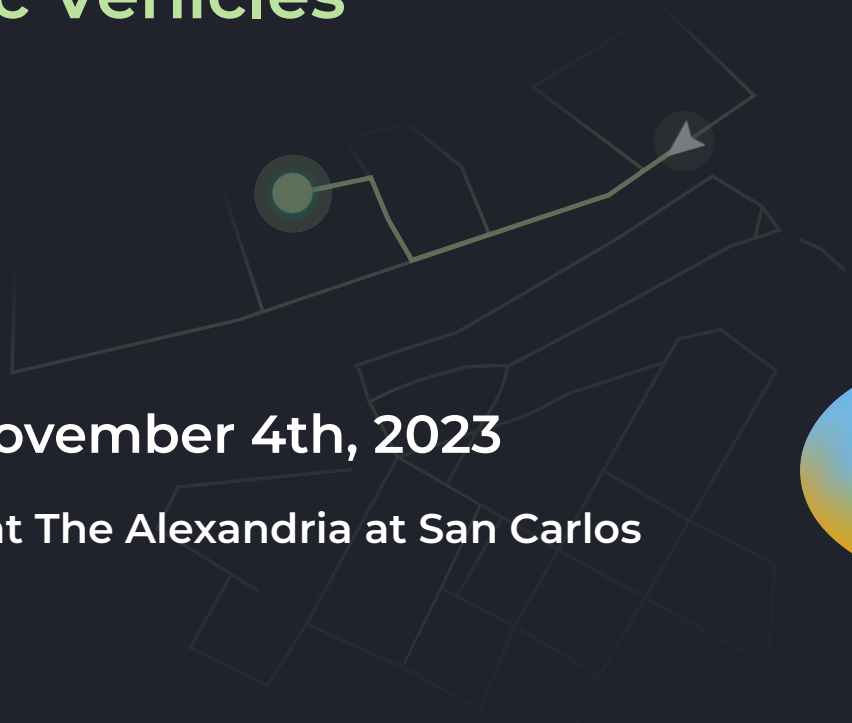
2023 U.S. Taiwan High-Tech Forum

Opportunities and Challenges in Electric Vehicles



Saturday, November 4th, 2023

→ 01:00 pm PT at The Alexandria at San Carlos

Organizer

NATEA

Co-Organizers

DIGITIMES asia

NSTC 國家科學及技術委員會
National Science and Technology Council

Table of Contents

Welcome Message

NATEA
North America Taiwanese Engineering & Science Association

Dear Participants and Distinguished Speakers,

Welcome to the 2023 US-TW High-Tech Forum, our first in-person/online hybrid event since the challenges posed by COVID-19. We're thrilled to have you here for this exciting experience.

This year, we carry forward our tradition of tackling crucial topics that impact us all. Our discussions will revolve around the incredible opportunities in electric vehicle investments, as well as the challenges they bring. We'll also explore the transformative potential of software in the electric vehicle sector and ways to accelerate autonomous vehicle development. Additionally, we'll address Asian supply chain issues, seeking innovative solutions.

In our 26th year, we've adapted to the changing landscape, hosting the UTHF in a hybrid format, blending in-person and online experiences for your safety and convenience. Wherever you are, you can actively participate and enjoy the conference.

We're truly grateful for your participation. Your presence and insights are instrumental as we navigate the path toward the future of electric vehicles. Let's collaborate to make this forum an outstanding success!

Warm regards,

Hui-Shun (Ken) Hung, Conference Chair

Chien-Min Liao, Ph.D., Program Co-Chair

Agenda | November 4th

Theme

Opportunities and Challenges in Electric Vehicles

Time (Pacific Time)	Program
12:30 - 13:00	Registration / Check-In
13:00 - 13:30	Welcome and Opening Remarks **Chien-Min Liao** President, NATEA-SV
13:30 - 14:20	Ensuring Success of the shift to Software Defined Vehicles **John Heinlein** Chief Marketing Officer, Sonatus
14:20 - 14:50	Unlocking the Potential of Over-The-Air (OTA) Updates for Electric Vehicles **Paul Wu** CEO & Founder, CAROTA
15:10 - 15:50	User Experience: The Driving Force for Electrical Vehicles **Simon Lee** Lead UX Designer, Lucid Motors
15:50 - 16:30	The Journey of EV start up: The Blood, Sweat and Tears **Chen-Yen Yu** Propulsion Systems Control Manager, Archer Aviation
16:50 - 18:00	How the emerging technologies affect Asia high-tech industries - Semiconductor, EV and AI Servers **Colley Hwang** (Remote) President, DIGITIMES

John Heinlein

Chief Marketing Officer, Sonatus

Talk

“Ensuring Success of the shift to Software Defined Vehicles”

Abstract

Join us for an insightful exploration of the challenges and solutions in embracing the future of Software Defined Vehicles (SDV). In this presentation, we will delve into the complexities of the evolving automotive landscape and discuss strategies to ensure a successful transition to SDV technology.

We will address the intricacies of SDV deployment and examine how this transformation interplays with the shifting landscape of EVs. By exploring the symbiotic relationship between SDVs and EVs, we will uncover the essential role of software-defined tech in the automotive industry's future. Don't miss this opportunity to gain a profound understanding of the key factors shaping the automotive industry's trajectory.

Bio

Dr. John Heinlein is the CMO of Sonatus, which is accelerating vehicle software innovation and the transition toward software-defined vehicles. Before Sonatus, he worked at Arm for 14 years during which he held several different senior-level roles, including leading the team that was integral to launching the SOAFEE industry initiative for software-defined vehicles. Prior to Arm, John had an 11-year tenure at microprocessor startup Transmeta where he held several senior roles across the organization.

John earned his B.S. in Computer Engineering from Carnegie-Mellon University and an M.S. and Ph.D., both in Electrical Engineering, from Stanford University

Colley Hwang

President, DIGITIMES

Talk

“How the emerging technologies affect Asia high-tech industries - Semiconductor, EV and AI servers”

Abstract

Taiwan's semiconductor sector remains robust post-pandemic with a 23.3% global share, outshining the combined 18.9% of the U.S. and Europe. Amid China's massive investment and U.S.-China trade tensions, a shift in semiconductor investment strategies is speculated. As Asia, led by China in EV, and others like India and ASEAN nations, emerge as significant players in tech and EV sectors, they're attracting global supply chain investments. Taiwan, dominating server manufacturing and having industry leaders' attention, is pivotal in this landscape. The evolving New Asia landscape is redefining global tech supply chains, hinting at a potential reconfiguration in the global tech domain.

Bio

Colley Hwang is the founder of DIGITIMES with extensive entrepreneurial experience across industries. He has been an industry analyst for more than 30 years, and first handedly witnessed the industry’s transformation from PC, to mobile communications, and the IoT today. Hwang has also lectured at many international conferences and leading educational institutions. Hwang is currently an independent director of the China Airlines Board of Directors and a director of Monte Jade Science & Technology Association (Taiwan).

Paul Wu

CEO & Founder, CAROTA

Talk

“Unlocking the Potential of Over-The-Air (OTA) Updates for Electric Vehicles”

Abstract

OTA significantly impacts performance and safety in the Software Defined Vehicles era, facilitating swift updates and efficient, personalized driving experiences for manufacturers. It heightens customer satisfaction and enables data-driven insights, bolstering competitive standing and profitability. We assist OEMs in designing bespoke smart cockpits via OTA, featuring customized interfaces, in-car ambiance, and updated infotainment such as navigation and multimedia. Subscription-enabled functionalities like seat heating, high-power battery unlocking, and remote diagnosis are introduced, providing an enriched atmosphere and making the driving experience notably more enjoyable.

Bio

Paul Wu is the CEO of Carota, a company that aims to provide connected car services globally. Carota offers IoV services, including remote diagnostics, Infotainment, navigation, EV charging, ADAS, and in-car payment services. In the past, Paul improved OTA updates for mobile brands while working at MediaTek. He believes in the future of OTA updates for connected devices and envisions Carota as a leading software service provider for OTA and remote diagnostics. Paul is also involved in various innovative projects and holds an MBA from RSM Rotterdam Business School in the Netherlands, in addition to his degree from Taiwan University in Agricultural Economics.

Simon Lee

Lead UX Designer, Lucid Motors

Talk

“User Experience: The Driving Force for Electrical Vehicles”

Abstract

We are witnessing the transformation of electric vehicles from a niche segment to the mainstream. This evolution is not just about the shift from gasoline to electricity, but it is also about the revolution of the overall driving experience. This talk delves into the pivotal role of user experience design in automotive. Drawing insights from cutting-edge innovations, including firsthand experiences from the creation of the Lucid Air and other standout EVs, together we'll discover the drive behind the EV revolution.

Bio

Simon Lee is a Lead Product Designer at Lucid Motors, where he played a pivotal role in shaping the user experience of Lucid Air Sapphire, renowned as one of the world’s swiftest production vehicles. His contributions extend to the infotainment design of the luxury EV sedan Lucid Air and the upcoming Gravity SUV. Prior to Lucid, Simon led innovation teams at Samsung’s innovation lab, focusing on developing new products with emerging technology. His diverse design experience includes Frog, Microsoft, and WebEx, producing iconic products such as the T-mobile Sidekick and Disney MyMagic+ experience.

Speaker Profile

Chen-Yen Yu

Propulsion System Control Manager, Archer Aviation

Talk

“The Journey of EV start up: The Blood, Sweat and Tears”

Abstract

The unique journey of joining an electric vehicle startup during the dynamic landscape of 2016. In a time when the EV industry was bustling with hundreds of ambitious startups, this tale is one of survival, adaptation, and innovation. Many companies faced adversity and went bankrupt, but a select few, including the one I was a part of, managed to thrive.

Bio

CY currently served as Archer Aviation's Propulsion Control System Manager, led the development of electric engine controls for pioneering eVTOL aircraft. During his role as Sr. Director of Powertrain Architecture & Control at Seres EV, he managed cross-continental teams of 200 engineers across the US and China and drove innovation, designing advanced software control for in-house electric powertrains, while spearheading thermal, charge, and OTA integration for several top-selling electric vehicles. Previously, at Tesla Inc., he pioneered bi-directional charge systems for vehicle-to-grid, vehicle-to-vehicle, and vehicle-to-home applications. He also worked on traction drive systems for Model S, X, and III, and successfully delivered critical powertrain software in early Tesla days.

Alice Wenchi Kuo

Business Innovation Consultant at Alice Lab

Bio

Alice Kuo drives startup growth across US and Asian markets in many disciplines, such as cross-functional program management and international event planning, strategic relationships, B2B partnerships, and community development. Moreover, Alice is a seasoned speaker and moderator for a wide range of events, from exclusive global panel seminars to widely publicized industry events.

Additionally, Alice is a thoughtful writer and regularly publishes on her blog "Reflection on Resilience", which serves as a platform to share insights about community events, diversity, equity, and inclusion. Her dedication to shedding light on these critical topics reflects her commitment to fostering positive change and creating a more inclusive society.

Organizer

NATEA
North America Taiwanese Engineering & Science Association

NATEA (North America Taiwanese Engineering & Science Association) is a non-profit founded in 1991 by a group of scientists and engineers in Silicon Valley with the mission to promote science and technology research, development and leadership training opportunities. Since its founding, NATEA has grown to 14 regional chapters in North America and over 3500 members.

In recent years, NATEA is going through a transformational phase with a new look-and-feel website (www.natea.org) and growth in our membership is fueled by an aggressive outreach campaign with next generation young talents who are pursuing science and engineering careers as well as strong community building and bonding with other like-minded non-profit organizations.

Throughout the year, we host seminars and tech talks as well as major events including events such as our annual US Taiwan High-Tech Forum (www.uthf.net) and US Taiwan Startup Forum (www.utstartup.net)

As a science and technology non-profit, it is our mission to promote these high-tech innovations and advancement in the U.S., Taiwan and globally. To support this effort, we have also assembled an world-class industry advisors to support our communities in the advancement of these initiatives.

In addition, we plan to advance our mission with focus in these sectors
1. Community Playground that is accessible to all
2. Cross-Border Connection of technology exchange between U.S. and Taiwan
3. Career Developments for the next generation leaders and entrepreneurs in corporate and start-ups

We believe that the success of NATEA strong resides in our endowment and especially our sponsors for your generous financial support and enable us to bring greater good to our communities and high-tech industries that we are part of and serve.

Co-Organizer

DIGITIMES asia

Being one of the first media outlets to focus on the Asia supply chain since 1998, DIGITIMES ASIA takes readers to the core of the global IT ecosystem, offering daily coverage of the latest tech-related developments. Taiwan and China have captured much of the attention when it comes to ICT manufacturing. The global tech supply chain is being transformed with Asia as a central role, and Southeast Asia and India particularly exerting themselves. DIGITIMES Asia is a unique source of information and an ideal strategic partner coverage of a region that no one in the ICT industry can afford to overlook. Our News and Reports enable faster, smarter decisions and stronger performance on an organization's most critical priorities.

Our news service, DIGITIMES Asia, attracts more than 250,000 visitors monthly, primarily from Asia and North America. We provide valuable industry insights, from supply chain to the latest tech news, from upstream to downstream. We offer daily coverage of Taiwan's IT companies, and news from China and other regions, serving as a lifeline for global industry professionals, channel participants, investment analysts, and media. Additionally, we provide exclusive industry insights through deep interviews with Asia tech leaders.

As your trusted industry partner, DIGITIMES Asia is committed to providing essential coverage of the global IT ecosystem.
https://www.digitimes.com

Co-Organizer

NSTC 國家科學及技術委員會
National Science and Technology Council

The National Science and Technology Council (NSTC), originally established as the National Science Council (NSC), Executive Yuan on February 1, 1959, is the cross-government agency dedicated to scientific and technological development. In an age dominated by the knowledge economy, S&T innovation has become the key driver of economic growth and national progress. As such, the NSC was reorganized and became MOST on March 3, 2014, with a new organizational structure aiming to promote academia-industry partnerships, encourage innovation, and incubate startups.

On July 27, 2022, MOST incorporated the Office of Science and Technology and restructured to become the NSTC. The government formed this new agency to line up with international best practices in planning and executing national science and technology policy. The NSTC will continue to be responsible for MOST's original four missions: promoting national science and technology development, supporting academic research, developing science parks, and incubating startups.

The NSTC will take these missions a step further by facilitating forward-looking science and technology projects and connecting basic research, applications, and the private sector. In addition, the NSTC will also coordinate and integrate cross-government and cross-disciplinary science and technology policies while optimizing the allocation of related monetary resources. The NSTC will take the lead in building up Taiwan's key scientific and technological capabilities that will be necessary over the next decade. In terms of mapping out such development, Taiwan will utilize its strengths in semiconductors to bolster other strategic industries such as space technology, precision health, quantum computing, cybersecurity and smart technologies

Past UTHF Conference

2023	**Opportunities and Challenges in Electric Vehicles**
2022	How Semiconductors, Electric Vehicles, Blockchain, WEB3.0, shape the future of infrastructure
2021	Blockchain, Semiconductor and its intersection in the Future of Finance, Work and Network Infrastructure
2020	Impact of Trade and Pandemic on High-Tech Industry and Future Landscape
2019	The Combination of 5G, AI and Massive IoT
2018	How Digital TWIN Technology will Further Digital Transformation
2017	The Future After Digital Transformation, AI & IoT
2016	Accelerating Digital Transformation with Real-World IoT Solutions
2015	Enabling Internet of Things
2014	The Ecosystems of Cloud Computing
2013	Cloud Computing and Taiwan
2012	Mobile, Social and Cloud
2011	Ubiquitous Sensors in the Intelligent Connected World
2010	Emerging Technologies for the Next Decade
2009	Clean Energy: High-Tech to Clean Tech
2008	Regulation in Medical Devices Development
2007	Trends of Wireless World
2006	The World with RFID
2005	E-Security: The Next Wave of Security Technology and Market Trend Technology and Market Trend
2004	New Digital World
2003	Next Wireless Innovation: Radio Frequency Integrated Circuits
2002	MEMS and Network Security
2001	High-Speed / High-Performance Computing Network
2000	Biotechnologies
1999	High-Speed LAN Technologies
1998	Green Technologies

UTHF Committee Members

Ken Hung

Vice President of NATEA-SV, 2023
Software Architecture Engineer
@ Ambarella
Conference Chair

Chien-Min Liao, Ph.D.

President of NATEA-SV, 2023
Sr. Manager
@ Applied Materials
Program Co-Chair

Hsiang-He Lee, Ph.D.

Board of Director of NATEA-SV, 2023
Research scientist
@ Lawrence Livermore National Laboratory
Logistic Planning

Tiffany Wang

Board of Director of NATEA-SV, 2023
PhD Candidate in Applied Physics
@ Stanford University
Logistic Planning

Tien-Ning Hsu

Board of Director of NATEA-SV, 2023
Computer Scientist
@ Adobe
VIP Reception

Ming-Yen Kao, Ph.D.

Board of Director of NATEA-SV, 2023
Staff Hardware Engineer
@ NVIDIA
IT and Technical Support

Iris Lin

Board of Director of NATEA-SV, 2023
Associate Project Manager
@ AppLovin
Website / Program booklet

Constance Liu

Hardware Partnership Manager
@ Zoom
Logistic Planning

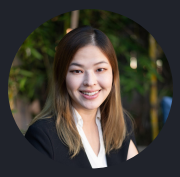
Bruce Chou, Ph.D.

Board of Director of NATEA-SV, 2023
Technical Staff
@ Applied Materials
Event Marketing

Yan-Kai Huang

Board of Director of NATEA-SV, 2023
Engineering Product Manager
@ Cisco Systems
Event Marketing

UTHF Committee Members



Jasmine Yu

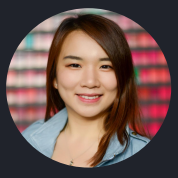
Board of Director of NATEA-SV, 2023
Product Manager
@ Airbnb
Event Marketing

Jeff Lin

Board of Director of NATEA-SV, 2023
Account Technical Leader
@ IBM
Event Marketing

Chu-Han Tung

Treasurer of NATEA-SV, 2023
Senior Financial Analyst
@ Autodesk
Event Marketing



Peggy Pan

Secretary General of NATEA-SV, 2023
Sr. Product Marketing Manager
@ Uscreen
Event Marketing

Volunteers

Kuan-Fu Chen

ChemE MS student @ Berkeley
IT and Technical Support

Ethan Wang

MatSci MS student @ Stanford
Program Service

Yi-Ting Wu

EE MS student @ Stanford
Program Book and Program Service

Yi-Chin Huang

CS MS student @ Stanford
Program Service

Ting-Yu Chang

CEE MS student @ Stanford
IT and Technical Support

Chuan-Hua Cheng

MechE MS student @ Stanford
Program Service

Che-Wei Yang

CS Undergrad @ Berkeley
IT and Technical Support

Tracy Chang

CS MS student @ Stanford
Program Service

Po-Kai Huang

CS Undergrad @ Berkeley
IT and Technical Support

Acknowledgments

We graciously appreciate the following individuals below for their time and support in helping to put together UTHF 2023. Thank you so much!

Digitimes
Jewel Chen
Joyce Siow
Missy Chen

Science & Technology Division, TECO in SF
Mong-Hsun Tsai
Chih-Ping Wang

NATEA-SV BoD & Advisors
Joseph Chen, Ph.D.
Mark Tseng, Ph.D.
Rex Chen, Ph.D.

Visual Designer
Ivory Sheng Chien, UI/UX Product Designer

TaiwanNext Foundation
Katie Hsieh

INSTO
Abeen Chen

Recording & Photography
Hassen, iStudios Media

駐舊金山臺北經濟文化辦事處科技組
Science and Technology Division,
Taipei Economic and Cultural Office
in San Francisco

5201 Great America Pkwy., Suite 200
Santa Clara, CA 95054
+1-408-986-8686
負責轄區：North CA, OR, WA, NV, ID, MT, WY

NSTC