

BERKELEY INNOVATION FORUM

GARWOOD CENTER FOR CORPORATE INNOVATION

April 20 - 22 , 2022

Learn about the Magic of Innovation & How it Happens
Emerging Technologies & Business Models

Location: Disneyland's Grand Californian Hotel, Anaheim, California

Disney Grand Californian Hotel & Spa

Open Innovation in
Designing Creative Theme Parks

Pre-event & Day 1: April 19 & 20



NASA Jet Propulsion Laboratory (JPL)

Open Innovation in Space
Exploration

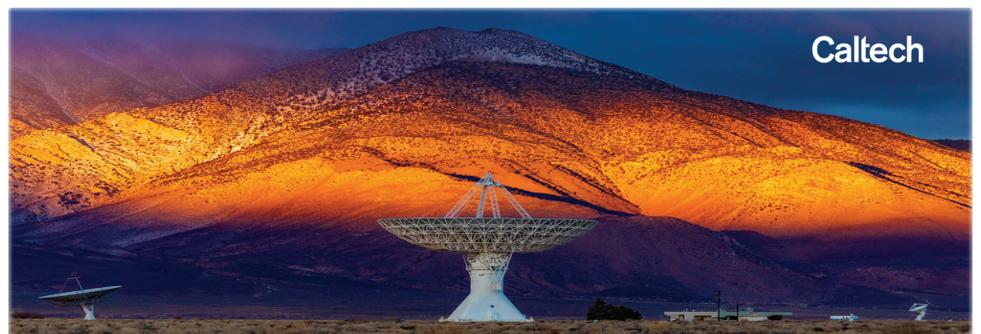
Day 2: April 21, 8:30am - 12pm



California Institute of Technology (Caltech)

Emerging and Anticipated
Technologies

Day 2: April 21, 1pm-5pm



Northrop Grumman Aerospace

Innovation in Factories:
Factories of the Future & Beyond

Day 3: April 22, 9am-1pm



At Disney: *“It is kind of fun to do the impossible” - Walt Disney*



1. **Learning about the History of Innovation in Entertainment**
2. **Learning about Stuntronics - Application of AI & Robotics:** Behind the Scenes of the Spiderman Show - Disney
3. **Customizing Your Tools for Open Innovation:** Open Innovation Workshop by Nine Sigma
4. **METaverse: The Future Is Already Here - No Turning Back:** Presentation by Nvidia
5. **Transforming your Business Model with Digital Tools:** C-Suite Panel from AirAsia, Microsoft and Apollo Hospitals
6. **Enhancing and Extending Brand Awareness:** Open Innovation Challenge by Fujitsu
7. **Networking with Innovators Across Industries**

At NASA JPL: *The Sky is Never too High*



1. **Learning from History of Space Technology:** Museums of historical artifacts of space exploration
2. **Planning the Next Trip to Mars:** Opportunities, Challenges, and Risks -A Zero Room for Error
3. **Building Vehicles for Space:** Visit to the Rover Technology Testing Site
4. **Controlling the Space Mission:** Visit to the Command Control Center
5. **Understanding our Changing Planet:** Earth Science Center
6. **Upcoming Projects at JPL:** Larry James, JPL Director
7. **Latest Research on Application of Open Innovation:** Professor Chesbrough
8. **Networking with Innovators (with JPL, Caltech Scientists, and BIF Members):** Lunch at Caltech

At Caltech: *Our Future is Here to Consider*



1. **Learning about History of Breakthrough Innovations:** Caltech Museum
2. **Accelerating our Future:** Breakthroughs in Quantum Computing
3. **Augmenting our Human Capabilities:** New Developments in Robotics
4. **Surpassing our Cerebral Intelligence:** Advances in (AI) Artificial Intelligence
5. **Extending your Mind:** Emerging Solutions in Neuroscience
6. **Enhancing your Health and Longevity:** Latest in Biosciences
7. **Sustaining our Planet:** Emerging Facts, Figures, and Trends about our Planet



A SpaceX Talk: *Imagination & Technology Have No Boundaries*

1. **Learning about Future Business Opportunities Associated with Space Travel Industry**
2. **Understanding Risks in Space Travel:** Questions and Answers



At Northrop Grumman: *Pushing the Limits of Technology*

1. **Innovation in Factories: Factories of the Future & Beyond:** Tour & Presentation
2. **Creating “Minimally Viable Digital Ecosystems” to Expand Markets:**
Innovation Round Table by Solomon Darwin

Pre-event & Dinner: Tuesday, April 19, 2022

Location: Disney's Grand Californian Hotel & Spa

5:00pm - 6:00pm

Informal Networking Reception at Disney's Grand Californian Hotel & Spa - Hearthstone Lounge

6:00 - 6:10pm

Welcome & Introduction by Solomon Darwin - Sequoia Ballroom



Solomon Darwin

Executive Director
Garwood Center for
Corporate Innovation



Solomon Darwin is the executive director, Garwood Center for Corporate Innovation and former executive director of Financial Reporting and Management, at the Haas School of Business. Prior to joining UC Berkeley he was an associate professor at the University of Southern California from 1996 – 2005. Solomon Darwin has more than 13 years of industry experience at Bank of America and Motorola.

6:10 - 7:00pm

Networking Welcome Dinner – Disney's Grand Californian Hotel and Spa - Sequoia Ballroom



7:00pm - 8:30pm

Evening Keynote



Bob Weis

Global Imagineering
Ambassador,
Walt Disney
Imagineering



Bob Weis is Global Imagineering Ambassador for Walt Disney Imagineering, the team that creates, designs, and develops Disney's theme parks, attractions, resort hotels, cruise ships, and retail, dining, and entertainment centers. Bob has led Disney projects around the globe over several decades and most recently served as president of Imagineering for more than five years. In his current role, Bob leverages the deep legacy of Imagineering along with his personal experience to advocate for and mentor current Imagineers, works to ensure a steady pipeline of diverse future talent by forging strong relationships with universities and other organizations and focuses on finding new ways to leverage Imagineering's rich culture of storytelling in media and publishing.

Walt Disney Imagineering Guests:



Bei Yang

VP Technology
Studio Executive,
Walt Disney
Imagineering

Bei Yang is the Walt Disney Imagineering Technology Studio executive. In this role, Bei oversees the team that develops technology solutions for business operations, and the advancement and integration of design and construction software. Bei reviews and advises technical implementation plans for Walt Disney Imagineering projects and processes involving computer graphics, show control, and overall systems integration. He led the collaboration with ILM and Lucasfilm to develop an innovative attraction for Star Wars: Galaxy's Edge. Previously, Bei was the concept technical director for Goofy's Paint N' Play House at Tokyo Disneyland and the overall show control team lead for Shanghai Disneyland. Bei joined Imagineering in 2007 as a concept design associate intern, where he worked on the ride platform with a robotics simulator in Epcot's Sum of All Thrills attraction.



Sara Thacher

R&D Senior Imagineer, Walt Disney Imagineering



Sara Thacher is a Senior R&D Imagineer at Walt Disney Imagineering, where she works with engineers, computer scientists, architects, artists, and inventors to fashion new technology into revolutionary guest experiences. Her work at Imagineering includes creative leadership on the recently launched Star Wars: Galactic Starcruiser two-day immersive experience and the TEA Award-winning Haunted Mansion: Ghost Post. She also serves on the Board for the Peabody Awards where she recently helped expand the field of eligible work to interactive "Stories that matter." Previously, she served as Executive Producer and Experience Designer at Nonchalance where she co-created the groundbreaking experience, The Jejune Institute.



Morgan Pope

Research Scientist, Walt Disney Imagineering



Morgan is a research scientist at Walt Disney Imagineering, where he is responsible for the invention and implementation of new technologies with an emphasis on dynamic, high-velocity robotics. Morgan is currently the technical lead for Stuntronic technology, which combines advanced robotics with untethered dynamic movement, allowing autonomous figures with onboard sensors and processors to perform a variety of flips, twists, and poses with repeatability and precision. This technology was first applied at Disney California Adventure, where a Stuntronic Spider-Man figure dazzles guests by performing intricate acrobatics while soaring high above the rooftops of Avengers Campus.

8:30pm

Group Photo

Day 1: Wednesday, April 20, 2022

Location: Disney's Grand Californian Hotel at the California Adventure Park

6:15am

Meet at Sequoia Ball Room

6:30am - 7:30am

Stuntronic: Behind the Scenes of the Spiderman Show - Disney California Adventure Park



Bob Weis

Global Imagineering Ambassador, Walt Disney Imagineering



Bob Weis is Global Imagineering Ambassador for Walt Disney Imagineering, the team that creates, designs and develops Disney's theme parks, attractions, resort hotels, cruise ships, and retail, dining and entertainment centers. Bob has led Disney projects around the globe over several decades, and most recently served as president of Imagineering for more than five years. In his current role, Bob leverages the deep legacy of Imagineering along with his personal experience to advocate for and mentor current Imagineers, works to ensure a steady pipeline of diverse future talent by forging strong relationships with universities and other organizations, and focuses on finding new ways to leverage Imagineering's rich culture of storytelling in media and publishing.



7:30am - 7:45am

Walk back to Disney's Grand Californian Hotel

7:45am - 8:30am

Registration & Networking Breakfast at Disney's Grand Californian Hotel - Sequoia Ballroom

8:30am - 9:00am

Welcome by Henry Chesbrough



Henry Chesbrough

Faculty Director, Garwood Center for Corporate Innovation, UC Berkeley



Henry Chesbrough is a professor at the Haas Business School, UC Berkeley, and faculty director of the Garwood Center for Corporate Innovation. An internationally acclaimed author, Dr. Chesbrough's Open Innovation concept was first introduced in his award-winning book, "Open Innovation: The New Imperative for Creating and Profiting from Technology" (2003). When he coined the term Open Innovation, he defined an approach that companies around the globe now use to innovate. Today, Chesbrough works directly with companies through Garwood's programs to apply the principles of Open Innovation, and he continues to refine our understanding through his research and books.

9:00am - 9:45am

Networking: Speed Dating

9:45am - 10:45am

Pushing the Boundaries Innovation - Creativity behind the Magic of Animation
Fireside Chat with Clark Spencer, President of Walt Disney Animation Studios - Moderated by Solomon Darwin



Clark Spencer

President, Walt Disney Animation Studios



Clark Spencer is an American film producer, best known for winning the Oscars for Best Animated Feature for his work on Zootopia and Encanto. Spencer graduated from Harvard University in 1985 with a degree in history. He joined Walt Disney Feature Animation in 1993. He was director of planning but moved on to be senior vice president of finance and operations. He moved on to the Florida animation division of the company where he was the head of studio before becoming the producer of Lilo & Stitch. Since then, Spencer has gone on to also produce the Disney animated film Bolt, as well as Winnie the Pooh, Wreck-It Ralph and Zootopia. He was involved in the purchase of Miramax Films in the early 1990s. In August 2019, Spencer was named president of Walt Disney Animation Studios after Andrew Millstein was moved over to co-president of Blue Sky Studios.

10:45am - 11:00am

Challenge Presentation: Creating the Theme Park of the Future



Conrad Sangma

Chief Minister State of Meghalaya, India



Conrad Kongkal Sangma is the current Chief Minister of Meghalaya. He is the president of the National People's Party (NPP) and is also the member of Parliament from Tura's constituency. He began his political career in the late 1990s after completing his studies. He held a number of positions such as Power, Finance, IT, Tourism and GAD. He also presented his first budget within 10 days of being a minister in Meghalaya. From 2009 to 2013, he held the position of the Leader of Opposition in Meghalaya Legislative Assembly. In March 2016, he became NPP's president after his father's death.

11:00am - 11:05am

Group Photo

11:05am - 11:20am

Networking Break

11:20am - 12:00pm

Challenge Discussion: Creating the Theme Park of the Future



The Gaps

1. What emerging technology could be utilized to entertain the next generation in a nature setting?
2. How do you prepare to overcome the constraints of the next pandemic?
3. What design elements should be incorporated for a versatile & "Pandemic Proof" park?
4. How can you divert the use of park assets to generate alternative sources of income?
5. List types of entertainment that thrive under a pandemic sourced from the park's physical location?
6. What policies are needed to incorporate "Going Green" to preserve the planet?
7. Is there a digital opportunity to address the park experience, if a park is not operational?

12:00pm - 1:30pm

Networking Lunch at Disney's Grand Californian Hotel & Spa Conference Center - Trillium Ballroom

1:30pm - 2:30pm

METAVVERSE: The Future Is Already Here - No Turning Back



Keith Strier

VP, Worldwide,
AI Initiatives,
Nvidia

Keith Strier is Vice President, Worldwide AI Initiatives at NVIDIA. He leads NVIDIA's global public sector portfolio and AI Nations partnership Initiative, advising governments on domestic AI infrastructure policy. Keith was recently appointed by the OECD as Co-Chair, AI Compute Task Force to lead the development of a new framework to help government leaders measure and benchmark national AI compute capacity.

Key Learnings:



- The future: virtual worlds will co-exist with the physical world, across every dimension of life
- The misconception: only one "metaverse" and it is primarily for people to connect, game and shop
- The truth: millions upon millions of virtual worlds, most being industrial/enterprise digital twins
- Real world: more than visual experiences, they will accurately simulate physics, transforming science, engineering, design, and collaboration.
- Paradigm shift: the virtual economies = many times larger than our current world economy
- Digital twins for earth, nations, cities, even humans, etc., predicting the future of all life on earth.

2:30pm - 4:00pm

C-Suite Panel: Digital Business Model Transformation



Satish Reddy

Chariman,
Dr. Reddy's
Laboratories Ltd



Satish Reddy is the Chairman of Reddy Labs, a multinational pharmaceutical firm that manufactures and markets a wide range of products world-wide. The firm has over 190 medications, 60 APIs, diagnostic kits, critical care, and biotechnology products and is listed among the most trusted brands. During the Covid pandemic, Satish was deeply involved in forming global partnerships on industry issues. As the head of Indian Pharmaceutical Alliance, a group of 24 leading Pharma companies, working closely with the Indian Government during this unprecedented crisis. At an organisational level, he has overseen his firm accelerate its digital strategy by introducing to the market the most affordable and innovative therapeutics and vaccines.

Key Learnings:

- Organizational transformation to accelerate digital strategy to deliver services - opportunities, challenges, and lessons learned.
- Industry transformation in times of crisis to expedite solutions through alliances and partnerships.



Aileen Omar

President
Air Asia



At AirAsia, Aileen is responsible for its digital strategy, promoting innovation throughout the group and encouraging collaboration across AirAsia's businesses and markets. She oversees large, digital strategic group-wide initiatives to help transform AirAsia Group into a global, cloud and data-driven and platform company. At AirAsia Digital, Aileen is also pivotal in incubating and growing the digital and fintech businesses.



**Kamakshi
Sivaramakrishnan**

CEO,
Drawbridge
(part of Microsoft)



Kamakshi Sivaramakrishnan's is the CEO Drawbridge. The company was founded in 2010; it uses large-scale AI and machine learning to identify the different devices people use based on data generated from their devices, like the WiFi network a person connects to. Drawbridge then calculates the probability of one person using multiple devices. Drawbridge has raised \$68.7 million from investors, including Sequoia Capital. Before starting Drawbridge, Sivaramakrishnan worked as a data scientist at mobile ad platform AdMob, which was acquired by Google in 2009 for \$750 million, and received her PhD in information theory and algorithms from Stanford.

4:00pm - 4:15pm

Networking Break

4:15pm - 5:00pm

Challenge: Enhancing and Extending Brand Awareness



Fujitsu is a global leader in technology and business solutions that transform organizations and the world around us. Fujitsu has a long heritage of bringing innovation and expertise, continuously working to contribute to the growth of society and our customers.

5:00pm - 5:15pm

Recap by Solomon Darwin, Executive Director



Solomon Darwin
Executive Director
Garwood Center for
Corporate Innovation



Solomon Darwin is the executive director, Garwood Center for Corporate Innovation and former executive director of Financial Reporting and Management, at the Haas School of Business. Prior to joining UC Berkeley he was an Associate professor at the University of Southern California from 1996 – 2005. Solomon Darwin vhas more than 13 years of industry experience at Bank of America and Motorola.

5:15pm - 6:15pm

Networking Cocktail Reception - Brisa Courtyard

6:30pm

End of Program (Networking dinner on your own)

Day 2: Thursday, April 21, 2022

Location: NASA Jet Propulsions Lab & CalTech

6:20am - 6:40am

Hotel Checkout & Boxed Breakfast

6:45am - 8:30am

Bus Leaves to NASA-Jet Propulsion Laboratory (4800 Oak Grove Dr, Pasadena, CA)

8:30am - 9:30am

Keynote: Open Innovation and Open Source Software: Opportunities and Challenges



Henry Chesbrough
Faculty Director,
Garwood Center for
Corporate Innovation,
UC Berkeley



Henry Chesbrough is a professor at the Haas Business School, UC Berkeley, and faculty director of the Garwood Center for Corporate Innovation. An internationally acclaimed author, Dr. Chesbrough's Open Innovation concept was first introduced in his award-winning book, "Open Innovation: The New Imperative for Creating and Profiting from Technology" (2003). When he coined the term Open Innovation, he defined an approach that companies around the globe now use to innovate. Today, Chesbrough works directly with companies through Garwood's programs to apply the principles of Open Innovation, and he continues to refine our understanding through his research and books.

9:30am -12:00pm

Jet Propulsion Laboratory (JPL): "Understanding our Changing Planet" at the Earth Science Center



Larry James
COO & Deputy
Director, JPL



At JPL, Larry James is the Laboratory's COO responsible to the director for the day-to-day management of JPL's resources and activities. This includes managing the laboratory's solar system exploration, Mars, astronomy, physics, Earth science, interplanetary network programs, and all business operations. These activities employ 6,000 scientists, engineers, technicians, and business support personnel, generating \$2.6 billion in annual revenues.

12:10pm - 12:30pm

Bus Leaves to CalTech

12:30pm - 1:15pm



Lunch: Caltech Faculty Club (the Athenaeum: 551 S. Hill Avenue, Pasadena, CA 91125)

1:15pm – 2pm

Faculty Keynote with Q&A Session



S. A. (Ali) Hajimiri

Co-Director,
Space-Based Solar
Power Project
Engineering and
Applied Science

Professor of Electrical
Engineering & Medical
Engineering

Prof. Ali Hajimiri received his B.S. degree in Electronics Engineering from the Sharif University of Technology, and M.S. and Ph.D. degrees in electrical engineering from the Stanford University. Before joining the Faculty of Caltech, he worked at Philips Semiconductors, where he worked on a BiCMOS chipset for GSM and cellular units, at Sun Microsystems working on the UltraSPARC microprocessor's cache RAM design methodology, and with Lucent Technologies (Bell Labs), Murray Hill, NJ, where he investigated low-phase-noise integrated oscillators. In 1998, he joined the Faculty of the California Institute of Technology, Pasadena. His research interests are high-speed and high-frequency electronics and photonics integrated circuits for applications in sensors, biomedical devices, photonics, and communication systems. He is a Fellow of National Academy of Inventors (NAI). Prof. Hajimiri was selected to the TR35 top innovator's list.

2:00pm – 2:45pm

Talking to Cells: Technologies for Imaging and Controlling Cellular Function Deep Inside the Body



Mikhail G. Shapiro

Professor of Chemical
Engineering;
Investigator, Howard
Hughes Medical
Institute Chemistry and
Chemical Engineering

Mikhail Shapiro is a professor of chemical engineering at Caltech and the head of the Shapiro Lab. He is a 2019 recipient of the Vilcek Creative Promise Prize in biomedical science. His research is focused on technologies to image and control cellular function deep inside the body using sound waves and magnetic fields. This work has applications in basic biology and development of cell-based diagnostics and therapeutics for medicine. Among his research accomplishments, Mikhail developed the first genetically engineered functional reporters for magnetic resonance imaging, invented the first reporter genes for ultrasound, and discovered a fundamental mechanism by which infrared light stimulates neurons.

2:45pm - 3:00pm

Break

3:00pm - 3:45pm

Lecture with Q&A Session



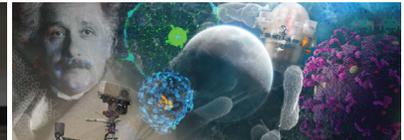
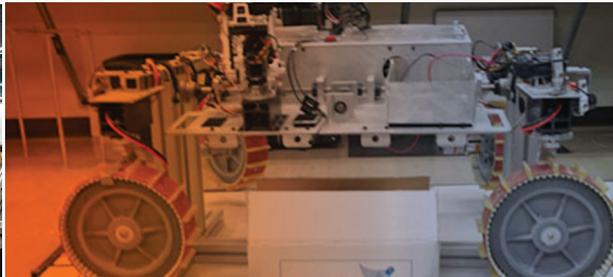
Maria Spiropulu

Shang-Yi Ch'en
Professor of Physics
Physics, Mathematics
and Astronomy

Maria Spiropulu is an experimental particle physicist. Born and educated in Macedonia/Greece, she moved to the U.S. to pursue her Ph.D. at Harvard and worked at the Collider Detector at Fermilab (CDF). She has worked on silicon sensors, calorimetry, trigger and data acquisition and on searches for new physics. She used the double blind data analysis method for the first time in hadron collider data. The particular Tevatron results from her search for supersymmetric dark matter using missing energy were the best yet obtained.

3:45pm - 4:45pm

Walking Tour of Caltech - Sustaining our Planet: Emerging Facts, Figures, and Trends about our Planet
Ken Hargreaves & Max Christman



5:00pm

Bus leaves to AC Hotel by Marriott Los Angeles (2130 E Maple Ave, El Segundo, CA 90245)

Post-Event: Friday, April 22, 2022

Location: Northrop Grumman (Simon Ramo Dr & Marine Ave, Redondo Beach, CA 90278 - Bldg E2)

8:15am Bus leaves AC Hotel by Marriott Los Angeles (2130 E Maple Ave, El Segundo, CA 90245) to SpaceX & Northrop Grumman (Simon Ramo Dr & Marine Ave, Redondo Beach, CA 90278 - Bldg E2)

8:30am SpaceX photo with Steve Jurvetson (*SpaceX facilities will not be accessible*)

9:00am - 10:30am Keynote: Space, the Final Frontier and a Case Study in Disruption



Steve Jurvetson

Board Member,
SpaceX



Co-founder,
Future Ventures



Steve is a board member at SpaceX, and was the early VC investor for SpaceX, Tesla, Planet, Memphis Meats, Hotmail, D-Wave, Boring, Zoox and the deep learning companies Mythic and Nervana. Steve Jurvetson is an early-stage venture capitalist with a focus on founder-led, mission-driven companies at the cutting edge of disruptive technology and new industry formation. He also led founding investments in five companies that went public in successful IPOs and several others that became billion-dollar acquisitions. Before co-founding Future Ventures and Draper Fisher Jurvetson, Steve was an R&D Engineer at Hewlett-Packard, where seven of his chip designs were fabricated. He also worked in product marketing at Apple and NeXT and management consulting with Bain & Company.



10:30am - 11:00am Northrop Grumman Overview & Presentation



Jonathan Arenberg
(TBC)

Chief Systems
Engineer,
Northrop Grumman
Aerospace Systems



Jonathan Arenberg has been with Northrop Grumman Aerospace Systems since 1989 having started with Hughes Aircraft Company. His work experience includes optical, space, and laser systems. Dr. Arenberg has worked on such astronomical programs as the Chandra X-ray Observatory, James Webb Space Telescope, and helped develop the New Worlds Observer concept for the imaging of extra-solar planets. He has also worked on major high-energy and tactical laser systems, laser component engineering, and metrology issues.

11:00am - 11:30am Northrop Grumman Tour: Innovation in Factories - Factories of the Future & Beyond



Innovation Officer's Roundtable

11:30am - 12:15pm Innovation Round Table



Solomon Darwin

Executive Director
Garwood Center for
Corporate Innovation



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12:15pm - 1:00pm Networking Lunch at Northrop Grumman

1:15pm Bus Pick up to AC Hotel by Marriott Los Angeles (2130 E Maple Ave, El Segundo, CA 90245)

Members of the Berkeley Innovation Forum

