigation**

**Presenter:** Sheekha Singh, University of Nebraska – Omaha, ssingh02@unomaha.edu

Uncertainty is an inevitable aspect of most IT projects, and the most successful managers face difficulty handling these various uncertainties that have a negative impact. Project management uncertainties are categorized as known unknowns and unknown unknowns and we are going to focus on unknown unknowns. Project managers cannot predict the future, but accurately gauging the degree of uncertainty inherent in their projects can help them quickly adapt (Meyer, Loch & Pitch, 2002). Risk management is the practice of identifying, evaluating and controlling these factors to avoid or to mitigate impact. There have been many techniques and plans employed to avoid black swan events. Best practices are expert judgment and stochastic methods, and a useful tool to support expert judgment would be an expert system which provides information regarding managing black swan events like earthquake. I intend to develop an application which would help project managers carry out tasks at the time of crisis which they might ignore otherwise. “Highly innovative/radical IT projects reflect a ‘black swan’ situation, where knowledge from previous projects does not provide significant insight into how they can be managed” (Wu, Rose & Lyytinen, 2011). Black swans, unknown unknowns, represent the unpredictable, which is outside the realm of regular expectations and experience which carry a great impact; e.g., natural disasters, market crashes, catastrophic failures and any surprising events (Masys, 2012). A study based on data from 1,417 IT projects showed that although the average cost overrun was only 27%, one in 6 projects had a cost overrun of 200% and a schedule overrun of almost 70% (Flyvbjerg & Budzier, 2011). A large number of black swan events have occurred since 2005. Hurricane Katrina in 2005 is considered to be one of the major unknown unknowns (circumstances that are impossible to predict), and we are still dealing with the consequences today 10 years later. Another major black swan event was the 2010 market crash with worldwide impact. An earthquake measuring 7.3 on the Richter scale in Japan also made it to the list of the black swan events. Therefore, the product of this research would be an application to meet the needs of effective project management and alert to tasks that need to be performed to reduce the impact of damages incurred during one of these catastrophic events. The application will serve as a template to rapidly construct a plan to mitigate harm based on empirical research.
Poster Session

Graduate Entries

Understanding the Tension Between Genome Defense and Genomic "autoimmunity" by piRNAs
Presenter:  Alexandra Erwin, University of Kansas, a312e318@ku.edu

Transposable elements (TEs) are DNA parasites that proliferate in the genome. Since their movement is harmful, a small RNA immune system (piRNA) has evolved to limit their spread. In addition to TEs, genes may also be the target of this immune system. Using a unique syndrome in Drosophila virilis, we show that genic off-targeting can differ significantly between strains. We also find that when TEs are chronically expressed in the germline, genic piRNA targeting increases. The tension between silencing TEs and subsequent effects on gene expression may be an important evolutionary determinant in the evolution of the piRNA machinery.

Harnessing Kansas City Open Data to Improve the Lives of Citizens
Presenter:  Samaa T. Gazzaz, University of Missouri - Kansas City, stgrkf@mail.umkc.edu

The increasingly rapid growth of real-life data makes it difficult to be processed and analyzed manually. In this research, we attempt to harness Kansas City crime data and utilize the extracted information in improving the lives of citizens. We used the Bayesian database ‘BayesDB’, created by MIT researchers, to build a probabilistic model of the dataset and derive meaningful knowledge. In addition, we addressed the strengths and weaknesses of ‘BayesDB’ as a step toward improving the scalability of such a system, so that it can handle ‘big data’ in an efficient manner.

Understanding the Health of a Campus Network Using Big Data Analytic Tool
Presenter:  Helen Gebre-Amlak, University of Missouri - Kansas City, hhgc77@umkc.edu

Understanding the health of a network via offline outage and failure analysis is important to assess the availability of the network, and will help improve future network reliability. Splunk, one of the big log data analysis tools, was used to effectively handle the sheer amount of node outage and link failure log data and topology information. In the research, we investigate the network reliability characteristics using SNMP and syslog data, evaluating causes of failures, and their impact.

Improved Caching for DASH
Presenter:  Sheyda Kiani Mehr, University of Missouri - Kansas City, skkv6@mail.umkc.edu

Dynamic Adaptive Streaming over HTTP (DASH) technology enables delivery of high quality videos over the Internet using web-servers. With DASH the client has the ability to select from multiple video qualities based on the network conditions. We propose an Adaptation Aware Cache (AAC) framework based on bandwidth estimations at the in-network cache between client and the HTTP server to improve the QoE of the video. Our scheme uses the knowledge of the rate adaptation scheme used by clients to predict the next segment that could be requested by a client to increase byte-hit and reduce unnecessary pre-fetches in the cache.
Feature-based Search Engine for Open Source using Big Data Analytics
Presenter: Malathy Krishnan, University of Missouri - Kansas City, mkdb9@mail.umkc.edu

The open-source code base has increased enormously with no proper documentation. Hence, understanding the functionality of each project has become difficult. In this project, a Big-Data Analytics model is proposed for automatic discovery of components and features for open-source projects using Machine Learning. The steps involved are to extract meta-data, get the topic discovery with LDA, clustering with K-means and analyzing the features with TF-IDF in Spark environment. As a case study, we demonstrated the accuracy and scalability of Apache-Solr and compared with manual evaluation by software architecture experts as a baseline. This project can be used as feature-based search engine.

A Framework for Analyzing Federal Regulations for Information Security
Presenter: Sayonnha Mandal, University of Nebraska – Omaha, smandal@unomaha.edu

The Nòmos 2 framework for modeling law-compliant solutions in software system design is applied in the context of the Federal Information Security Modernization Act (FISMA) of 2014. Information security regulations with a high variability space are examined to explore the utility and limits of the Nòmos 2 framework for information security regulations. Additionally, Nòmos 2 concepts are modeled in a semantic web representation for reasoning about the applicability and satisfiability of FISMA regulations for information systems. The use of freely available semantic web toolsets for knowledge modeling and reasoning are demonstrated in an example scenario requiring the determination of FISMA related authorities and functions.

Predicting Author Traits from Twitter Messages
Presenter: Caitlin McCollister, University of Kansas, caitlin.mccollister@gmail.com

How much can we tell about a person from nothing but their tweets? The aim of this work was to design a system that automatically predicts an author's age, gender, and personality traits based on training data provided for the PAN 2015 workshop's Author Profiling shared task. Using an approach centered on probabilistic topic modeling, the finished system performed admirably among an international field of competitors. We will present the architecture of the system, as well as share some of the pitfalls and breakthroughs encountered in its design and implementation.

Reactions to Internet Security Warnings: Personal versus University Computers
Presenter: Jenny Stanhope, Missouri Western State University, jstanhope@missouriwestern.edu

The purpose of this research is to determine if computer ownership plays a role in reactions to internet security pop-up warnings. University students are asked to bring personally owned computers to the psychology lab to take a reading comprehension test. The participants are randomly assigned to use an institutional computer or personal computer. They are told that the test is timed and to hold all questions until finished. During the test, a pop-up internet security warning appears on their screen. We found that participants who used university computers were less likely to read the warning and to close it quickly.
Nowadays massive amounts of data are being created by modern companies, and many challenges are being faced with relational database technologies which can be too limiting for use with modern web applications. Complex information systems may require a polyglot approach chosen from a variety of relational and NoSQL (key-value, document, column family and graph) management systems to best address multiple business objectives. Specific research into evolving design options will be presented. Designing an appropriate data model using polyglot persistence technique can improve data access performance via some combination of handling larger data volumes, reducing latency, and improving throughput.

**Undergraduate Entries**

**Apps Development Using Different Platforms**

**Presenter:** Kriti Kafle, Park University, 929545@park.edu

According to Harvard Business Review article, the average person interacts with their mobile device 150 times a day and by end of 2015 there will have been 5 billion enterprise app download. Based on increasing use of apps, the objective was to give a student with little knowledge about mobile computing an opportunity to develop apps for smart phone and smart watches using different platforms. The student utilizes three platforms to develop apps, namely App inventor, Android sdk and cloud pebble. Utilizing the three platforms, the student was able to develop three simple, functional and useful apps.

**Canvas Train Sorter Using the Towers of Hanoi Algorithm**

**Presenter:** Kriti Kafle, Park University, 929545@park.edu

The objective was to implement a train sorter program using what would allow a user to sort the trains in ascending order. The program utilizes the Towers of Hanoi algorithm and also handles the worst case scenario using a recursive algorithm. The program is developed using HTML5, CSS, and JavaScript.

**Network Visualization Tool**

**Presenter:** Becca May, University of Missouri - Kansas City, beccammay@gmail.com

Network Visualization Tool (NVT) is an app designed to visually represent and aggregate network data. NVT was motivated by a need to present findings about network resilience and geographically correlated events in a concise, visual format. A geometrically based algorithm allows the user to plot intersections of many different areas of interest on the network, making it easy to see vulnerabilities according to the metric used. Developed in Python, it uses several classes to encapsulate a network and its relevant characteristics. NVT has proved to be a useful tool which will be further optimized and packaged for future research use.
Lightning Talks

**Mathematical Modeling in Neuroscience: NEURON**
**Presenter:** Ellen Fjellman, Southwest Baptist University, s622883@sbuniv.edu

Rarely do sufficient data materialize from a single experiment; applicable discoveries are pieced together from the laborious efforts of innumerable researchers, gaining ground measurement by measurement. Mathematical models are key to advancing the borders of scientific knowledge because they elucidate otherwise abstracted data. NEURON, a modeling tool developed by John Moore and Michael Hines, has proved to be revolutionary to the neuroscience field. While researchers work to characterize nervous systems, NEURON provides an intuitive platform for organizing each minute finding. This software demonstrates how computing unites laboratories globally as scientists seek to understand the most complex organ system in existence.

**Swift-New iOS Fast and Safe Programming Language**
**Presenter:** Vasudha Jagarlamudy, Northwest Missouri State University, vasudhajags@gmail.com

The Swift programming language, which is introduced lately for iOS, OSX and watch OS, is programmer friendly. Swift is an interactive language and easy to learn for programmers with rudiments in OO programming. My experience with swift began during my college course which led me to develop simple applications using Swift and did not require any earlier development experiences. The API, which is simple and easy to read and follow, is expressed in Objective-C. The programming style is powerful, and use of protocol concepts makes it faster and easier for a programmer to carry out implementation of further requirements.

**Feature-based Search Engine for Open Source Using Big Data Analytics**
**Presenter:** Malathy Krishnan, University of Missouri - Kansas City, mkdb9@mail.umkc.edu

“The open-source code base has increased enormously with no proper documentation. Hence, understanding the functionality of each project has become difficult. In this project, a Big-Data Analytics model is proposed for automatic discovery of components and features for open-source projects using Machine Learning. The steps involved are to extract meta-data, get the topic discovery with LDA, clustering with K-means and analyzing the features with TF-IDF in Spark environment. As a case study, we demonstrated the accuracy and scalability of Apache-Solr and compared with manual evaluation by software architecture experts as a baseline. This project can be used as feature-based search engine.

**My Inspiration – Women’s Lives Before and After Computer Science**
**Presenter:** Saimadhavi Murari, Northwest Missouri State University, murarimadhavi9@gmail.com

Computer science brought a drastic transition in women’s lives. It was an inspiration to see the statistics of women employees in India before and after computer science. This field is user friendly; moreover, it offers lucrative jobs, professional careers, and safe working environments. Large numbers of families have been changed due to the advancement of women in computing. In India, women employment has increased exponentially. There are some stories where the young women changed the life style of their families, which is inspirational for present young girls to imagine themselves in creative positions in creative field.
**Women in Technology**
**Presenter: Sumnima Rana**, Northwest Missouri State University, sumnimarana1@gmail.com

Short Video on women in Technology, Introduction: Women in Technology, the Key Facts, Famous Women (Role Models), Roles and Position of Women in High-tech Jobs, Importance of Technology for women, Brief description on Reasons and problems about Why so Few Women in Tech? Some Explanation on How to overcome it? For the Development of Women in Technology, How/Where do we start? Short description of Organization involved in empowerment of women in technology. What are the platforms for women in technology? What are the next steps that women can do in the field of technology?

**A Big Data Methodology for Categorizing Technical Support Requests Using Hadoop and Mahout**
**Presenter: Ramya Sankara**, Northwest Missouri State University, S525107@mail.nwmissouri.edu

“A commercial product that comes with support will often win over customers giving assurance that someone will provide solutions.” Several millions of customers world-wide raise technical support requests related to software products. By saving this data on Hadoop we can organize, analyze, categorize and access all support related data from the company efficiently. Mahout Map Reduce algorithms help in clustering the data. We discuss the challenges faced for development of such a system which categorizes all the technical support queries, and the solution we provide by using the Hadoop programming model, extended ecosystem, and the Mahout Big Data Analytics.

**Social Networking and Smart Women**
**Presenter: Sheekha Singh**, University of Nebraska – Omaha, ssingh02@unomaha.edu

The buzzword today is social networking. We use this platform to showcase talents in every field. Being updated with the latest inventions has become a must for everyone. Social networking sites have helped to prove to the world that women are not behind in the race, and statistics have shown that there has been an increase in the number of women users on these sites than men. I strongly believe that these platforms should be extensively used and young students should be encouraged to explore various groups, which would result in more number of girls choosing computers as their career field.

**Cloud Computing - Microsoft Azure**
**Presenter: Ramya Krishna Velivala**, Northwest Missouri State University, ramya.velivala@gmail.com

In recent times, IT Organizations are facing challenges with an increase in maintenance and operating costs for storing massive amounts of data on their own servers. Microsoft Azure has been a popular choice among IT pros looking to move their systems to the cloud. It reduces the need for up-front technology purchases, and enables developers to quickly and easily create applications. Azure offers several ways to host web sites: Azure App Service, Cloud Services, Virtual Machines. Hence, organizations that can’t afford the costs of in-house development can deliver their applications using Microsoft Azure without building and maintaining an expensive data center.
Invited Technical Speakers

I Don’t Know. I’ll Figure It Out!

Amber Beerends, Cerner Corporation

On any given day, a software engineer will likely encounter at least one problem for which they don’t know the solution. This can be unnerving and contribute to imposter syndrome especially if you are surrounded by people who seem to know everything all the time! I will share how I have learned to take on big and small challenges in working in a field where there is always something unexpected to investigate and something new to learn.

Amber Beerends is a Lead Architect at Cerner Corporation. She leads an edge development team based in Victoria, BC while working remotely from her home in central Iowa. Amber graduated from Northwest Missouri State University in 2000 with a degree in Computer Science. She has worked at Cerner for most of the last 15 years, having experience in a plethora of Java based technologies. Amber’s interest in Imposter Syndrome is one of personal self-discovery. When not chauffeuring her kids to various activities, she enjoys running and biking.

UX in the Real World

Courtlan Howard, Useagility

The “real world” of making technology is much more than writing lines of code. It’s about creating software, web and mobile applications that are useful and engaging to the people that use them. User experience design is a growing field that is key to the success of technology. It’s a place where the tech world and creative world intersect. Courtlan will share her personal journey in the technology space which led her to user experience, an area of technology that is well-suited for so many women. This is a great introduction to UX, and for those who are interested, Courtlan will share recommendations for fields of study that can start you on the path to a career in UX, and will suggest ideas for how to start getting experience right now with school-based and community-based learning opportunities.

Courtlan Howard is an Experience Director at Useagility, a user experience consulting firm dedicated to making technology products easier to use. Courtlan uses a variety of research methods to articulate the user experience strategy, and collaborates with designers to bring the product to life for the client. Courtlan developed a passion for user experience during her career as a Business Analyst, leading scoping activities for software development initiatives in a variety of organizations, from Fortune 500s to start-ups. She started in the Computer Science discipline, earning a Masters of Computer Science from the University of Kansas. Courtlan is now a Certified Business Analysis Professional (CBAP) through the IIBA and a member of the local UXPA organization, UXPA Kansas City.
Confidence and Creativity in a Tech Career

*Lynn Miskell, NetApp*

In this presentation, you will learn how confidence and creativity work together to make great things happen, and how to tap into both as you build your career in computer technology. Creative thinking can help solve business problems, or develop new ideas for innovative products. Discover things about your own confidence and creativity, and how other women have applied them in their careers.

**Lynn Miskell** is a software development manager at NetApp. Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. During her career, Lynn has worked as a developer, project manager and people manager on a variety of systems and in a variety of organizations, ranging from manufacturing systems at an aircraft company, to distributed Point-Of-Sales systems at a global pizza company to her current role at data storage company, NetApp.

Lynn is a member of the Wichita chapter of Women Who Code, and enjoys working with teachers and students to facilitate and promote computer programming in grades K-12. NetApp's Volunteer Time Off program enables Lynn to participate in a STEM program with the Girl Scouts, which recently won an award as part of the STEM2020 initiative.

Digital & IT, a Partnership

*Jennifer Pumphrey and Heather Williams, American Century Investments*

Like most companies, there are many different teams responsible for the care and feeding of the American Century Investments web properties. The more disconnected these teams are, the more the client experience suffers. Take a journey with us as we share how we’ve strengthened our partnership--and a few mistakes we made along the way too--and come away with lessons that you can apply in any organization.

**Jennifer Pumphrey** is Digital Channel Solutions Manager for American Century Investments. She has over 20 years’ experience in digital marketing, interaction design and user experience. Jennifer and team are responsible for digital product management, testing and optimization of web and mobile sites, and social media strategy and execution. She is a member of the American Century Investments Speakers Bureau, delivering financial literacy education to kids and young adults in our community. Jennifer holds a BA from Rockhurst University and an MBA with an MIS emphasis from the University of Missouri, Kansas City.

**Heather Williams** is an Information Technology Manager for American Century Investments, a premier investment manager headquartered in Kansas City, Mo. Heather manages a team of 13 developers responsible for all of the companies external facing websites that service their direct, intermediary, institutional, and international clients. Prior to becoming a manager Heather was a Programmer/Analyst-Specialist with the company and served as a team lead, project manager, and developer on various teams within the Information Technology department. She graduated from University of Missouri – Columbia in 1996 and worked for a software consulting company prior to joining the firm in 1998.
Unleashing Your Leadership Potential

Katherine Schoenborn, Commerce Bank

Does getting into a leadership position interest you? Do you have what it takes? Come learn about different leadership career paths available in the technology field and see if unleashing your leadership potential is right for you.

Although Katherine Schoenborn took computer science courses in college for her BS in Math and a minor in English, it was not her initial interest. However, when her career started at Alltel she found herself learning to be a COBOL programmer. During her time at Alltel she worked on VB applications and started developing in Java. In 2001 she moved to Commerce as a VB Programmer for our Branch Connections team. While at Commerce she has had the opportunity to play many roles including, developer, technical writer, business analyst, project manager, and project lead. In 2013, after 15+ years of being in software development, Katherine was encouraged to take on a new opportunity and enter leadership. She never doubted her ability to lead a team, but wanted to be able to juggle her life outside of work and the demands of being an effective leader. Her greatest strengths includes building meaningful relationships with the people she works with, the ability to crossover technical barriers, and the ability to weigh and consider multiple perspectives. Her focus as a leader is to be available, ensure accountability, create a results driven yet rewarding environment, and develop a collaborative, innovative and consistent team.
# Panels

**Women Entrepreneurs and Tech Startups**
Panelists will talk about what it’s like to be a woman entrepreneur or work in a tech startup. Panelists will share their experiences in taking risks to push boundaries and unleash their potential.

**Panelists**

- **Jeanne Johnson (Moderator)**  
  Senior Enterprise Strategist: Business Continuity and Disaster Recovery  
  Microsoft

- **Amy Vikander**  
  General Manager  
  Civic Ready

- **Laura Gowans**  
  Director of Customer Experience  
  SpiderOak

- **Denise Case**  
  Assistant Professor  
  Northwest Missouri State University

- **Chrys Sullivan**  
  Founder & CEO  
  Useagility

- **Angela Hurt**  
  Founder and CEO  
  Veracity Consulting, Inc

**Jeanne Johnson** is a Senior Strategist and a member of the Global Black Belt Organization. Specializing in Business Continuity and Disaster Recovery utilizing Enterprise Datacenters, Hosted/Service Providers, and Public Cloud, Jeanne manages the Enterprise partner community in Canada, United States and Latin America. Prior to being recruited to Microsoft, Jeanne started up, grew and profitably sold a technology consulting firm from 2002 to 2009. During her time as the owner of Server Centric Consulting, she received the WIPP Fast Five Award in the White House, and was an Ernst and Young Entrepreneur of the Year finalist for the Midwest. A serial entrepreneur, Jeanne also started up many other companies ranging from Online Bill Pay companies, Property Management Firms, Marketing and Event Management businesses, Software Development companies, and Wind Energy Start Ups. As an entrepreneur, she also worked as a lobbyist for Women Impacting Public Policy, speaking before the Senate subcommittee on Small Business on issues specific to Women Owned Businesses.

Mother of 3 adults, Jeanne is a motorcyclist, a stage performer, a stained glass artist, and a mentor to Entrepreneurs.

**Amy Vikander** is the General Manager to CivicReady a product of CivicPlus headquartered out of Manhattan, KS. She has been with CivicPlus since 2007 maintaining several positions. As the General Manager of CivicReady, Amy is responsible for the overall go-to-market strategy of the newest product offering of CivicPlus. Prior to accepting the position with CivicReady, Amy worked As the Director of Client Care and helped define the strategy and vision for CivicPlus while leading a team of Account Managers and Support Specialists. Throughout her career, she has focused her efforts on building teams that focus on continual
growth both personally and professionally. Amy is the mother of four boys, ages 7, 8, 10 and 15. Outside of work, her life is full of baseball, football, and any other typical sporting event her children find to participate in.

Denise Case is an Assistant Professor at Northwest Missouri State University. Her career includes 20 years as a licensed professional engineer with Black & Veatch, a global engineering, consulting, and construction company working on information systems and analytics for critical infrastructure industries. While raising five kids and a half-dozen animals, she decided to leave the 8-5 routine and start her own consulting business. She built a business plan and a growing client base, working on innovative projects for regulatory agencies and Fortune 500 companies. She graduated with a BS in Chemical Engineering from the University of Missouri at Columbia in 1985 and 30 years later, earned a PhD in Computer Science from Kansas State University.

Laura Gowans graduated from Scripps College in 2009 with a B.A. in History and French. After graduating, she returned home to Kansas City to join a small startup named SpiderOak as its eighth employee. Over the following years, as SpiderOak grew from a small startup into an internationally recognized company, Laura's role grew from the single customer support representative to the manager of the customer support department and finally to Director of Customer Experience. This role entails not only managing the CS department but also working on designs for upcoming products and helping direct the future of the company. In her free time Laura enjoys volleyball, hiking, and reading.

Angela Hurt is the Founder and CEO of Veracity Consulting and has more than 15 years of experience in the technology industry. Her career began in 1999 with a Kansas City-based consulting firm where she committed to learning from those around her. She focused on developing collaborative relationships with peers and associates in the field, which created opportunities for her to test her skills and gain experience working for national firms. Her expertise in business development, systems integration, business IT standards and processes, and management consulting was the impetus for her to found Veracity Consulting in 2006. Her vision was to build success through thoughtful relationship building and the conscientious understanding of individual work environments. As a driving force at Veracity, Angela has led the company to where it is today. She is also passionate about giving her time and talent to local organizations and outreach programs supporting the character development, personal growth, and education of women and girls, particularly local and regional STEM initiatives. Angela is also the Co-Chair for Kansas City’s 2015 GoRed for Women Campaign, which raises awareness of women’s heart health issues.

Chrys Sullivan is Founder at Kansas City-based UX firm, Useagility. Under her leadership, the company has ranked among KC’s fastest-growing companies. She and her team are elevating exposure of user-centered design as critical to success of digital products at established companies and innovative start-ups. Chryls is also an advocate for women in the technology workforce and a company culture that supports work-life balance.
Imposter Syndrome

The “imposter syndrome” is a common, yet typically unacknowledged, condition. Those experiencing it typically have difficulties believing in and internalizing their own accomplishments, despite clear evidence of success. Many young women starting out in undergraduate computing majors believe that they are not as qualified as men. This panel will address the confidence problems that women often have upon entering the computing field. Panelists will talk about their own experiences with the imposter syndrome.

Panelists

Debbie Jasiczek (Moderator)  
Software Engineering Manager  
Garmin International

Amber Beerends  
Lead Architect  
Cerner Corporation

Tanya Sargeon  
Senior Information Technology Manager  
American Century Investments

Erin Wilson  
Software Engineer  
Lexmark

Amber Beerends, Cerner

Amber is a Lead Architect at Cerner Corporation. She leads an edge development team based in Victoria, BC while working remotely from her home in central Iowa. Amber graduated from Northwest Missouri State University in 2000 with a degree in Computer Science. She has worked at Cerner for most of the last 15 years having experience in a plethora of Java based technologies. Amber’s interest in Imposter Syndrome is one of personal self-discovery. When not chauffeuring her kids to various activities she enjoys running and biking.

Kari Gazdich, Director of Admissions, Carnegie Mellon University

As Director of Admissions, Kari oversees the INI admissions and recruitment process, which includes formulating and implementing strategies for all programs. Her work entails directing the work and activities of the admissions team and the admissions review committees. She also serves as a member of the INI leadership team. Most recently, she held a project management position with the federal government in conjunction with the Vietnam Education Foundation. She holds a Master of Public Management degree from Carnegie Mellon.

Debbie Jasiczek, Garmin International (moderator)

Debbie is a Software Engineering Manager at Garmin International. She is the math nerd daughter of two math nerds. After majoring in Math & Computer Science at MidAmerica Nazarene University, Debbie found embedded software as a great way to apply her love of math! She joined Garmin right out of college and began working on the core GPS and sensor algorithms. 13+ years later, Debbie now leads the Software Technology group for Garmin’s Consumer products with teams focusing on GPS, sensors, file systems, Wi-Fi,
operating systems, and ConnectIQ. She just completed a Master’s Degree in Mathematics from Emporia State University. In her free time, Debbie loves to travel, play games, and spend time with her husband and 3 fur-babies (2 dogs and 1 cat).

Erin Wilson, Lexmark
Erin graduated with a B.S. in Computer Science from Baker University in May of 2014. Since her graduation she has worked at Lexmark Enterprise Software as a Software Engineer. At Lexmark she has worked on the Business Process Management and Forms teams. Outside of work she has a long list of hobbies, some of which include quilting, biking, and baking.

Tanya Sargeon, American Century Investments
Tanya is a Senior Information Technology Manager for American Century Investments. She holds a BS degree in Information Technology from Rockhurst College. After fifteen years as a software developer, Tanya decided to move to a manager role within the company. She has lead the Investment Operations team, which managed the fund accounting and pricing of funds at ACI, and currently manages the Corporate Applications team. Tanya and team are responsible for all systems related to Corporate Finance, Human Resources, Facilities Management, Physical Security and Payroll. When she isn’t glued to a computer screen, she spends her time cheering on her youngest son’s basketball team as well as the Royals and the Chiefs!

Internships and Launching Your Career
Panelists will talk about what it takes to get an internship and how to position yourself for starting a successful career. Panelists will share advice from how to find an internship, nailing the interview, how to make a good impression, and what to do to land that first job.

Panelists

Hannah May (Moderator)
Student
Northwest Missouri State University

Katie Medler
Technology Services
Target

Yuvonise Thurmond
IT Supervisor, Outage Management System Team
KCP&L

Regan Katz
Student
Southwest Baptist University

Dr. Joy Hatch
V.P. for Technology
Fort Hays State University

Hannah May, Northwest Missouri State University (moderator)
Hannah is a senior at Northwest Missouri State University, expecting to graduate May 2016 with a Bachelor’s degree in Interactive Digital Media with an emphasis in Computer Science and New Media. On campus I am a
member of ACM-W, Digem, STEM and Sigma Kappa Sorority. I work on campus in career services as Web Page assistant, and also as a teaching assistant for Computer Science classes. The summer of 2014 I interned at Gallup Polls doing Quality Assurance work as well social media planning. I spent this past summer interning at Garmin as a Web Business Analyst. During the fall I continue to work for Gallup as an instructor for their high school program “Get Hip” on Saturdays. I enjoy getting involved with things on campus and traveling with the Northwest road show to talk about the importance of technology and getting kids involved.

**Yuvonise Thurmond, Kansas City Power and Light**

Yuvonise worked as a Programmer Analyst in various positions before joining Kansas City Power and Light Company (KCP&L) in 2006. Currently, she is the IT Supervisor for the OMS (Outage Management System) Team at KCP&L. In addition, she is the coordinator for the KCP&L IT Internship Program and is a member of the Computer Science/Information Systems Professional Advisory Board at Northwest Missouri State University. Yuvonise attended the University of Missouri – Kansas City, and graduated from Northwest Missouri State University with a Bachelor’s of Science degree in Computer Science in 1992.

**Regan Katz, Southwest Baptist University**

Regan is a student at Southwest Baptist University where she will graduate with a B.S. in Computer Information Science in 2017. Recently, Regan finished an internship at Leggett and Platt Manufacturing in Carthage, Missouri and had the opportunity to compete in the national Phi Beta Lambda/FBLA business competition, where she received second place in Project Management and fourth place in Information Management. Additionally, she is currently the Systers Chair of SBU’s student chapter of the ACM and is treasurer of the SBU Wind Symphony.

**Katie Medler, Target**

Katie grew up in St. Louis, MO and received her degree in Information Technology Management from the University of Notre Dame. She currently lives in Minneapolis and works at for Target in their Technology Services area.

**Dr. Joy Hatch, Fort Hays State University**

Joy is the Vice President for Technology at Fort Hays State University where she is bringing together information technology components from across the campus into an effective and efficient way that aligns with the needs of the FHSU students, faculty, and staff. She is passionate about technology and the intersection of technology with education, and is constantly searching for new or innovative ways that technology can solve everyday problems. She participates in various technology organizations within higher education, including the EDUCAUSE Board, Campus Technology Advisory Board, and various other vendor advisory groups. In addition to higher education, Dr. Hatch has technology experience in manufacturing, broadcasting and K-12 school systems. With over two decades of experience in higher education, she joined the FHSU Tiger family in January 2015.
Invited Workshops

Quick & Easy Career Guide - Perspective, Ingredients and Advice to Beginning Your Soon to Be Successful Career

Andreae Pohlman, IT Consultant, Microsoft

Come learn the top things that tech recruiters look for in a resume! There will be some general guidelines on do’s and don’ts as well as a few tips to prepare once you’ve landed the interview! This should give you plenty of time to make your resume polished before the career fair.

So You Want to Be Technical? Let's Build a Virtual Lab!

Andreae Pohlman, IT Consultant, Microsoft

This workshop will cover the steps and tools needed to get hands-on basic technical skills. We will learn about virtualization and cloud environments and how to leverage these environments into making your own virtual playground. This workshop will cover what you need to build your own virtual lab and will give you the understanding of what most organizations have built in their network.

Bringing your laptop will be optimal for getting the maximum benefits out of this session.

Andreae Pohlman is a Microsoft IT Consultant (read more about her in the Microsoft Job’s blog Microsoft hires military veterans). She got her start serving as a system administrator in the United States Air Force. Since then, she has held several local and federal government IT positions. She holds a Master’s degree in Information Systems Technology from The George Washington University’s School of Business.

Andreae is a member of several professional communities such as the Association for Computing Machinery (ACM) and the Women’s Society of Cyberjutsu (WSC) and loves STEM outreach volunteering (see Annual Cool Careers for Cyber Security for Girls Workshop shown in the middle picture teaching girls about steganography). She tries to reach out to students, including young women about careers in IT and her experience at Microsoft, such as this feature “UW’s Women in Informatics (Winfo)“and the “Computer Science Guest Speakers via Skype” initiative to help increase STEM career knowledge and excitement in students grades K-12. Andreae is also the co-Managing Director of the Girls in Tech DC Chapter nonprofit organization.
Intro to Hacking With the Raspberry Pi
Sarah Withee, Commerce Bank

You’ve heard lots of hype about the Raspberry Pi, the credit-card sized computer available for under $40. This talk will introduce some of the Pi’s features, explore some sample projects you can create, and show you how to write code to control hardware through its IO pins. After this talk you will be ready to make your own cool hacking projects with the Pi.

Sarah Withee recently began her career as a software developer at Commerce Bank after completing her computer science degree at the University of Missouri-Kansas City. While at UMKC, Sarah gained three years of experience writing artificial intelligence code for the UMKC Robotics Team, was a member of the UMKC Programming Competition Team, and was the president of UPE (the CS/IT honor society). She also taught an Intro to Programming 2 (C++) course, and an Intro to Programming 2 lab course while working towards her undergraduate degree.

Sarah is currently a mentor for a FIRST Tech Challenge robotics team. She has previously mentored two FIRST LEGO League robotics teams, all whom have won numerous awards, including a top award at the FLL world competition. In her free time Sarah enjoys hacking on various projects (including the Raspberry Pi!). She has participated in three hackathons, including one in which her team won the Best Mobile App award.

Sarah is committed to supporting women in computer science. She is currently planning the curriculum for a Girls Who Code after school program at a high school. She serves on the planning committee for the Missouri, Iowa, Nebraska, and Kansas Women in Computing conference. She has also been a mentor for the Tech Sheroes program for middle schoolers, and a member and conference planner for the Society of Women Engineers.

A Swift Introduction to Swift
Dr. Michael Rogers, Northwest Missouri State University

In June of 2015, Apple surprised and delighted the entire development community by announcing a new programming language, Swift, to supplant Objective-C as the language of choice for iOS and OS X development. In this fast-paced presentation, we will outline the key features that make Swift so popular, and provide a brief demo of how Swift is used in iOS development.

Dr. Michael Rogers is an Assistant Professor in the department of Mathematics, Computer Science and Information Systems at Northwest Missouri State University, where he teaches an assortment of Computer Science courses, including Mobile Computing on both Android and iOS platforms. He has published two apps in The App Store, with a third on the way.