



Pre-GSTC Event: Workshop on RESPONSIBLE SPACE BEHAVIOR and the DEMOCRATIZATION OF SPACE

February 5, 2020

Residence 2, Grand Hyatt, Singapore

As the space start-up community continues to grow internationally, and the investment/finance community becomes more involved, SWF is working with partners to organize the “Space Investing & Responsible Behavior” workshop series. In a growing and diversifying community of space-interested investors, this discussion seeks to raise awareness of the importance of responsible operations practices in light of the unique challenges to the sustainability of the space domain. This workshop at GSTC will examine the context through which the investor community can work with industry to encourage and implement responsible space operations practices.

08:30 Registration

09:00 Welcome and Overview

Workshop Overview, Introduction, and Objectives

Ian Christensen, Secure World Foundation

Joerg Kreisel, CEO, JKIC

09:15 Discussion 1: Key Trends in the Space Domain

Speaker 1: Luigi Scatteia, Partner and Space Practice Group Lead, PWC

Speaker 2: Bidushi Bhattacharya, CEO, Astropeneurs Hub & Advisor GEN Space

Speaker 3: Rod Mamin, COO, Spacebit

Speaker 4: Chris Blackerby, COO, Astroscale

Moderator: Ian Christensen, Secure World Foundation

10:00 Keynote: OneWeb: Responsible Space Initiative

Earl Han, Senior Engineer, OneWeb

10:30 Break

11:00 Discussion 2: Responsible and Sustainable Space Investment

Speaker 1: Kenji Fuma, CEO, Neural Inc.

Speaker 2: Lisa Enckell, Partner, Antler

Speaker 3: Tytus Michalski, Managing Partner, Fresco Capital

Moderator – Joerg Kreisel, JKIC

12:00 **Networking Lunch** – *Workshop Concludes at 13:00*

Speaker Bios

Bidushi Bhattacharya

Dr. Bidushi Bhattacharya is an ex-NASA scientist-turned-astropreneur with three decades experience in spacecraft development and operations, NewSpace startup growth, and scientific research. She is founder and CEO of Astropreneurs HUB (astropreneurs-hub.com), a Singapore- and US-based startup dedicated to space workforce development for professionals and students. Her team provides hands-on training using CubeSats and International Space Station research labs.

Dr. Bhattacharya serves on advisory boards for a number of space-related organizations, including Global Entrepreneurship Network - Space (<https://www.genglobal.org/gen-space>)

She holds a Ph.D. and M.S. in space physics from UCLA as well as dual degrees from Rutgers University, a B.S. in mechanical engineering and a B.A. in physics.

Chris Blackerby

Chris Blackerby is Group COO & Director, Japan at the Astroscale. Prior to joining Astroscale Chris served as the NASA Attaché for Asia, the senior space policy official in the US Embassy Tokyo, from 2012-2017. In that capacity he identified multiple opportunities for cooperation in the region; served as strategic space advisor to the US Ambassador to Japan and senior US Government officials; acted as an official intermediary between NASA and its partners in Asia in negotiating agreements and resolving disputes; and participated in numerous outreach events highlighting NASA activities.

Chris began working for NASA as a Presidential Management Fellow in 2003. While at NASA he was a leader in forging international cooperative partnerships around the world in the fields of Earth science, space science and human space exploration. From 2005- 2007 Chris was the Executive Director of the NASA Advisory Council, which provided advice to senior NASA officials on future policies and plans. Chris received a BA in History and Education from the University of Richmond (Va.) in 1995 and an MA in International Relations from the University of Rhode Island in 2002. In 2009 Chris earned an MBA from the McDonough School of Business at Georgetown University.

Ian Christensen

Ian Christensen is Director of Private Sector Programs at Secure World Foundation. He is responsible for leading SWF's engagement activities with the commercial space industry, where his activities focus on policy and governance topics in support of the development of private sector space capabilities: including topics such as space debris mitigation, norms of behavior for responsible space operations, and space resources policy. In this role Ian is a member of the Hague International Space Resources Governance Working Group and is a member of the Secretariat for the Consortium for Execution of Rendezvous and Servicing Operations (CONFERS), an industry group developing best practices and standards for commercial satellite servicing. Prior to joining SWF, Mr. Christensen worked at leading space-sector consulting firms Futron Corporation and Avascent. In these positions he managed or served in lead analysis roles on market, business planning, and forecasting studies for numerous commercial and government space sector clients in the United States, Asia, Israel, and Europe. Mr. Christensen holds a Master of Arts (M.A.) in international science and technology policy, focusing on space policy

from the George Washington University Elliott School for International Affairs. He holds dual Bachelor's of Science (B.S.) degrees in political science and biochemistry from the University of Nebraska-Lincoln.

Lisa Enckell

Lisa Enckell is a Partner at Antler. Lisa Enckell was part of starting the startup generator and early-stage VC Antler in 2018. Based in Singapore, she's one of their global partners overseeing the firm's global network of advisors and portfolio companies and is part of the investment committees. Antler brings exceptional individuals together to build disruptive tech companies. Since the launch in Singapore in 2018, Antler is now running its program in eight cities around the world and has invested in 120 companies to date. Over 20,000 people have applied to be part of Antler's programs and hundreds of advisors are part of the close network supporting the entrepreneurs.

Lisa has been working for- and advising startups in Europe, the US and Asia over the past nine years. She's also been an active angel investor together with her husband, Andreas Ehn. As an angel investor, the couple supports their portfolio companies on product strategy and roadmap as well as fundraising and hiring.

After living in the Bay Area for nearly three years, Lisa and Andreas decided to embark on a journey to learn more about the world. Their goal was to live in ten different countries, spending about six months in each place. That's how they in 2015 arrived in Southeast Asia and Jakarta. After living in Jakarta they briefly lived in Singapore while their first son was born and then they moved to Berlin. In each city, they connected with the local ecosystem of startups and VCs. They then worked with startups in Mumbai for a period before they in 2017 decided to settle down in Singapore to focus more on their work with startups and their investments.

Lisa started her career in Stockholm, Sweden, working as a PR consultant and public speaker before entering the startup scene in 2011. She holds an MSc in Business and Economics from the Stockholm School of Economics.

Kenji Fuma

Kenji Fuma is a founder and CEO of Neural Inc, a strategy and management consulting firm in corporate sustainability and ESG investment, established in 2013. Kenji obtains first-rate and up-to-date knowledge and intelligence on international disclosure frameworks, sustainability guidelines, international treaties, domestic legislation, and company and investment strategies. He manages the company's online news website, "Sustainable Japan."

As a world's leading expert of responsible business and sustainable finance, Kenji has been a committee member of the Socio-Economic Panel of the Hague International Space Governance Working Group since 2018, which is an international rule developer for space resource mining and orbit-operations. Kenji is also appointed as a selection board member for Japan's ESG Finance Award by the Japan's Ministry of Environment.

Kenji has presented lectures on sustainable finance and sustainability management at the International Finance Corporation of the World Bank Group and in many industrial conferences, covering a variety of agendas from climate change and water stress to human rights, diversity & inclusion, cybersecurity,

corruption, and corporate governance. Kenji is also a distinguished contributor to CNN, Washington Post, Forbes, NHK and Nikkei.

Kenji holds a Master of Liberal Arts in Sustainability from Harvard University, an MBA in Global Management from Thunderbird School of Global Management, and a Bachelor of Liberal Arts in International Relations from the University of Tokyo.

Joerg Kreisel

Joerg is CEO of JKIC. He specializes in technology commercialization – with a strong focus on space – and has been involved in numerous primarily international activities in both space and early-stage equity finance since 1987 (i.e. support to the creation and early years of RapidEye). After pursuing a first career in space business he became venture capitalist in the early 1990s. Joerg serves as board member of several high-tech startups and investor boards, has been involved with new business creation in the space arena around the globe. He holds a degree in aerospace engineering from RWTH Aachen University (Germany) and is an ISU alumnus, acts as lecturer at different universities since the 1990ies, and is a frequent speaker at international events. Joerg was born in 1961 and is married, with two children.

His firm JKIC (JOERG KREISEL International Consultant – Independent Space Business + Finance Advisors) was formed in 1991 in Germany and is focused on innovative and commercial activities related to the space sector as well as on special activities in the private equity and venture capital industry. Today, JKIC is a recognized label in the global space community, advising space-related government authorities, industry, SMEs and selected investors worldwide using its proprietary global network of leading expertise, and acting as intermediary. JKIC supports space ventures, facilitates business partnerships, equity finance, global links and strategy development as well as new system concepts. The portfolio also spans over financing strategies and models beyond commercial endeavors, e.g. conceptualization and development support for national or international funding schemes.

Since 2000 JKIC is involved with on-orbit servicing (OOS) both space agency and industry projects or commercial offerings, was part of the iBOSS consortium, and instrumental in creating iBOSS GmbH which commercializes the iSSI (intelligent Space System Interface enabling plug-and-play space infrastructure and fully-fledged OOS).

In summary, Joerg is around in the industry for more than 30 years and deals with space finance for more than 25 years, moreover, he currently holds stakes in several space-related startups in different countries. Moreover, Joerg is Associate Fellow of the AIAA (American Institute of Aeronautics and Astronautics) and founding member of the Space Entrepreneurship and Investment Committee (EIC) of the IAA (International Academy of Astronautics).

Earl Han

Earl works in the Mission Systems Engineering group at OneWeb as a Senior Engineer. In this role, Earl supports OneWeb's Regulatory team with systems engineering analyses and activities related to licensing and system compliance to launch and operate OneWeb's satellite constellation. In addition, Earl manages the ADR workstream of Project Sunrise, which explores the commercial viability of active debris removal services with some of the leading ADR companies within the ESA ecosystem.

Rod Mamin

Rod Mamin is COO of Spacebit, a UK space startup focused on commercial lunar business opportunities. In 2013 he received a Master's degree in Math & Computer Science from with his Master's Thesis on Genetic Algorithms for Neural Networks optimization. Since 2011 he has worked in outsourcing for an IT company as a CTO and in 2013 he started his own IT business. At that time he participated in several IT startups, but since 2014 Rod began thinking about space projects. In 2016 he exited all other activities to focus on the space sector. In 2018 he participated in a crowdfunding company as its CMO to collect money for a prototype of a biological life support system that used algae to clean CO2 from the air and convert it into oxygen and biomass. In 2018 he joined Spacebit as its COO.

Tytus Michalski

Tytus Michalski is a co-founder and Managing Partner of Fresco Capital, an early stage venture capital firm investing at the intersection of people and technology. Previously, he was Chief Investment Officer of Equities at PMA Investment Advisors, an institutional Asia Pacific hedge fund, managing the equity funds and the equity team. He was a co-founder of PMA, which was started in 2002 and acquired in 2006 while in the process of scaling up to US\$3B in assets under management. Before that, he was focused on equity investment with HSBC Asset Management in Hong Kong, Singapore, Tokyo, and London.

Tytus graduated from the Sauder School of Business at the University of British Columbia (Finance with Honours) and is a Leslie Wong Fellow alumnus of the UBC Portfolio Management Foundation. He is also a founding Board Director of the UBC Sauder Alumni Club of Hong Kong and holds the CFA designation. In his spare time, Tytus enjoys training and teaching traditional Okinawan karate as a third degree black belt.

Luigi Scatteia

(bio not received)