

Agenda

Early Morning – Sponsored by Silver Sponsor Digital Minerva Web/Marketing



7:30AM – 8:30AM - MAIN BALLROOM

Registration, Breakfast and Vendor Tables

Sponsored by Silver Sponsor, [James Carter Web/Marketing](#).

8:30AM – 8:45AM - MAIN BALLROOM

Welcome

8:45AM – 9:15AM - MAIN BALLROOM

Opening Speaker

[Karen Jackson](#), former Virginia Secretary of Technology & President, Apogee Strategic Partners

Technology is rapidly changing every aspect of our lives from work to home to play. Leveraging technology and information will lead to dynamic change in healthcare, transportation, agriculture, artificial intelligence and more, ultimately leading to the development of smart communities.

Breakout Session I

9:15AM - 10:00AM - APPALACHIAN ROOM A

What You Should Already Know About Data Science – Becoming A Data Scientist

By [Renée Teate](#), Data Scientist, [HelioCampus](#)

Data Science, AI, and Machine Learning are technologies that are becoming pervasive in our increasingly data-driven world and are terms you're probably hearing everywhere. You are generating data at your business, while you drive and shop, and every time you turn on your computer or phone. So, what is Data Science, and how does it work? What terminology and skills do you need to know in order to start using data science at your workplace? What ethical issues do you need to be aware of? Should you hire a Data Scientist? Become a Data Scientist? Come to this talk and get up to speed with what you should already know about data science!

9:15AM - 10:00AM - APPALACHIAN ROOM B

Blockchain Technology and Hyperledger

By [Morgan Benton](#), Associate Professor, ISAT, [James Madison University](#)

While the permission-less blockchain technologies that support software like Bitcoin and Ethereum dominate headlines there are still very significant unsolved technological challenges that prevent these platforms from becoming truly mainstream. Meanwhile, big companies like IBM, Intel, Cisco, and American Express are putting their energy behind a less ambitious, less risky, but no less impactful form of blockchain platform—the permissioned blockchain. The dominant player in the permissioned blockchain space is Hyperledger (www.hyperledger.org), a massive, open-source family of blockchain frameworks being managed by the Linux Foundation. In this session, we will briefly cover the key differences between permissioned and permission-less blockchains, and demonstrate why wise developers looking to break into the blockchain space should

invest their time and energy learning to develop solutions with Hyperledger. We'll dive right into a demonstration of what blockchain development looks like with Hyperledger Fabric, one of the five frameworks currently being incubated by the Hyperledger project.

9:15AM - 10:00AM - APPALACHIAN ROOM C

Cyber Attack Resilience Applied to Autonomous Vehicles

By [Barry Horowitz](#), Munster Professor of Systems and Information

Engineering, [University of Virginia](#), Former President & CEO, [The MITRE Corporation](#)

This session will introduce attendees to the concept of cyber attack resilience and how it would be applied to autonomous vehicles. In recognition of the risks to humans associated with cyber attacks against highly automated physical systems, including serious injury or death, new approaches are being developed for detecting and immediately responding to successful cyber attacks so as to minimize consequences and restore safe system operation. Experimental results addressing cyber attacks and resilience solutions related to automobiles will be presented. This will include results related to human responses as part of resilience solutions.

10:00am Mid-morning snack Breakout Session II

10:15AM - 11:00AM - APPALACHIAN ROOM A

Extending a Ruby on Rails Application with Phoenix and Elixir

By [Chiedo John](#), Founder & CEO [Chiedo Labs](#)

After years of frustrations with the black box magic of Ruby on Rails and the kludgy results from working in Node.js Chiedo gave the Elixir framework, Phoenix, a try. He shares his experiences attempting to add new functionality to an existing Ruby on Rails code base by extending it with a Phoenix application on a shared database.

10:15AM - 11:00AM - APPALACHIAN ROOM B

Driving Security Through Technology

By [David Cafaro](#), Capital One

This break out session will focus on the human interaction side of information technology and many of the key subjects that non-cyber leaders and non-technical managers may need to keep in mind when driving security through technology. Topics covered will include: ideas on how to focus on “what’s important” while integrating security into the technology deployment cycle; avoiding the “Blocker Affect” and becoming the enabler while driving security into the enterprise or business; and avoiding the trap of buzz words/ security snake oil while properly accounting for risk from your business threat profile. While not all who work with information technology will be information security experts, having a basic understanding of the fundamentals, and why they are key to managing the threats of a connected world, will help maintain an environment for business growth.

10:15AM - 11:00AM - APPALACHIAN ROOM C

Internet of Things

By [Fred Briggs](#), NOVA Labs

Internet of Things (IoT) is transforming the way we collect data, connect with people and interact with devices. Corporations are collecting new and novel data that reduce costs and improve situational awareness. Consumers are accurately tracking fitness routines, seamlessly ordering consumables and creating the next generation of connected homes. The IoT industry is exploding with over 8 billion devices currently on the network and it is estimated that we will have 30 billion devices connected by 2020. In this discussion, we will look at what is fueling this growth as well as the innovative and sometimes quirky products that are coming to market. Through this discussion, we will also touch on the security and ethical concerns that new innovations can create.

Breakout Session III

11:15AM - 12:00PM - APPALACHIAN ROOM A

Critical Cyber Skills for Students and Companies Serving the US Government

By [Captain Paul Tortora](#), USN (Ret) [United States Naval Academy Cyber Center](#)

Captain Tortora will discuss the cyber knowledge, skills, and abilities of cyber professionals that will serve and protect the United States' interests. This session should be of particular interest to educators, employers and those seeking to do business with the US government.

11:15AM - 12:00PM - APPALACHIAN ROOM B

Autonomous Vehicles

By [Mike Raschid](#) and Garrett Moore, [Perrone Robotics](#)

Perrone Robotics, headquartered in Crozet, Virginia, (with a Silicon Valley office opened in 2018), was formed in 2003 and has been developing mobile autonomous robotics solutions ever since. This session will focus on the current state and the inevitable future of autonomous vehicles.

11:15AM - 12:00PM - APPALACHIAN ROOM C

Unpacking the Dark Web

By [Dr. Eric Jardine](#), visiting professor at [Virginia Tech](#)

This session unpacks the technology of the Dark Web and its effects on society in greater detail. Following a brief discussion (and technical demo) of how the Dark Web renders people anonymous, the session explores the various ill-effects of the Dark Web. This discussion will be particularly focused on the criminal implications of anonymity-granting technologies. These effects can be broken into three types: facilitating online crime (i.e. child abuse sites, malware markets, etc.), displacing offline crime (i.e. illegal

drug markets, etc.) and society-wide implications for police effectiveness (i.e. increased drug arrest rates, reduced violent crimes, etc.). The session is designed to be interactive, with a technical demo to showcase the ease with which individuals can use Dark Web technologies such as Tor and presentations/open discussion of the ill-effects of these technologies.

Lunch **Keynote** – Sponsored by Gold Sponsor **Shentel**



12:15PM - 1:15PM - MAIN BALLROOM

Pioneering a New Category of Game Design: Real World Games

By [Dan Hanlon](#) and [Travis Fox, Raincrow Studios](#)

Sponsored by Gold Sponsor, [Shentel](#)

Real-world game design for mobile devices has its roots in pervasive game design, augmented reality, mixed reality ubiquitous gaming, and a dozen or so other classifications. Raincrow Studios, doing business from Harrisonburg, survived the fate that befalls most pioneers and helped create this new category within the \$108 billion game market. Travis and Dan's story of entrepreneurial grit, keen innovation, and embracing the challenge of being a Shenandoah Valley studio competing in a west-coast dominated market, will be insightful and riveting.

Breakout Session IV A

This will be an extra-long session that will run concurrently to the standard length sessions

1:30PM - 3:15PM - APPALACHIAN ROOM C

Extended Session – Resources for building a tech company in the Valley(s)

By [Bob Smith](#), ICAP at [George Mason University](#); [Keith May](#) – [Shenandoah Valley Angel Investors](#); [Brian Shull](#) – [Harrisonburg Economic Development](#) and [Mary Lou Bourne](#) – [Virginia is for Entrepreneurs](#).

This session will highlight the valuable resources available to assist technology companies in growing in the Shenandoah Valley. The session will feature business assistance programs available from the local, state and federal level. Additionally, participants will learn about Shenandoah Valley Angel Investors, a network of private investors that help fund entrepreneurial enterprises located in the region.

Breakout Session IV B&C

1:30PM - 2:15PM - APPALACHIAN ROOM A

Pitching to Investors

By [Patrick McQuown](#), Executive Director, James Madison University Center for Entrepreneurship

Serial entrepreneur, former Ivy League Professor and current Director of James Madison University's Center for Entrepreneurship (CFE), Patrick McQuown has built companies, attracted investment and completed successful exits. Under Patrick's leadership, JMU entrepreneur students have won several pitch competitions over the past year. These JMU companies from the CFE have attracted millions in venture capital. In this session, Patrick will give his insight on how to make the most effective pitch to attract capital to launch or grow a business.

1:30PM - 2:15PM - APPALACHIAN ROOM B

Machine Learning and AI: A practical introduction and how it is being used to improve business outcomes

By [Tom Brock](#), at [ConvergentAI](#).

There is significant rhetoric about Artificial Intelligence in the news, but less clarity on how it's being used to solve real business problems AI would also appear to be out of reach for every day businesses, limited only to those with teams of data scientists and significant capital to experiment with it. Join us as we demystify Machine Learning and AI; and explore how it's being used to improve business outcomes through more informed operations.

Breakout Session V B&C

2:30PM - 3:15PM - APPALACHIAN ROOM A

Bringing Tech to Market

By [Peter Kant](#), Vice President, Federal Partnerships SRI International

The pathway from initial idea to successful technology or business is not straightforward and is often filled with pitfalls ventures come from the combination of innovative technologies and solid business plans that focus on customers and markets. Mr. Kant will discuss the key elements needed to evaluate potential businesses and the critical elements new companies need to succeed.

2:30PM - 3:15PM - APPALACHIAN ROOM B

From BattleBots, to a successful government software development consultancy, to launching a failed mobile security startup and working on groundbreaking robotic systems

By [Jeff Cesnik](#), Founder, Clutch, and Principal, [Clutch Labs](#).

Jeff Cesnik shares his experiences and wisdom gained from over 18 years as a tech entrepreneur in the Shenandoah valley

Closing and Networking Event

3:30PM - 4:00PM - MAIN BALLROOM

Closing Speaker

[Osama Malik](#), Digital Strategy and Management Principal at [Booz Allen Hamilton](#)

The Conference closing session will focus on connecting the knowledge presented, lessons learned, and opportunities identified during the day. Mr. Malik will work to identify the common threads linking the sessions and share his analysis of the most appropriate next steps to take and his ideas for the best ways for conference attendees to leverage what they've learned during the day into business opportunities and solutions. By the end of this session, participants should feel prepared to continue their learning, focus on creating new relationships and partnerships, and know what to do next to create successful business and career opportunities for themselves and their companies.

4:00PM - 5:30PM - [PALE FIRE BREWING COMPANY](#)

Shuttle to Pale Fire Brewing Company for Networking

This is a limited capacity event. You must register for the networking event to receive a drink ticket.