

2024 IEEE/ACM TCF Information
Technology Professional Conference
(TCF-ITPC)

Program Book

Date: Friday, March 15, 2024

Time: 10:00am to 5:00pm

Location: Armstrong Hall at TCNJ

Sponsors:

Princeton / Central Jersey Chapter of IEEE Computer Society

Princeton Chapter of Association for Computing Machinery

Princeton / Central Jersey Section of IEEE

Conference Committee

Conference Chair: **Dennis Mancl**

Program Chairs (honorary): **Annette Taylor** and **David Soll**

Princeton Chapter of ACM Chair: **Robert Krovetz**

IEEE PCJS Computer Society Chapter Chair: **Dennis Mancl**

Princeton / Central Jersey Section IEEE Chair: **Francis O'Connell**

TCF Chair: **Al Katz**

Thank you to our Sponsors, Speakers, Volunteers and Participants

Also, thank you to the **Trenton Computer Festival** and **The College of New Jersey**

Conference Logistics

Dear Participants,

Welcome to the 2024 18th Annual IEEE/ACM Information Technology Professional Conference at TCF! We have an exciting program this year and are looking forward to seeing you.

Schedule:

The ITPC Conference program schedule may be found in this program book and posted on our website.

Our conference presentations are scheduled to begin at 10:30 AM and conclude by 5:00 PM on Friday, March 15, 2024.

Registration and Check-In:

In-person registration, check-in and coffee will open at 10:00am.

Presentations:

- Track 1 – AI | Education
- Track 2 – Applications Development
- Track 3 – User Experience and Design

Trenton Computer Festival (TCF): <https://tcf-nj.org>

The 47th Annual Trenton Computer Festival will also be an in-person event scheduled for Saturday, March 16, 2024 between 9:00am and 5:00pm. This year's TCF theme is "Putting Generative AI to Work!"

The TCF program includes over 50 panel sessions, workshops, tutorials, demonstrations, educational events and a Flea market. For more information, please visit the TCF website: <https://tcf-nj.org>.

TCF Keynote:

The TCF keynote speaker will be Michael Littman, professor at Brown University - he will be presenting "Conveying Tasks to Computers: How Machine Learning Can Help."

There will also be an EV Car Show with the opportunity to test drive EVs (weather permitting).

Posted Presentations:

If speakers have provided a PDF copy of their slides, the slides may be posted on the TCF ITPC website, <https://princetonacm.acm.org/tcfpro>.

Thank you for your participation,

Dennis Mancl

Conference Chair

IEEE Information Technology Professional Conference

Program Schedule

Time (EDT)	Track 1 AI and Education <i>Room TBA</i>	Track 2 Application Development <i>Room TBA</i>	Track 3 User Experience <i>Room TBA</i>
10:00 am	---- REGISTRATION AND COFFEE ---		
10:30 am	Building Real-Time Generative AI Pipelines <i>Timothy Spann</i>	Jakarta EE 11: Going Beyond the Era of Java EE <i>Michael Redlich</i>	Teaching User-Centered Design to People Who Aren't Interested <i>Susan Fowler</i>
11:40 am	Monte Carlo Methods in Haskell and Functional Spreadsheets <i>Enzo Alda and Daniel Andres Pinto Alvarado</i>	Digital Signatures Decoded: Crafting an In-House e-Signing Microservice <i>Amol Gote</i>	Service Design Cookbook <i>Thomas Wilson</i>
12:40 pm	---- REFRESHMENT BREAK ---		
1:20 pm	Non-Generative AI and UX: My Personal Field Notes <i>Josephine Giaimo</i>	Doctoral Degrees in Artificial Intelligence, Quantum Computing, Cybersecurity, What is the Time/Cost and Return on Investment? <i>Don Hsu</i>	The 5D Assessment: A simple, powerful, and free questionnaire for obtaining user feedback <i>Charles Kreitzberg</i>
2:30 pm	Code Whisperer: Leveraging AI to Enhance Software Development <i>Sujatha Dantuluri</i>	Bitcoin, Blockchain, Cryptocurrency Crashing to Zero? <i>Don Hsu</i>	UX & Visual Design Principles for Developers <i>Lubina Bogoeva</i>
3:40 pm	Revolutionizing Engineering Education: The Impact of AI Tools on Student Learning <i>Sofia Vidalis</i>		Mobile Design from Goals to Wireframes <i>John Chin</i>

Building Real-Time Generative AI Pipelines

by Timothy Spann

Track 1 – 10:30 - 11:30am

In this talk, I will delve into the exciting realm of building real-time generative AI pipelines with streaming capabilities. The discussion will revolve around the integration of cutting-edge technologies to create dynamic and responsive systems that harness the power of generative algorithms. From leveraging streaming data sources to implementing advanced machine learning models, the presentation will explore the key components necessary for constructing a robust real-time generative AI pipeline. Practical insights, use cases, and best practices will be shared, offering a comprehensive guide for developers and data scientists aspiring to design and implement dynamic AI systems in a streaming environment. I will show a live demo showing we can use Apache NiFi to provide a live chat between a person in Slack and several LLM models all orchestrated with Apache NiFi, Apache Kafka and Python. We will use RAG against Chroma and Pinecone vector data stores, Hugging Face and WatsonX.AI LLM, and add additional context with NiFi lookups of stocks, weather and other data streams in real-time.

About Timothy Spann:

Tim Spann is a Principal Developer Advocate in Data In Motion for Cloudera. He works with Apache NiFi, Apache Pulsar, Apache Kafka, Apache Flink, Flink SQL, Apache Pinot, Trino, Apache Iceberg, DeltaLake, Apache Spark, Big Data, IoT, Cloud, AI/DL, machine learning, and deep learning. Tim has over ten years of experience with the IoT, big data, distributed computing, messaging, streaming technologies, and Java programming.

Previously, he was a Developer Advocate at StreamNative, Principal DataFlow Field Engineer at Cloudera, a Senior Solutions Engineer at Hortonworks, a Senior Solutions Architect at AirisData, a Senior Field Engineer at Pivotal and a Team Leader at HPE. He blogs for DZone, where he is the Big Data Zone leader, and runs a popular meetup in Princeton & NYC on Big Data, Cloud, IoT, deep learning, streaming, NiFi, the blockchain, and Spark.

Tim is a frequent speaker at conferences such as ApacheCon, DeveloperWeek, Pulsar Summit and many more. He holds a BS and MS in Computer Science.



Jakarta EE 11: Going Beyond the Era of Java EE

by Mike Redlich

Track 2 – 10:30 - 11:30am

Since its introduction in 2018 as Jakarta EE, the platform has evolved from: Jakarta EE 8, an open-source version of Java EE 8; to Jakarta EE 9, the "big bang" release; to Jakarta EE 10 that introduced the Core Profile.

Jakarta EE 11, scheduled for a GA release in 1Q2024, will introduce one new specification, provide updated specifications, and set the baseline to Java 21, the latest LTS release.

This presentation will provide a brief history of JavaEE/Jakarta EE and a review of new and updated specifications with code examples.

About Mike Redlich:

Michael Redlich is freelance Java and OO technology expert. Until recently, Mike worked as a Senior Research Technician at ExxonMobil Research & Engineering in Clinton, New Jersey with experience in developing custom scientific laboratory and web applications. He also has experience as a Technical Support Engineer at Ai-Logix, Inc. (now AudioCodes) where he provided technical support and developed telephony applications for customers.

Mike's technical expertise includes object-oriented design and analysis, relational database design and development, computer security, C/C++, Java, Python, Matlab and other programming/scripting languages. His latest passions include MicroProfile, Jakarta EE, Helidon, Micronaut and MongoDB.

Mike has been an active member within the Java community for the past 20 years. He founded the Garden State Java User Group (formerly the ACGNJ Java Users Group) in 2001 that remains in

continuous operation. Since 2016, Mike serves as a Java community news editor for InfoQ where his contributions include monthly news items, technical writing and technical reviews. Mike has co-authored 9 articles with Barry Burd for Java Boutique (now jGuru). He has presented at venues such as Oracle Code One, Emerging Technologies for the Enterprise (ETE), Trenton Computer Festival (TCF), TCF IT Professional Conference, Philly Java Users Group, Princeton Java Users Group and Capital District Java Developers Network. More recently, Mike has contributed to open-source projects and participates on the leadership council of the Jakarta EE Ambassadors.

Mike holds a Bachelor of Science in Computer Science from Rutgers University.



Teaching User-Centered Design to People Who Aren't Interested

by Susan Fowler

Track 3 – 10:30 - 11:30am

At Fairleigh Dickinson University, I have been teaching a human-computer interaction class to IT and cybersecurity undergraduates, for whom the class is just a peculiar required course. I also taught “Websites 101,” which was advertised as a way to set up a free website, to small business owners on Staten Island. However, in both cases, the participants got more than they bargained for.

The college students learn about affordances, signifiers, conceptual models, and gulfs of evaluation and execution—in other words, why simple things in their environments don't work the way they're supposed to.

The small business owners learned how physiology trumps aesthetics and how Jacob Nielsen's “10 Usability Heuristics for User Interface Design” play out in real life.

In this session, you'll learn how to explain user-centered design issues to co-workers and supervisors who are unfamiliar with or uninterested in the topic—until you show them what it means for their products and services. book available rooms and desks on the same day of arrival on premise. This design addresses the

About Susan Fowler:

Susan Fowler currently teaches human-computer interaction online at Fairleigh Dickinson University and also has been teaching a Websites 101 class for small business owners on Staten Island for five years. Susan was a usability engineer at Telcordia Technologies (now iconectiv) and an automated usability test analyst for Keynote Systems. With Victor Stanwick, Susan is author of three books on software design: *The GUI Style Guide*, *GUI Design Handbook*, and *the Web Application Design Handbook*.



Digital Signatures Decoded: Crafting an In-House e-Signing Microservice by Amol Gote

Track 1 – 11:40am - 12:40pm

In the digital era, e-Signing services are indispensable for businesses, especially in the fintech domain. While third-party solutions are prevalent, there's a compelling case for in-house development. This approach grants businesses enhanced control, adaptability, and potential cost savings. This presentation will explore the intricacies of creating an e-Signing service, emphasizing the pivotal role of the e-Sign Act in ensuring the validity of electronic signatures. We'll also spotlight open-source tools, such as Spring Boot with Java and AWS S3, that can be harnessed in this endeavor. Central to our discussion will be the journey of iCreditWorks, a fintech company that transitioned to an in-house e-Signing solution. Through their narrative, attendees will gain insights into the challenges, solutions, and rewards of such a transition. By the session's conclusion, participants will be equipped with a holistic understanding of e-Signing services and the advantages of leveraging open-source tools for in-house development.

About Amol Gote:

Amol Gote is a seasoned technology professional adept at building scalable, resilient microservices in both Java and .NET. He excels in deploying and managing microservices in AWS and Azure environments, boasting technical proficiency across multiple applications and tools. His expertise spans full-stack capabilities, from designing to constructing end-to-end solutions that include databases (SQL/NoSQL), back-end services, messaging services, and modern interactive web applications using web sockets. Currently serving as a Solutions Architect at a Fintech startup, Amol has built the underwriting platform from scratch, along with multiple horizontal and vertical business domain-specific microservices. Previously, he has engaged in consulting roles with major clients like Bank of America, Morgan Stanley, and the Associated Press, and has worked with Microsoft for seven years. With over 18 years of experience, Amol is passionate about writing blogs and technical articles for online platforms like DZone, Baeldung and InfoQ. He has also served as a judge and mentor at various Hackathon events. Amol's commitment to excellence is evident in his multiple certifications, including AWS Certified Solutions Architect and various Microsoft certifications.



Monte Carlo Methods in Haskell and Functional Spreadsheets

by Enzo Alda and Daniel Andres Pinto Alvarado

Track 2 – 11:40am - 12:40pm

Monte Carlo simulations are an important computing technique in science, engineering, and business. Originally employed to perform complex calculations required for the development of nuclear weapons (Manhattan Project), Monte Carlo methods have found multiple uses in fields as diverse as physics, chemistry, telecommunications, virology, marketing, and finance. They are also useful in educational settings, helping students develop statistical intuition and a better understanding of well-known results, like the law of large numbers and the central limit theorem.

We introduce the topic and demonstrate how to implement Monte Carlo simulations in a functional programming language, like Haskell, as well as a higher-order functional spreadsheet, like ZenSheet.

About Enzo Alda:

Enzo Alda is the founder of Lakebolt Research, a firm focused on end-user computing. Formerly, he held roles at technology startups and large organizations like Oracle, Bloomberg, and Google. Before coming to the U.S., Mr. Alda lectured courses in compiler construction and programming language design. He holds degrees in Software Engineering, Computer Science, and an MBA. Mr. Alda joined the IEEE in 1999 and the ACM in 2013.



About Daniel Andres Pinto Alvarado:

Daniel Andres Pinto Alvarado is a software engineering student at Universidad Simón Bolívar. His areas of research are functional programming, domain-specific languages, and type-driven software development. He is currently leading the effort to embed Lilly – the language foundation of ZenSheet – in Web clients.



Service Design Cookbook: What is it and how we do it by Thomas Wilson

Track 3 – 11:40am - 12:40pm

The Service Design Cookbook has been used at AIG, BlueCross Blue Shield and United Healthcare and used to set up several communities of practices and train more than 30 Service Designers with established process on several of the largest journey and product teams in the world. This presentation will explore why Service Design is the most viable form of design, unifying businesses and teams to better understand customer, business and user needs to create unparalleled product and service value.

About Thomas Wilson:

Thomas Wilson is an award-winning UX, Service Designer, Product Designer, and Design Director.

Wilson has provided design leadership and experiences with UX design, product, and service design, working with notable clients like; AIG, Experian, Amazon, NASA, LPL Financial, and Kroger, as well as numerous tech startups, SMBs, and Fortune 50-500 companies. He has been listed in the Inc. 500 twice, and one of his client sites was featured in Forbes 'Best of the Web.'

Wilson holds A.As in design, B.A. In Organizational Design & Leadership and a specialization in Leadership & Management from Harvard Business School. His certifications include an Accredited Service Design - Master Trainer (SDN), a Lean Six Sigma Green Belt - Level II, a Human-Centered Service Design certification from IDEO U, and a Nielsen Norman Group (NNG) Masters in UX Management.



Non-Generative AI and UX: My Personal Field Notes

by Josephine Giaimo

Track 1 – 1:20 - 2:20pm

I will share my personal experiences with several non-generative AI implementations.

1. How I proposed a framework and metric for evaluating the performance of AI in predicting project profits.
2. How I helped AT&T improve several key metrics by using UX design and research to implement an expert system.
3. How I used my UX-related skills to support the implementation of Robotic Process Automation projects.
4. How my ethnographic research laid the groundwork for future AI data modeling.
5. How I used my background in machine learning and UX to provide user-centered documentation of an exciting, new healthcare IT product.

I will distinguish between generative and non-generative AI, and encourage participants to build their own AI implementation as a personal learning experience.

Takeaways:

1. You don't have to have studied calculus to successfully provide user-centered design, research, and related services as part of an AI implementation.
2. AI has been around for decades, there are many ways to implement AI, many of them are non-generative.
3. You will learn the difference between generative and non-generative AI. 4. You can build your own no-code AI implementation, and you will learn a lot by doing so. I encourage you to do it.

About Josephine Giaimo:

Josephine Giaimo worked in the field of data science in the 1980s, where she wrote FORTRAN code for defined benefit pension plans for insurance companies and brokerage houses as an actuarial assistant. She left the field of data science to eventually become a leader in user-centered quantitative and qualitative research. Her original academic research proposed a framework for evaluating the performance of neural networks and statistical approaches in predicting project profits. She has been working in AI and UX since the 1980s. She is the Founder and Principal of User Experience Research, LLC, providing human-centered consulting to AT&T, ADP, Google, Medidata, Sarnoff Corporation, and others. She holds a Bachelor's degree in psychology from Montclair State University, and a Master's in Industrial Engineering from the New Jersey Institute of Technology. For several years, she taught psychology courses, including the dynamics of group processes, at Bloomfield College. She has taught courses in robotics and AI to K-12 students, and holds a middle school math teaching certification. She served as Treasurer of the Princeton ACM/IEEE Joint Computer Science Society from 2011 to 2023, and currently leads its Strategic Planning Committee. She is the Membership and Operations Chair of the UXPA NJ chapter.



Doctoral Degrees in Artificial Intelligence, Quantum Computing, Cybersecurity, What is the Time/Cost and Return on Investment?

by Don Hsu

Track 2 – 1:20 - 2:20pm

Artificial Intelligence (AI) started in 1957. After 67 years, it is a key marketing buzzword for Amazon, Apple, Google, Facebook, IBM, Microsoft, Samsung, Walmart to sell their products/services, why? Cybersecurity is a branch of Computer Science, many Universities started offering a Master or PhD program. Quantum Computing, a field that includes Physics, Math, Electrical Engineering, Computer Science, is a booming new field. Managers, entrepreneurs, founders, lined up to pursue Doctoral Degrees, why?

This talk deals with the answers on the growth of these three fields in research, commercial applications, jobs, careers. Topics are AI, machine learning, deep learning, Python, internet of things, Qubit, quantum mechanics, Schrodinger cat, quantum space cybersecurity application, and many more.

The speaker currently mentors 11 doctoral candidates studying these fields. One of them just got his Doctoral Degree in Cyber Security, July 22, 2023. He got a full time Professor job. The return on investment is 100%. Bring a friend to learn more!

About Don Hsu:

Donald Hsu, PhD., Professor Dominican University New York, <http://www.duny.edu>, Dissertation Chair University of Phoenix, <https://research.phoenix.edu/users/donald-hsu>, and President Chinese American Scholars Association (CASA).

Don trained/taught 70 subjects - Accounting to Unix - to more than 15,000 students. Clients/students work at Amazon, Apple, AT&T, Bank America, Facebook, Goldman Sachs, Google, IBM, JPMChase, Mercedes Benz, Microsoft, Morgan Stanley, New York Presbyterian, Oracle, Salesforce, Siemens, Sony, Toyota, Union Bank Switzerland, United Parcel Service, Verizon, other Global 500 firms.

CASA ran 31 successful E-Leader conferences in Asia and Europe, <http://www.g-casa.com>.

Don has traveled to 92 countries in Africa, Asia, and Europe for international business. Don's profile is on LinkedIn, <https://www.linkedin.com/in/dohsu>, with links to 10,160+ partners/clients and 294 public recommendations. Send him an invitation. He may help you to land your next job.



The 5D Assessment: A simple, powerful, and free questionnaire for obtaining user feedback

by Charles B. Kreitzberg

Track 3 – 1:20 - 2:20pm

The 5D Assessment is a questionnaire that obtains both numeric ratings and feedback on five dimensions of user experience. It is built on the 5D Rubric – an operational definition of UX that is sophisticated enough for UX Professionals and straightforward enough for business, and technical stakeholders. In this session you will learn how to customize and use the 5D Assessment for your projects including: websites, apps, and content.

About Charles Kreitzberg:

Charlie Kreitzberg is Senior User Experience Advisor at Princeton University. Prior to that, he was CEO of Cognetics Corporation, a UX consulting firm. He has been involved with user experience for 60 years. He is the Founding Editor of UXPA's User Experience magazine, co-author of four books, and author of over 60 articles. He holds a Ph.D. in Cognitive Psychology.



Code Whisperer: Leveraging AI to Enhance Software Development

by Sujatha Dantuluri

Track 1 – 2:30 - 3:30pm

Developing quality software efficiently is crucial yet challenging. Issues like unclear requirements, complex architectures, and debugging can slow developers down. Code Whisperer is an AI assistant that empowers developers to code faster and smarter. In this talk, we will explore how Code Whisperer taps into the power of large language models to provide on-demand support during the development process. Key features like contextual code completion, function description generation, and bug detection leverage AI to boost productivity. Attendees will learn best practices for integrating Code Whisperer into their workflow to improve coding speed, reduce errors, clarify ambiguities, and enhance overall developer experience. We will cover practical examples of how Code Whisperer can suggest completions for statements, methods, and classes in Python, JavaScript, Go, and more to accelerate development. The talk will also discuss how Code Whisperer can generate helpful comments and function summaries based on context to aid documentation and maintenance. Tips for maximizing the value from Code Whisperer to debug errors faster and ship better code will be provided.

About Sujatha Dantuluri:

Sujatha Dantuluri is a Senior Solutions Architect at Amazon Web Services (AWS), supporting federal civilian customers. In her role, she provides architecture reviews and recommends industry best practices for building mission-critical solutions on the AWS cloud. With over 22 years of IT experience, Sujatha has supported numerous federal agencies in their modernization efforts, large-scale integration and cloud migration and innovation. She is a frequent speaker at AWS events and industry conferences, sharing her expertise on cloud adoption strategies, security, and innovative technologies like machine learning. Sujatha is passionate about helping public sector organizations leverage the agility and innovation of the cloud to better serve citizens.



Bitcoin, Blockchain, Cryptocurrency Crashing to Zero?

by Don Hsu

Track 2 – 2:30 - 3:30pm

Steve Wozniak Apple Co-Founder believes Bitcoin is better than gold. There are only 21 million Bitcoins being mined, the price is highly volatile from \$17,000 to \$66,000.

This talk will discuss Bitcoin, Cryptocurrency, Ethereum, Blockchain technology, digital transaction, mining in China, software wallet, security issues, payment providers, major US or European banks adopting Bitcoin, investment options, venture capital firms, risk, benefits, volatility, academia research, and industry trends. FTX collapse, Sam Bankman-Fried is in jail. But Binance CZ, Coinbase, and main players are still around? No one knows the answer.

The speaker will provide specific examples of investing in bitcoin and other cryptocurrency.

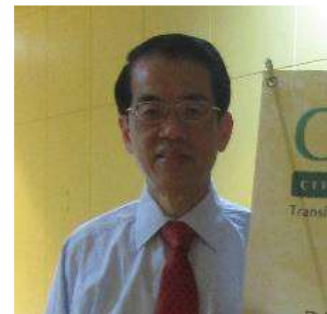
About Don Hsu:

Donald Hsu, PhD., Professor Dominican University New York, <http://www.duny.edu>, Dissertation Chair University of Phoenix, <https://research.phoenix.edu/users/donald-hsu>, and President Chinese American Scholars Association (CASA).

Don trained/taught 70 subjects - Accounting to Unix - to more than 15,000 students. Clients/students work at Amazon, Apple, AT&T, Bank America, Facebook, Goldman Sachs, Google, IBM, JPMChase, Mercedes Benz, Microsoft, Morgan Stanley, New York Presbyterian, Oracle, Salesforce, Siemens, Sony, Toyota, Union Bank Switzerland, United Parcel Service, Verizon, other Global 500 firms.

CASA ran 31 successful E-Leader conferences in Asia and Europe, <http://www.g-casa.com>.

Don has traveled to 92 countries in Africa, Asia, and Europe for international business. Don's profile is on LinkedIn, <https://www.linkedin.com/in/dohsu>, with links to 10,160+ partners/clients and 294 public recommendations. Send him an invitation. He may help you to land your next job.



UX & Visual Design Principles for Developers

by Lubina Bogoeva

Track 3 – 2:30 - 3:30pm

Have you come out of a meeting with a designer feeling like you're speaking different languages? The UX & Visual Design Principles for Developers dives into the principles and vocabulary of visual design. We'll explore how aesthetics aid efficient data comprehension and how developers can collaborate with designers to enhance the user experience. From crafting intuitive layouts to employing color strategically, this session will prepare IT professionals to collaborate with their designer teammates with clarity and confidence.

About Lubina Bogoeva:

Lubina Bogoeva is an AVP, UX Design at a multinational insurance company with over 15 years of diverse UX design experience that spans Fortune 100 corporations, design studios, and non-profits. She served as an advisor for the UXD Masters Externship program at Rutgers University. In addition to her Visual Arts degree, she completed the MIT's HCI program. She is currently a co-chair of the UXPA New Jersey chapter. Her interest in design was sparked by her father who is an artist in Bulgaria. She lives in Central New Jersey where she enjoys yoga, reading and photography.



Revolutionizing Engineering Education: The Impact of AI Tools on Student Learning

by Sofia M. Vidalis

Track 1 – 3:40 - 4:40pm

The rapid advancement of artificial intelligence has led to the integration of chatbots like ChatGPT into various sectors, including education. This study investigates the impact of many AI tools on engineering education, focusing on their potential to enhance learning outcomes and improve student engagement. The integration of AI tools has the potential to significantly impact student learning, bridging the gap between theoretical knowledge and practical application. This paper aims to explore the impact of AI tools on student learning in engineering education. AI tools offer numerous benefits in engineering education, providing students with interactive and immersive learning experiences. These tools enable students to apply their theoretical knowledge in real-world scenarios, enhancing their understanding and problem-solving skills. By utilizing a student survey, educators can gather invaluable feedback on the effectiveness of these AI tools, allowing for continuous improvement and customization to meet individual student needs. Through the data collected from the student survey, educators can gain insights into the specific areas where AI tools have positively impacted student learning. This information can guide curriculum development, ensuring that the incorporation of AI tools aligns with the desired learning outcomes. Furthermore, the student survey can provide vital feedback on areas where improvements are needed, allowing educators to address any challenges faced by the students in utilizing AI tools effectively.

About Sofia Vidalis:

Dr. Sofia M. Vidalis is currently an Associate Professor in the Civil Engineering and Structural Design and Construction Engineering Technology Programs at Penn State Harrisburg (PSH). She received her B.S., M.S., and Ph.D. in Civil Engineering from University of Florida in Gainesville, FL. Dr. Vidalis joined Penn State Harrisburg in 2006. Before joining Penn State, Dr. Vidalis worked at Florida Design Consultants as a Transportation Engineer. Vidalis' current research interests include quality assurance in pavement construction and materials, construction management, transportation planning and operations, and building information modeling.



Mobile Design from Goals to Wireframes

by John Chin

Track 3 – 3:40 - 4:40pm

This presentation illustrates how user experience design activities contribute to the design thinking and methods. The journey from initial idea or concept to implementation spans many steps including: Design goals, user research, personas or user profiles, user stories, tasks, use cases, and wireframes. This design example will design a user experience of a mobile app that will book available rooms and desks on the same day of arrival on premise. This design addresses the following use-cases:

- Find and reserve a hot desk using a floor plan.
- Find and reserve a conference room using a floor plan.

About John Chin:

John Chin earned his PhD at the University of Maryland studying Cognitive Psychology and specializing in Human Factors at the Human Computer Interaction Lab. He is best known for menu design and user satisfaction (i.e. Questionnaire for User Interface Satisfaction or QUIS).

In New Jersey, he conducted user experience research and User Interface (UI) development in a wide range of applications in the telecommunications industry at companies like Verizon Wireless. In addition, he led the human factors team's research and development of UI requirements for a cloud-based Enterprise Information Display System for air traffic controllers, data administrators and maintainers at the Federal Aviation Administration (FAA).

Recently, Chin was a remote contract Senior User Experience Researcher at Charles Schwab where he collected client input and feedback on the Digital Trade Experience for desktop and mobile application using both remote moderated and unmoderated usability studies on UserZoom.

Currently, he resides in Grand Island, NY with his wife, Jennifer. When not working, he enjoys road trips, kayaking and jet skiing.

