

AGENDA

Sunday, June 3, 2018

4:00 - 8:00 p.m. Atrium Foyer	Registration/Information Desk Open Please check in to pick up your conference materials and name badge.
4:00 – 8:00 p.m.	Technology Showcase Setup See poster assignments in program booklet. Please hang all posters no later than
Atrium Foyer & Atrium A Ballroom	8:30 a.m. on Monday morning. There is no security provided in the poster area, do not leave valuables unattended.

Monday, June 4, 2018

7:30 a.m. – 6:30 p.m.	Registration/Information Desk Open			
Atrium Foyer	Please check in to pick up your conference materials and name badge.			
7:30 – 8:30 a.m.	Technology Showcase Setup			
Atrium Foyer & Atrium A Ballroom	See poster assignments in program booklet. Please hang all posters no later than 8:30 a.m. on Monday morning. There is no security provided in the poster area, do not leave valuables unattended.			
7:30 – 8:30 a.m.	Breakfast Buffet			
Atrium Foyer	Please enjoy breakfast in the Atrium B Ballroom.			
8:30 – 9:00 a.m.	Welcoming Remarks			
Atrium B Ballroom	Barry Johnson, Division Director, Industrial Innovation and Partnerships, National Science Foundation (NSF)			
9:00 – 9:30 a.m.	National Science Foundation: Investing for a Brighter Future			
Atrium B Ballroom	Dawn Tilbury, Assistant Director, Directorate for Engineering, National Science Foundation (NSF)			
9:30 – 10:30 a.m.	Featured Speaker: From PhD to CEO: The Founding and Building of Bolt			
Atrium B Ballroom	Threads Dan Widmaier, CEO and Founder, Bolt Threads			

10:30 – 11:00 a.m.	Coffee Break		
Atrium Foyer	Gones Broak		
11:00 a.m. – 12:00 p.m.	Phase II Supplements: Overview		
Atrium B Ballroom	Ben Schrag, Senior Program Director, SBIR/STTR, NSF		
12:00 – 1:30 p.m.	Luncheon With Featured Speaker: Lessons Learned from a Young Serial Entrepreneur		
Atrium B Ballroom	Adam Tilton, CEO and Founder, Rithmio		
	SBIR/STTR Grantee Breakout Sessions With Your Program Director		
1:30 – 2:30 p.m. Breakout Rooms	A703: Murali Nair & Richard Schwerdtfeger A704: Henry Ahn, Nancy Kamei & Rajesh Mehta A706: Peter Atherton, Linda Molnar & Ben Schrag A707: Anna Brady-Estevez & Ruth Shuman		
2:30 - 3:00 p.m. Atrium Foyer	Coffee Break		
3:00 - 4:30 p.m. 9th Floor	NSF SBIR/STTR One-on-One Meetings With Program Directors Schedule available online and in program booklet.		
3:00 – 4:00 p.m. Atrium B Ballroom	Impact Stage Phase II Company Insights This session will highlight talks by Phase II companies that will share their "lessons learned" experiences – insights, challenges, "war stories," surprises, and impact. These are experiences from building their companies in a way that reflects their vision, authenticity, and passion.		
4:00 - 4:25 p.m. Atrium B Ballroom	Navigating the Entrepreneurial Education Sessions Ruth Shuman, SBIR/STTR Program Director, NSF		
4:30 - 6:30 p.m. Atrium Foyer & Atrium A Ballroom	Technology Showcase I All IRI Annual Meeting attendees are invited to join this event showcasing NSF SBIR/STTR Phase II and PFI grantees. NSF Program Directors will visit odd numbered posters on Monday evening.		

Tuesday, June 5, 2018

7:30 a.m. – 6:30 p.m.	Registration/Information Desk Open
Atrium Foyer	
7:30 – 8:30 a.m.	Breakfast Buffet Please enjoy breakfast in the Atrium Foyer or in the breakout room of your first
Atrium Foyer	session.
8:00 a.m. – 4:30 p.m.	NSF SBIR/STTR One-on-One Meetings With Program Directors Schedule available online and in program booklet.
9th Floor	Schedule available offilite and in program bookler.

8:00 a.m. – 4:30 p.m.	One-on-One Meetings With Other Federal Agencies (FDA, PTO, NIST MEP) Sign up for ad hoc meetings at the registration desk onsite.				
Atrium Foyer					
•	ew the session descriptions the	•	•	oughout the day on Tuesday. re information.	
8:45 – 10:00 a.m. Breakout Rooms	Forming Technology Commercialization Alliances: Approaching Partners and Structuring the Deal Gene Slowinski, Director, Open Innovation and Strategic Alliance Research, Rutgers Business School	How to Fire Your First Customers Grant Warner, Director of Innovation and Entrepreneurship, Howard University		Creating Values-Aligned Team Dynamics Mark Nicolson, Founder, Nicolson Group	
	Atrium Ballroom B	A703/A7	04	A706/A707	
10:00 - 10:30 α.m. Atrium Foyer	Coffee Break				
10:30 — 11:45 a.m. Breakout Rooms	The Perfect Pitch Blake Patton, Managing Partner, Tech Square Ventures	Top Five Things NOT to Say to an Investor Patti Glaza, SVP/ Managing Director, ID Ventures		Creating Values-Aligned Team Dynamics Mark Nicolson, Founder, Nicolson Group	
	A601/A602 A703/A704		04	A706/A707	
11:45 a.m. – 1:15 p.m. Atrium B Ballroom	Women in Business Luncheon All women attending the IRI, PFI and SBIR/STTR Phase II conferences are encouraged to attend this luncheon.				
11:45 a.m. – 1:15 p.m. Skyline, 10th Floor	Networking Luncheon				
1:30 – 2:45 p.m.	Working With Large Corporations – Panel Discussion Moderator: John Bacon, Co- Founder, GrowthPilot LLC		Prototype to Production and Overcoming the Challenges Along the Way – Panel Discussion Moderator: Rick Schwerdtfeger, SBIR/STTR		
Breakout Rooms – Atrium Level	A703/A704 Program Direct A706/A707			tor, NSF	
1:30 – 2:45 p.m. Breakout Rooms – Marquis Level	 IRI Breakout Sessions Open to SBIR/STTR and PFI Grantees: Creativity: A Most Practical Guide (M304) The Future of the Blockchain (M301) Jill Watson, Family & Friends: Experiments in Artificial Intelligence Cognitive Assistance (M101) Managing Technology in an Exponential World (M104-105) 				
2:45 – 3:15 p.m.	Perspectives in Corporate Innovation (M302-303) Coffee Break				

Coffee Break

Atrium Foyer

3:15 – 4:30 p.m. Breakout Rooms – Atrium Level	Forming Technology Commercialization Alliances: Approaching Partners and Structuring the Deal Gene Slowinski, Director, Open Innovation & Strategic Alliance Research, Rutgers Business School	Top Five Things NOT to Say to an Investor Patti Glaza, SVP/ Managing Director, ID Ventures	How to Fire Your First Customers Grant Warner, Director of Innovation and Entrepreneurship, Howard University
	Atrium Ballroom B	A703/A704	A706/A707
3:15 – 4:30 p.m. Breakout Rooms – Marquis Level	 IRI Breakout Sessions Open to SBIR/STTR and PFI Grantees: The Importance of Failure When Innovating in Today's Global Marketplace (M301) Fireside Chat: Georgia Tech, Boeing, and Partnering in Aerospace Technologies (M304) Approaches to Rapid Prototyping and Product Development (M104-105) The Future of Innovation is Fewer Ideas, Not More (M101) Staying Ahead of the Pace of Change: Crafting Alternative Business Models to Expedite Product Development (M302-303) Panel: Successful Partnerships Between Large Companies, Startups, and Universities (M106-107) 		
4:30 – 6:30 p.m. Atrium Foyer & Atrium A Ballroom	Technology Showcase II All IRI Annual Meeting attendees are invited to join this event showcasing NSF SBIR/STTR Phase II and PFI grantees. NSF Program Directors will visit even numbered posters on Tuesday evening.		

Wednesday, June 6, 2018

7:30 a.m. – 4:00 p.m.	Posicination/Information Dock Onon
Atrium Foyer	Registration/Information Desk Open
7:30 – 8:30 a.m. Atrium Foyer	Breakfast Buffet Please enjoy breakfast in the Atrium Foyer or in the breakout room of your first session.
7:30 – 8:30 a.m. <i>A708</i>	Celebrating Diversity Breakfast Are you passionate about increasing the diversity of America's innovation ecosystem? At NSF, we strive to enhance U.S. leadership in science and engineering discovery and innovation by proactively seeking and effectively developing science, technology, engineering and mathematics (STEM) talent from all sectors and groups in our society. Join us for breakfast to engage NSF staff, awardees and colleagues interested in broadening participation in entrepreneurship.
8:00 a.m. — 4:00 p.m. 9th Floor	NSF SBIR/STTR One-on-One Meetings With Program Directors Schedule available online and in program booklet.

Entrepreneurial Educational Sessions are offered concurrently in multiple rooms throughout the day on Wednesday. Please review the session descriptions that follow this agenda for more information.

8:45 – 10:00 a.m. Breakout Rooms	Michael Horten, Managing Member,		orkshop , ember,	Testing Your Solution: Validating Product-Market Fit Edmund Pendleton, Director, DC I-Corps, University of Maryland	
	Atrium Ballroom B	A703/A704		A706/A707	
10:00 – 10:30 a.m.	Coffee Break				
Atrium Foyer					
10:30 — 11:45 a.m. Breakout Rooms	Capital Right for You? - Panel Discussion		Financing Your Company With Angel Capital – Panel Discussion Moderator: Susan Preston, Managing Member, Seattle Angel Fund		
	Atrium Ballroom B A703/A7		704		
11:45 a.m. – 1:15 p.m. Skyline, 10th Floor	Networking Luncheon				
1:15 – 2:30 p.m. Breakout Rooms	How to Raise and Structure Your Early- Stage Capital Michael Horten, Horten CC	Preparing Realistic Financials Workshop Susan Preston, Managing Member, Seattle Angel Fund		Testing Your Solution: Validating Product-Market Fit Edmund Pendleton, Director, DC I-Corps, University of Maryland	
	Atrium Ballroom B A703/A704			A706/A707	
2:30 - 3:00 p.m. Atrium Foyer	Coffee Break	1 /			
3:00 – 4:00 p.m.	Pitch Your Company T	o An Investor			
Breakout Rooms	See "Pitching" section of the program booklet for breakout room assignments. All companies are encouraged to pitch during this session.				
4:00 p.m.	Conference Adjourns Please remove posters by 1:30 p.m. or they will be recycled.				



Entrepreneurial Education Session Descriptions

Tuesday, June 5, 2018

Forming Technology Commercialization Alliances: Approaching Partners and Structuring the Deal Speaker: Gene Slowinski, Director, Open Innovation and Strategic Alliance Research, Rutgers Business School

Startups use technology alliances to access critical aspects of commercialization such as manufacturing, marketing, distribution, and customer support. The startup decreases risk by alignment with an established firm. While alliances are powerful tools, they are not easy to plan or negotiate. Managers must deal with the complexities of allocating rights to jointly developed intellectual assets, protecting proprietary know-how and trade secrets, linking decision-making structures, and utilizing financial models that allow both firms to share the risks, as well as the rewards, of collaboration. This presentation will discuss two key practices that have emerged from the presenter's work on over 300 technology-based alliances—approaching the potential partner and structuring the deal.

How to Fire Your First Customers Speaker: Grant Warner, Director of Innovation and Entrepreneurship, Howard University

For startups, developing your first go-to-market strategy and finding and winning your first customers is often a big challenge. But even more challenging are the changes that you will encounter as you grow that will call for a different game plan. In this session, Grant will share his experience growing his business as it moved from a startup to a company. The session will cover common business development decision points that confront entrepreneurs. The goal is to help you better anticipate and assess the changing needs and opportunities of your business, and the business development, sales, and marketing strategies you will need to adapt to these changing dynamics.

Creating Values-Aligned Team Dynamics Speaker: Mark Nicolson, Founder, Nicolson Group

When Satya Nadella became CEO of Microsoft, the first thing he did with his top team was to give them a book to read—it was about empathy. This was arguably one of the smartest team moves to align values of all time. Microsoft's market cap has increased by more than \$400 billion since then. You can't become a values-aligned management team unless you understand team dynamics and the stages a team goes through—from startup to exit. In this talk, Mark outlines how to create a great management team and some of the key challenges teams face. Discover valuable moves you can make to get the best of out of your team.

Speaker: Blake Patton, Managing Partner, Tech Square Ventures

Learn how to pitch your company effectively from a venture capitalist who has listened to plenty of pitches! A great business pitch is an opportunity to tell your story, sell your ideas, and make an impact. This session will describe how to effectively pitch you company, including what to focus on and what you will need to know to prepare your pitch to investors and others. Grantees are asked to prepare and perfect their pitch during the conference. On Wednesday, the final day of the conference, grantees have an opportunity to give their two-minute elevator pitch to seasoned investors and business experts and receive valuable feedback. (Please note that you are not required to attend this session to give your pitch on Wednesday.)

Top Five Things NOT to Say to an Investor ...

Speaker: Patti Glaza, SVP/Managing Director, ID Ventures

... And the top things investors should never say to you. Navigating investment capital is never easy for early-stage startups. In this session, learn the basic lessons of raising capital to ensure smoother sailing through these challenging waters. While every investor and company are different, there are some common do's and don'ts that all founders should know. Get honest answers to the fundraising questions you might be afraid to ask from an active seed round venture capitalist.

Working With Large Corporations

Moderator: John Bacon, Co-Founder, GrowthPilot LLC

Panelists: Jay Amarasekera, Senior Manager, SABIC Ventures; Joe Fox, Director, Emerging & External Technologies, Ashland Inc; Michael Holman, VP of Intelligence, Lux Research; and Bill Weber, President, GrowthPilot LLC

As you grow your company, you may be attracted to opportunities with large corporations that want to partner, license, purchase, or jointly develop products. Such relationships can be game changers, but not always in the way that you hoped. This panel will explore asymmetrical relationships to help you understand how to avoid being crushed by your large corporate "partner." We'll look at types of agreements, the techniques for successful negotiation and relationship building, common mistakes, and how to avoid them. Panelists are both large company executives and entrepreneurs who have many years of deal experience.

Prototype to Production and Overcoming Challenges Along the Way

Moderator: Rick Schwerdtfeger, SBIR/STTR Program Director, National Science Foundation

Panelists: Mark Brinkerhoff, Co-founder and President, FusionDesign; Howard Edelman, Member, Life Science Angels and CEO, Advanced Resin Therapeutics; and Michael Keer, Co-founder & CEO, Product Realization Group

The skills required to develop a prototype for any product, whether it be hardware, software, biomedical device, or complex tool, are usually much different than the skills needed to make a robust, dependable, low-cost, production version of that prototype. The panel will explore some of the pitfalls to avoid and some of the new skills that your company will need to attain to produce your technology at scale.

IRI Breakout Sessions Open to NSF Grantees

Creativity: A Most Practical Guide

Matt Hermstedt, Senior Director of R&D, Accudyne Industries; Host of "The R&D Show" podcast

Breaking Boundaries is about innovation – acting and even thinking differently. Creativity is foundational to innovation. The challenge is that much of the literature and training on creativity provides little practical guidance on what to actually do to be more creative. It takes more than brainstorming tips and thought

exercises to spark creative output. In this session, Matt provides his 6-Step Creativity Development Method to build creativity skills and use them in a way that will produce innovative results. His basic creativity training session is now augmented with tools to foster an environment of creativity in organizations. Participants take part in several engaging exercises to practice the creativity development steps and gain an understanding that can immediately bring new-found creative power to their personal and professional lives.

The Future of The Blockchain Bryan Kissel, Managing Consultant, Kalypso

According to futurists, Blockchain will be more disruptive than the internet. Join this session to learn the current state status of Blockchain and apply qualitative forecasting techniques, called Impact Trees, to forecast Blockchain to the future. We'll form future-state vignettes and have a collaborative conversation on possible Blockchain implications especially in the financial, educational, and IP environments.

Jill Watson, Family & Friends: Experiments in Artificial Intelligence Cognitive Assistance Ashok Goel, Professor, Georgia Tech

"Jill Watson" was initially developed to respond to student questions posted to class forums, though the possibilities extend far beyond the classroom. Ashok Goel, creator of Jill Watson, will discuss how we can used A.l. to scale personalized learning, and how this will impact the future of innovation, both in the academic and industry sectors.

Managing Technology in an Exponential World John Avery, Engineering Group Manager, Panasonic

Is it possible to remain competitive in a technology company when Moore's Law makes everything obsolete before it ships? How should innovation teams think about technology strategy in a Moore's law world? Is it possible for plan for exponential technical advancement? Does history teach us anything?

Perspectives in Corporate Innovation Greg King, Associate Vice President for Economic Development, Georgia Tech

Georgia Tech is the home of a large number of corporate partners, many of which have facilities located in Tech Square or elsewhere on campus. Greg King, along with several of these very companies, will take the audience through the "people, place and process" of corporate innovation. The session will explore how these companies developed their relationship with the university and how it has changed their strategy and outlook on innovation. A facilitated Q&A will immediately follow the presentation.

The Importance of Failure When Innovating in Today's Global Marketplace Edward Jung, CEO, Xinova

Walk with tech industry visionary Edward Jung through his decades-long experience working in innovation. His latest company is an outsourced innovation source for all sizes of companies from multinational corporations to medium sized regional leaders and start-ups. Edward shares victories but also highlights failures as being an important step on the road to innovation success. Participants explore some of the latest techniques for sourcing innovation from external sources and implementing these into existing company infrastructure. Edward also shows how to take externally sourced innovation and structure it into start-ups to incubate until ready to fully bring in-house.

Fireside Chat: Georgia Tech, Boeing, and Partnering in Aerospace Technologies Dimitri Mavris, Georgia Tech and Larry Schneider, The Boeing Company

Georgia Tech Aerospace Systems Design Laboratory (ASDL) has had a long standing relationship with The Boeing Company. Bringing academia and industry together to form a collaborative innovation space has allowed Georgia Tech to work on cutting edge projects and enabled Boeing to capture new ideas in design, new market spaces, and lean processes without major disruption to near term goals. A key driver in the success of the relationship is the process by which Georgia Tech enables protection of proprietary information while delivering on the university's share of the partnership. Through a research facility established at the university, Georgia Tech is able to bring in work from Boeing, despite their many constraints, and work to develop proprietary solutions where Boeing can choose to own the IP. Join us for a moderated discussion to hear about the key enablers of the Georgia Tech/Boeing relationship allowing to efficiently produce leading edge solutions.

Approaches to Rapid Prototyping and Product Development Bob Klein, CEO and Jeff Mette, VP, Business Development, Digital Scientists

Participants learn about the tools and techniques fast growing companies are using to launch new digital products in under 90 days. Come away with a better understanding of which techniques work at each stage of the new product development life cycle. Session focus includes: creating concept pitch decks, moving from concept to prototype, validiating concept prototypes, moving from prototype to MVP, and launching minimum viable products. Come prepared to discuss challenges you have encountered when launching new products.

The Future of Innovation is Fewer Ideas, Not More Michael McCathren, Senior Manager, New Restaurant Marketing, Chick-fil-A, Inc.

We can view innovation like a blindfolded bow hunter, with an endless supply of ideas in his quiver that he hurls in random directions hoping to strike game. Or, we could determine which arrow represents the most ideal arrow for that specific type of game, and send a single arrow flying for a direct hit. Through real-world examples, Michael McCathren illustrates the dangers of beginning the innovation process with ideation. Participants take a walk through an idea using the Chick-fil-A innovation process. Learn how to identify and evaluate NPOs (Need to be met, Problem to be solved, Opportunities to be seized), and how to package a problem to move it into ideation as effectively as possible. McCathren maintains that if companies were to invest more and be more disciplined in the problem finding phase of innovation, the result would be fewer yet more focused ideas which would yield more successful innovations.

Staying Ahead of the Pace of Change: Crafting Alternative Business Models to Expedite Product Development

Jim Redden and Leslie Wainwright, RTI International

As futurist Gary Hamel so aptly says, "We are the first generation in history that needs to cope with an exponentially accelerated pace of change." While agreeing with Gary is easy, doing something about it is much harder. To date, very few organizations have adjusted their leadership mindset or have adopted different management approaches to be successful in this new environment. The future requires expanding an organization's willingness to learn, capacity to team and ability to create a range of alternative futures. This hands-on workshop session offers participants an introduction to a core set of visual tools and describe how they apply to business model creation. Participants then design for the future and develop new models that address key performance imperatives: improved product development timelines and operational excellence.

Panel: Successful Partnerships Between Large Companies, Startups, and Universities Greg King, Georgia Tech; Michael Mahan, Stanley Black & Decker; and Curtis Rogers, Brick and Mortar VC

This panel will bring together leaders from corporate, startup, and university sectors to discuss best practices for working with one another. Learn how to better position your company for most effective collaborations.

Wednesday, June 6, 2018

How to Raise and Structure Your Early-Stage Capital Speaker: Michael Horten, Horten CC

Far too many startups fail to raise capital because they go about it the wrong way or offer terms that don't resonate in today's marketplace for early-stage capital. This session will teach you how much money to raise, how to tranche your capital raises, the different approaches to individual angels versus angel groups and venture capitalists, how to choose among the dizzying array of financial instruments used in today's seed financings, and how to negotiate the right investment terms. The presentation will be amplified with war stories from Michael's many years as an angel investor and counseling early-stage companies. The session will be interactive, so bring your questions.

Preparing Realistic Financials Workshop Speaker: Susan Preston, Managing Member, Seattle Angel Fund

Your financial model drives every aspect of your company. And, investors critically assess your pro forma financials when considering an investment. This means that realistic, assumption-driven financials that you can support are an important factor in your success. Preparing your financials, including do's and don'ts from an investor perspective, will be presented in a workshop format where you are encouraged to bring your draft financials and questions.

Testing Your Solution: Validating Product-Market Fit Speaker: Edmund Pendleton, Director, Venture Accelerator, Maryland Technology Enterprise Institute

This session is for Phase II grantees specifically and builds on Customer Discovery that grantees have done in the Phase I Beat-the-Odds Boot Camp and/or the NSF I-Corps program. The first step of Customer Discovery is to identify and validate an "unmet need" in the market—a process often referred to as "Testing the Problem/Need." This phase of discovery is often referred to as seeking "Problem-Solution" fit. The hope is that all Phase II grantees have done this to some degree in Phase I. But what comes next? This session will cover how to move on to "Testing the Solution"—the phase of discovery where the company tries to validate "Product-Market" fit. Having identified a need, can the company build a product that meets that need? In other words, how will the product/service deliver true value for the customer? How much better and/or less expensive does it need to be for customer adoption? This session will describe how to use prototype and minimum viable product testing to validate product market fit, even for complex technology-based businesses.

Aligning Interests: Is Venture Capital Right for You?

Moderator: Errol Arkilic, CEO, M34 Capital

Panelists: Jeffrey Klunzinger, Co-founder, OS Fund; Hemai Parthasarathy, Scientific Director, Breakout Labs and

Partner, Breakout Ventures; and Jenny Rooke, Managing Director, Genoa Ventures

Innovation, entrepreneurship, and venture capital (VC) are business concepts that co-exist in our rich economic ecosystem. When properly aligned, they can act in mutual support to help develop new products, processes,

and services that advance industry and humanity. When they are not aligned or fall out of alignment, these three business concepts may be at odds with one another, causing much pain and suffering. In this panel, we will explore the fundamentals of VC and the elements of the VC business model with the goal of helping you decide if VC funding is right for your business.

Financing Your Company With Angel Capital
Moderator: Susan Preston, Managing Member, Seattle Angel Fund
Panelists: Michael Horten, Horten CC and Rhys Williams, JD MBA, Chairman & Co-founder, New World Angels, Inc.

For most technology companies, financing your company with angel capital investment will be critical to your early-stage success. The panelists will provide a practical overview of how angel capital works and what entrepreneurs need to know to maximize their chances for successful investment. This moderated discussion is an opportunity for you to bring your questions to these seasoned angel investors.

Pitch Your Company To An Investor

Would you like to hear an investor's reaction to your company's pitch? Phase II companies will have an opportunity to test their pitching skills and receive feedback from investors and business experts on the last day of the conference. You are asked to develop a two-minute elevator pitch aimed at investors – slides will not be allowed! If you need help preparing your presentation, plan to attend the training session entitled *The Perfect Pitch* on Tuesday morning (but you are not required to attend the training session to give your pitch on Wednesday). The slides from *The Perfect Pitch* session will be posted online right after the presentation. You are encouraged to practice your pitch during the evening Technology Showcases. Whether you are a presenter or not, you are required to attend your assigned Pitch Session. Breakout room assignments for each company can be found in the "Pitching" section of the program booklet.