



IEEE
Internet of Things



Sponsored by the IEEE Multi-Society IoT Initiative

IEEE IoT Vertical and Topical Summit - Alaska
June 11th-13th, 2018
Hilton Hotel
Anchorage, Alaska

Call for Papers, Proposals and Participation

Overview

With its dispersed population, cultural diversity, vast area, varied geography, climate extremes, a richness of natural resources, and importance to the world ecosystems, Alaska is uniquely positioned to explore the potential and challenges of deploying Internet of Things (IoT) Solutions in its quest to create sustainable value. To facilitate this exploration in a global context, the IEEE IoT Multi-Society Technical Group is bringing together experts and stakeholders from industry, the public sector, and the research and academic communities from around the world to Anchorage for a Summit from June 11th-13th 2018.

IoT is a broadly used term that many industries, technologists, and individuals identify with. At its essence, it

is about the progressive digitization of goods, services, and processes. IoT makes it possible to create new and innovative ways to address needs and create value in ways not possible in the past. In part this is through the massive deployment of networked information gathering or sensors designed to understand the state or condition of a specific system or concern, the collection of data in many forms from many sources, the application of analytic techniques and artificial intelligence to support decisions, and the ability to take or control actions that have a purpose and a predictable outcome. Ultimately, IoT delivers value in widely deployed applications that exploit a common infrastructure of: connectivity, computing, storage, and power; and relies on essential contribution from many technical disciplines. IoT will provide dramatically better functionality, lower costs, and faster paths to value through innovation.

The Summit consists of:

- Tracks addressing Vertical and Topical Areas of general interest to IoT "Practitioners." We have selected five Vertical and five Topical themes that are important to IoT, and especially to the Alaska region.
 - Proposals for speakers, panels, workshops, and tutorials are welcome and should be submitted by March 30, 2018.
- A Technical Program consisting of outstanding original papers that will be peer reviewed and selected for presentation during the Summit and will be published in IEEE Xplore. Detailed instructions for submission are below and the deadline for Technical Papers submission is March 16th, 2018.
- Descriptions of each of the themes, a list of distinguished speakers, and information about the Summit's Organizing Committee are listed below.
- A banquet for attendees and participants on Tuesday June 12th, 2018 - the banquet will feature local fare and an evening built around the native culture of Alaska's first people.

We look forward to incorporating your proposals into a stimulating program and anticipate your participation in this important dialog.

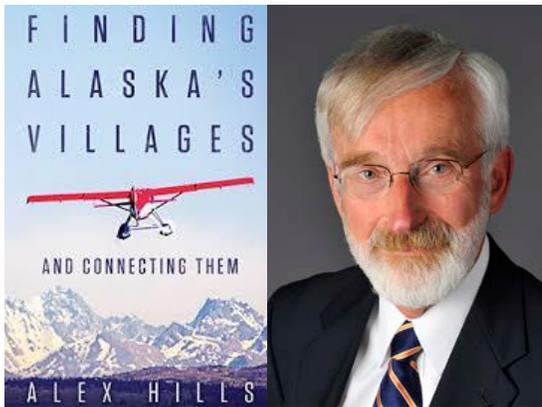
June is the height of the tourist season in Alaska, there are many unique opportunities for excursions and adventures to choose from that will uncover the vastness and natural beauty of Alaska! We hope that you can take this opportunity to explore some of the wonders of Alaska near Anchorage or further afield. The Organizing Committee has prepared some tourist and cultural explorations that you can elect to take advantage of before or after the Summit, as well as a companion program.

See you in Alaska!

Plenary Speakers

The summit features leaders and IoT experts from Alaska and from around the world!

Alex Hills, Distinguished Service Professor, Carnegie Mellon University



Dr. Alex Hills spent years living in rural Alaska, where he worked on providing telecommunication services to people living in the villages. He lived in Kotzebue, Nome and Bethel but worked in more than a hundred small villages across the state. This work is described in his new book, *Finding Alaska's Villages: And Connecting Them*.

Later Alex became a university professor. He is now Distinguished Service Professor at Carnegie Mellon University and Affiliate Distinguished Professor at the University of Alaska Anchorage. Well known in the fields of wireless, telecommunications, and networking technology, he has lectured widely and published many papers and technical reports. He holds 18 patents, and readers worldwide have enjoyed his easy-to-understand articles in *Scientific American* and *IEEE Spectrum*.

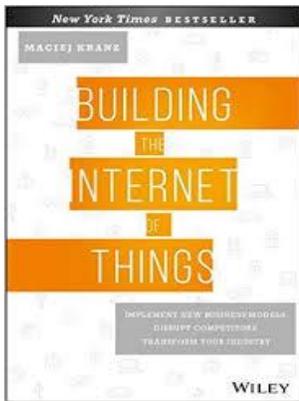
Dr. Hills also led the team that built Carnegie Mellon's "Wireless Andrew" system, the world's first large Wi-Fi network. With this work, described in his book, *Wi-Fi and the Bad Boys of Radio*, he helped to create the vision of what Wi-Fi would later become.

He served as Vice Provost and Chief Information Officer at Carnegie Mellon University, where he was responsible for the development and operation of Carnegie Mellon's computing and telecommunications systems. As head of the university's information technology organization, he was responsible for the financial and operational performance of the unit, which had 150 employees. Previously, he held a similar position at the University of Alaska.

And Alex has a great deal of international experience. He has traveled widely, lecturing and consulting in nearly 30 countries. When all are counted, he has visited 60 countries and seven continents. He has held visiting distinguished professor appointments in Chile, Singapore, and New Zealand.

Dr. Hills is a former U.S. Army Signal Corps officer and served as a company commander in South Korea. He lives in Alaska with his wife Meg, a nurse practitioner. The couple has two adult daughters and four grandchildren.

Maciej Kranz, Vice President, Corporate Technology Group at Cisco, and best selling New York Times Author on IoT.



Maciej Kranz brings 30 years of networking industry experience to his position as Vice President, Corporate Strategic Innovation Group at Cisco. In this role, Mr. Kranz leads a team focused on incubating new businesses, accelerating internal innovation, and driving co-innovation with customers and startups through a global network of Cisco Innovation Centers. Prior to assuming his current position, Mr. Kranz was General Manager of Cisco's Connected Industries Group, a business unit focused on technology solutions for the Internet of Things. He built a \$250M business from the ground up in 18 months and

relentlessly evangelized the IoT opportunity across Cisco and the market, making IoT one of Cisco's major priorities. Previously, Mr. Kranz led efforts across Cisco to define, prioritize, and deliver Borderless Network Architecture and roadmaps. He also drove business and product strategy for the wireless and mobility business and led product management for the stackable Ethernet switching business unit through its expansion from \$400M to \$6B in revenues. Before joining Cisco in 1999, Mr. Kranz held senior management positions at 3Com Corporation, where he drove a \$1B Ethernet network interface cards (NICs) product line. He began his professional career at IBM Corporation. Maciej Kranz holds a master's in business administration degree from Texas Christian University.

Lt. Governor Mead Treadwell



Former Alaska Lt. Governor Mead Treadwell is President of Pt Capital, an Alaska-based Private Equity and investment banking firm investing in Alaska, Canada, Greenland, Iceland and Finland. Pt Capital is an investor in NOVA, Iceland's largest wireless provider. Treadwell is also chair of global satellite firm Iridium Communications' Polar Advisory Board. Both firms serve the "internet of things" market.

Acknowledged as one of the world's leading Arctic policy experts, he also co-chairs the Woodrow Wilson Center's Polar Initiative and the Arctic Circle Mission Council on Shipping and Ports.

He served as the elected Lt. Governor of Alaska from 2010-2014, and was chair of the US Arctic Research Commission under Presidents Bush and Obama, from 2006-2010 after initially being appointed by President Bush to the Commission in 2001. The Commission sets goals for the US \$400 million annual Arctic Research program.

In business, Mead is the former VP and Treasurer of Yukon Pacific Corporation, then a subsidiary of CSX Corporation (NYSE:CSX). He is a founding investor and former officer of Digimarc Corporation (NASDAQ:DMRC), the world leader in digital watermarking for music, film, video and currency. He was chair of Immersive Media Corporation (TSX-V:IMC), which pioneered 360 degree video applications such as Google's Steeetview, now a subsidiary of Digital Domain.

A graduate of Yale and Harvard Business School, Mead is active in Arctic policy discussions worldwide. He likes fishing, hunting and skiing. He is married to Virginia Clay McClure and has, by his late wife Carol, three children.

Hon. Fran Ulmer - Chair, US Arctic Research Commission



Fran Ulmer is chair of the U.S. Arctic Research Commission, where she has served since being appointed by President Obama in March 2011. In June 2010, President Obama appointed her to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. From 2007 to 2011, Ms. Ulmer was chancellor of Alaska's largest public university, the University of Alaska Anchorage (UAA). Before that, she was a Distinguished Visiting Professor of Public Policy and Director of the Institute of Social and Economic Research at UAA. She is a member of the Global Board of the Nature Conservancy and on the Board of the National Parks Conservation Association.

Ms. Ulmer served as an elected official for 18 years as the mayor of Juneau, a state representative, and as Lieutenant Governor of Alaska. She previously worked as legal counsel to the Alaska Legislature, legislative assistant to Governor Jay Hammond, and Director of Policy Development for the state. In addition, she was the first Chair of the Alaska Coastal Policy Council and served for more than 10 years on the North Pacific Anadromous Fish Commission. She has served on numerous local, state, and federal advisory committees and boards. Ulmer earned a J.D. cum laude from the University of Wisconsin Law School, and has been a Fellow at the Institute of Politics at the Kennedy School of Government. She is currently serving as the Cox Visiting Professor at Stanford University.

For the latest plenary speakers, news, and arrangements, please view the Summit Web Site at: Anchorage2018.iot.ieee.org/

Who should attend?

You should plan to attend the Summit if you:

- are interested in the Internet of Things and are in any part of the IoT eco-system;
- would like to understand how IoT will revolutionize: the public sector; industry, the research community, and individual lives;
- would like to meet leading practitioners and technologists who are contributing to and leading

- advances important to IoT's success;
- are interested in business models and policies;
- would like a perspective of how IoT is viewed by end users and the how it could satisfy the needs they have.

The Summit is a place for sharing knowledge and experiences about IoT deployments and to nurture IoT adoptions that create benefits for Society in keeping with IEEE's mission of "Technology for Humanity".

You will find the Summit stimulating and informative if you have any of the following roles or responsibilities:

- Public Sector
 - Policy Maker and Legislator
 - Civic Leader or Administrator
 - Project Planner or Manager
 - Technical or Engineering Oversight
 - A user of IoT Solutions and Applications
- Industry
 - Leader or Manager of a Vertical or Horizontal Business where IoT is important
 - Strategist or Business Analyst
 - Planner, Designer, or Supplier incorporating IoT Solutions
 - Project Leader or Engineer building the IoT
 - Operator of IoT Infrastructure and Applications
- Research and Academia
 - Conduct research on technologies important to IoT
 - Are developing demonstrations or performing trials for IoT applications
 - Are doing foundational work to solve basic problems relevant to IoT
- Individual
 - A part of the "maker" community
 - Are implementing IoT applications
 - Are just curious about the future that IoT can bring

The Themes and Topics for the Summit

Vertical Themes:

1. Arctic Region and Alaska Challenges:

The Internet of Things promises to transform the quality of human life, economic development, education, and healthcare, as well as situational awareness, and crisis response in Alaska and the Arctic. However, geography, the dynamically changing Arctic environment, lack of connectivity, and socio-economic and cultural factors pose unique set of challenges for the development and penetration of IoT in the Arctic. This track of the IEEE IoT Summit - Anchorage will focus on the potential applications and opportunities for IoT

in the Arctic and on the effects and possible approaches to overcome specific key challenges including: limited broadband access, variable connectivity over immense distances, multiple cultural and regulatory regimes, sparse data sets, the need to develop Arctic-capable hardware, and resilient edge computing frameworks and infrastructure. Also maritime challenges including search and rescue missions, and the monitoring of vessel activity pose additional challenges that the IoT can help resolve. Alaska and the Arctic include many unique natural phenomena that affect our planet. The IoT is also an indispensable tool for improving our understanding of these phenomena, examples of which are: active volcanic zones; seismic activity from movement of tectonic plates; a complex maritime ecology; glaciers and ice caps; and the high latitude ionosphere and magnetosphere.

2. Aviation and Unmanned Aerial Systems:

Alaska has one of the highest ownership rates for private aviation, which forms the backbone for movement of goods and services across the State. Alaska has strong tradition in Aviation and UAS research and innovation. UAA has received the Robert J. Collier Award "for the greatest achievement in aeronautics or astronautics in America, with respect to improving the performance, efficiency, and safety of air or space vehicles, the value of which has been thoroughly demonstrated by actual use during the preceding year." Alaska is also one of the six FAA-designated test ranges and a partner in the FAA's Center of Excellence for Unmanned Aircraft Systems (COE UAS). The Summit will address how IoT can contribute to improved safety, situational awareness, maintenance, and operations of Aviation in the wide range of conditions encountered across the State. This includes the role of Aviation in search and rescue, and other emergency response situations. The rapid growth in the adoption of Unmanned Aerial Vehicles promises myriads of uses, and for Alaska it may have extraordinary impact. The track will address potential use cases for UAV operations and how UAV's can contribute to the improvement of life in the Arctic, the Charting of the State, gathering of Scientific Information, support for industry, and improved stewardship of natural resources. At the same time the track will address the infrastructure and ancillary systems that will be needed to support increased uses of UAV's and the design and implementation of UAV and supporting Systems that can fit the requirements of the most promising use cases.

3. Education:

This summit will address technologies, frameworks and approaches aimed at: increasing and enhancing student and educator engagement; creating transformative learning environments, communities, and experiences that can provide hands on instructions online, equivalent to or better than in a typical classroom or lab; broadening participation by virtually shortening distances and maintaining education quality; providing security and privacy; meeting implementation cost, teacher training, and new ethics challenges. The track on Education will also highlight successful examples of distance learning implementations, deployments, and experiences, as well as new and novel approaches for improving the quality and nature of education through deployment of IoT infrastructure. The central question for the participants in the Track is how IoT can help to deliver as good or better education to children living in remote and sparsely populated areas when compared to children in urban environments.

4. Healthcare:

IoT technologies, platforms, and approaches that transform monitoring, diagnosis, care, and treatment; health - care specific cyber-security; and data analysis and predictive analytics using big and small data. Mixed reality systems that provides hands on experience online that is equivalent to a clinic or doctor's office experience. This can be beneficial for training and telemedicine application in remote Arctic areas. The challenge is to bring high quality Healthcare to a widely dispersed and population and do so in a culturally acceptable way and cost effectively. The Healthcare track is also expected to address experiences from "connected health", "telemedicine", and "e-health" and to explore key factors for success and challenges in practice.

5. Oil, Gas, and Natural Resources:

Alaska is a significant producer of products from Oil and Gas reserves and from Mining and other Natural Resource sources. It is an important part of the State's economy. For the Industries in this sector there is an accelerating trend towards digitization of processes and facilities and IoT plays an important part of that future. The impact can be seen in the life cycle of projects in the industry from design, to implementation, to operation, maintenance and upgrades, and eventual retirement. One aspect of IoT is that it depends on common infrastructure for scale, for affordability, and for efficiency. Alaska and other Arctic regions pose unique requirements on IoT deployment and implementation and the track will seek to identify what those requirements are and approaches for potential solutions. This topic specifically includes potential Architectures for IoT, movement of data, extended use of prognostics and diagnostics, common services, and how to deal with climatic conditions, and remote operations. As with the other tracks the Summit also seeks examples of actual and planned IoT implementations.

Topical Area Themes¹:

1. Artificial Intelligence and Autonomy:

¹ These are cross cutting technologies and issues that apply to all Vertical Themes.

The heart of what drives IoT is the digitization of products, services, and processes, improving how we manage individual lives, corporate enterprises, and public institutions. IoT brings new complex problems where information comes from many sources, in many forms, can be real time, or historic, and either limited or massive in scale. In applications information is used to make decisions and take courses of action. In the past it was possible to do that in a comprehensive way for only very high value applications or for important national problems that required national means - to afford the expense of infrastructure dedicated to a single purpose. The evolution of computing, storage, and communications technology now makes it routine and commonplace to extend the paradigm to a much broader set of use cases. The ultimate step is to build the "decision loop" - from data to decision - into autonomous systems, with none or little human intervention, using various forms of Artificial Intelligence, Machine Learning, and Heuristics. The Sessions on this topic will cover advances in Artificial Intelligence and the progression to Autonomous Systems and concentrate on examples of successful deployments and plans for future products and services relevant to the Vertical focus of the Summit.

2. Big Data:

A foundational facet of IoT is the benefit that comes from data. Today it is possible to take extremely large data sets and apply analytics to find patterns, relationships, and trends that valuable in how we make decisions. The data that may be created for goods, services, or process by specialized sensors and/or the data may come from many disparate sources in many forms enriching the information and knowledge crucial for making decisions and taking action. There are many aspects to the data that is used in IoT solution and among others these include: the Provenance, Characterization, Long-term Storage and Curation, ingestion of distributed data, Access Control, Security and Privacy, display and portrayal of multi dimensional data, the handling of the volume or size of the data involved, and lastly the use of the data processing techniques and algorithms to extract information and knowledge. The Summit will explore the technologies for effectively managing and using "Big Data" and examples of applications where "Big Data" can contribute to valuable outcomes.

3. Connectivity and Communications:

The Internet of Things puts a premium on the ability of product designers and service providers to incorporate easy to use, cost effective, systems that can provide communications for many different applications. This includes connectivity between objects, between objects and people, access to remote sources of information, and shared computing and storage facilities. At the same time a commonly held vision of IoT is that the connectivity utilizes a shared infrastructure. The sessions on this Topical Area will explore the requirements, challenges, and solutions posed for various approaches and how those challenges can be addressed through choices of architecture and technology. The great challenge for Alaska is the shear size and the geography of the State.

4. Public Policy and Regulations:

The deployment of IoT holds great promise for every Vertical. Much of the value comes from changing the way business is done and in changing the traditional responsibilities of the organizations in both the public and commercial sector. A natural first question is what policies and regulations no longer make sense and should be set aside to garner the benefits from IoT. The second thought is how to prepare for the transition and minimize the effect of dislocation. Two examples come to mind: the transition of TV stations from analog to digital where a considerable population of customers were left with TVs that no longer worked;

and the abandonment of automotive customers with analog cellular services for early "connected cars" when service providers introduced 3G services and phased out earlier systems. The disruption of traditional wireline services - cord cutting - is creating a similar wave of impacts as communications transition to all IP Networks. A specific issue for IoT is the roles, responsibilities, and obligations of organizations in IoT ecosystems when providing end-end services - the issues range from whom do you call when the service is not working, who fixes it, and who bears the cost? The Session will provide overview talks on broad issues of Policy and Regulations and how they are being approached in different parts of the world and in different industries. The session will also discuss how deployment of IoT can be accelerated responsibly and what steps are needed in policies and regulations to keep up with the rapid evolution of IoT.

5. Security and Privacy:

The IoT poses a new challenge for security and privacy. The estimate is that the IoT world will cross 50 Billion devices sometime in the early 2020's. Many of those will be critical to safety, individual well being, large-scale operations, and represent loss of significant value if disrupted. An important aspect of IoT is that solutions and applications are part of a complex eco-system and that end-end security and reliability depends on many parties. The Sessions will address the new threats that IoT enables, the approaches to dealing with them, and the emergence of basic principles for effectively dealing with security and privacy, as well as the education needed to create awareness and improve the public intuition about cyber-security.

Submitting a Proposal

IoT Summit Focus Verticals

Proposals should consist of ideas and suggestions for: specific speakers, offerings or services that are novel and should be highlighted, panels or round table discussions, demonstrations, or other formats that would enrich the Summit and fit within the verticals identified and the Summit theme.

Submission deadline: March 30th, 2018

Notifications of acceptance will be returned by April 13th, 2018

- **Arctic Region and Alaska Challenges**
- **Aviation and Unmanned Aerial Systems**
- **Education**
- **Healthcare**
- **Oil, Gas, and Natural Resources**

Conference proposals must be marked and submitted electronically: <https://edas.info/N24405>

IoT Summit Topical Areas

Proposals should consist of ideas and suggestions for: specific speakers, offerings or services that are novel and should be highlighted, panels or round table discussions, demonstrations, or other formats that would enrich the Summit and fit within the topical areas identified and the Summit theme.

Submission deadline: March 30th, 2018

Notifications of acceptance will be returned by April 13th, 2018

- **Artificial Intelligence and Autonomy**
- **Big Data**
- **Connectivity and Communications**
- **Public Policy and Regulations**
- **Security and Privacy**

Conference proposals must be marked and submitted electronically: <https://edas.info/N24405>

Important dates for IoT Summit Focus Verticals & Topical Areas

IoT Track proposal submissions Due Date: March 30th, 2018

Proposal Acceptance notification: April 13th, 2018

Submitting a Technical Paper

The IEEE IoT Vertical and Topical Summit in Alaska solicits two types of technical paper submissions.

- **Full papers** describing original research. Suggested size is four pages; papers up to six pages will be accepted. Extended versions of selected papers may be considered for publication in IEEE IoT Journal: <http://iee-iotj.org/>
- **Extended abstracts** describing emerging results of new research areas or relevant topics from an industrial point of view, not to exceed two pages.

Original and Novel Technical Papers Addressing the Summit Themes focused on but limited to the following topics:

Original and Novel Papers on the following the subjects are encouraged

Vertical Areas	Arctic Region and Alaska Challenges	<ul style="list-style-type: none">• Sensor Networks and Data Collection• Applications of IoT• Demonstrations and Deployments of IoT• IoT Technologies including Communications, Computing, Analysis, and Display Techniques
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		<ul style="list-style-type: none"> • Operational IoT Technologies
	Aviation and Unmanned Aerial Systems	<ul style="list-style-type: none"> • Applications and use cases for IoT in Aviation • Platforms and Frameworks for UAV Controls and Operations • UAV Swarms • Results of Experiments and Trials
	Education	<ul style="list-style-type: none"> • Technologies for distance learning • Experience with educational application trials and demonstrations • Virtual and augmented reality technology for education
	Healthcare	<ul style="list-style-type: none"> • Telemedicine • Remote patient monitoring and support • Digitization and Electronic Health Records • Personalized Medicine • IoT Healthcare Sensors and Diagnostics
	Oil, Gas, and Natural Resources	<ul style="list-style-type: none"> • Examples of IoT Applications <ul style="list-style-type: none"> ○ Oil and Gas ○ Transportation ○ Mining ○ Other Natural Resources • Condition based Maintenance • Platforms and Frameworks • Sensor Systems • IoT Decision making tools

Topical Areas	Artificial Intelligence and Autonomy	<ul style="list-style-type: none"> • Machine Learning • Deep Learning • AI Algorithms • Frameworks and Platforms • Specialized Software and Hardware • Results of Trials or Demonstrations
	Big Data	<ul style="list-style-type: none"> • Frameworks and Platforms • Data Visualization • Data Collection and Curation • Analysis Techniques • Distributed Data Systems • Examples of Applications
	Connectivity and Communications	<ul style="list-style-type: none"> • Large Area Coverage Communications for IoT • Network design and Architecture • Examples of Applications • Satellite and Micro-Satellite Communications for IoT • Broadband for IoT • Narrowband Systems • Spectrum Slicing • Cellular Systems (4G, 5G, etc)

	Policy and Regulations	<ul style="list-style-type: none"> • Roles and Responsibilities in Service and Product Offerings • Critical Infrastructure Reliance on IoT • IoT in Smart Cities and Communities • Infrastructure for IoT • Impacts on Rules and Regulations • Ethics in IoT
	Privacy and Security	<ul style="list-style-type: none"> • Architectures and Frameworks for Security • Blockchains Applied to IoT • Advanced Security Concepts • Techniques for Privacy Preservation • Security in Communications and Network Systems

Papers will be peer reviewed. If your paper is accepted and presented, it will be included in the conference proceedings and will be submitted to the Xplore Digital Library. IEEE takes the protection of intellectual property very seriously. All submissions will be screened for plagiarism using CrossCheck. By submitting your work you agree to allow IEEE to screen your work for plagiarism: <http://www.crossref.org/crosscheck/index.html>

How to submit

All papers must be submitted in PDF and US letter format. Submitted papers must conform to the IEEE formatting guidelines as specified in these templates (Word Template, LaTeX package). All papers must be submitted electronically: <https://edas.info/N24405>

Important Dates for Paper Submissions

Technical paper abstract submission: March 30, 2018

Technical paper submission: March 30, 2018

Acceptance Notification: April 13, 2018

Camera-ready submission: April 27, 2018

Papers must be submitted electronically: <https://edas.info/N24405>

Contacts for Technical Papers

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Organizing Committee

Dr. Helena Wisniewski, Vice-Provost, University of Alaska, Anchorage

Latif Ladid, University of Luxembourg, and President IPV6 Forum

Harvey Freeman, President, IEEE Communications Society

Tom Coughlin, Coughlin Associates, and Past President IEEE Region 6

Adam Drobot, Chairman OpenTechWorks, Inc. and Chair IEEE IoT Activities Board

Robert L. Seitz, Chair, Alaska Section of IEEE



Program Committee

IoT Verticals Co-Chairs

- Arctic Regions and Alaska Challenges: Dr. George Kamberov, Associate Vice Provost for Research, University of Alaska Anchorage.
- Aviation and Unmanned Air Systems: Dr. Vijay Kumar, University of Pennsylvania (invited) and John-Paul B. Clarke, Georgia Tech.
- Education: Dr. Kenrick Mock, Associate Dean College of Engineering - University of Alaska Anchorage, and Michael Andrews, Phoenix, AZ
- Healthcare: Dr. Jane Shelby, Director WWAMI medical Program, University of Alaska Anchorage
- Oil, Gas, and Natural Resources: Lee Gaspard, Jr. (formerly Shell Oil Co.)

IoT Topical Areas Co-Chairs

- Artificial Intelligence and Autonomy: Hausi Muller, University of Victoria and Marin Litoiu, York University
- Big Data: David Belanger, Stephens Institute of Technology, and Thomas Hermsdorfer, SET Technologies GMBH.
- Connectivity and Communications: Harvey Freeman, Former President IEEE ComSoc, and K.P. (Suba) Subbalakshmi, Stephens Institute of Technology
- Public Policy and Regulations: Mina Hanna, and Douglas Sicker, Carnegie Mellon University
- Security and Privacy: Leslie Gruis, DoD Ret. and Suzanne Wetzel, Stephens Institute of Technology

Technical Program Committee Chairs

- George Kamberov, University of Alaska
- Adam Drobot, OpenTechWorks, Inc.
- Latif Ladid, University of Luxembourg