

# NE INCOSE Member Meeting

Apr 19<sup>th</sup>, 2022

Virtual Only  
[incosenewengland@gmail.com](mailto:incosenewengland@gmail.com)



- **6:00 – 6:45 Chapter Business**
  - Introductions
  - 2022 INCOSE NE Chapter Organization and Committees
  - 2022 Operating Plan highlights
  - New Member Introductions
  
- **6:45 – 7:30: Guest Speaker**
  - “*Reliability and Survivability in Crewed Spacecraft*” by **Dan Burbank, Raytheon (Collins)**
  
- **7:30 – 8:00: Q & A / Wrap Up**

# Tax Day Over!!



# MONEY

YOU CAN MAKE IT, BUT NOT KEEP IT.

# 2022 Chapter Leadership Team



**President**

Madhu Rao, Ph.D.  
Belcan Engineering, LLC



**Vice President**

Haifeng Zhu, Ph.D.  
Smart Machinery Lab



**Treasurer**

Rachel McGrath  
Raytheon (P&W)



**Secretary**

Michael Tymms  
Vicarious Surgical Inc.



**Past President**

Eric Dano, Ph.D.  
BAE Systems



**Director**

Amy Thompson, Ph.D.  
UConn, UTC IASE



**Director**

Randy Skelding  
Raytheon (P&W)



**Director**

Jim Garman  
Sikorsky Aircraft



**Director**

Daniel Burbank  
Collins Aerospace



**Director**

Dave Finigan  
BAE Systems



**Director**

Bao Truong, Ph.D.  
Malta Inc.



**Director**

Peter Huie  
WPI



**Director**

Stephen Nichols  
Schindler Elevator Corp.



**Director**

Diane Alsing  
Strategic Global



**Director**

Brian Sheehan  
Draper Labs

## Operations Committee

**Madhu Rao, Chair**  
**Eric Dano, Past President & BoD Chair**  
**Haifeng Zhu, VP/President Elect**  
**Amy Thompson, Advisor**  
**Rachel McGrath, Treasurer**  
**Mike Tymm, Secretary**  
**Bao Truong, Director**

**Vision:** Plan and organize chapter operations. Create strategic and operations plans. Communicate and coordinate with Directors through BOD. Coordinate execution with committees. Report back to INCOSE national. Manage chapter finances.

**Regular Meeting Times:** 1st Tuesday of each month at 6:00pm, open to all members

## Membership Committee

**TBD, Chair**  
**Peter Huie**  
**Jim Garman**  
**Daniel Burbank**

**Vision:** Serve current membership. Recruit new members. Serve all industry sectors and states. Perform direct and indirect outreach to members. Collect information about how we can better serve. Member categories: existing members, new members, CAB members, university members.

**Regular Meeting Times:** 3rd Thursday of each month at Noon, open to all

## Programming Committee

**TBD**, Chair

**Eric Dano, Past President & BoD Chair**

**Ed Medri**

**Randy Skelding**

**Brian Sheehan**

**Vision:** Plan high quality events throughout the year that engage all chapter members based upon regular input and feedback from the membership.

**Regular Meeting Times:** 3rd Thursday of each month at 6:00pm, open to all

## Certification, Training & Workforce Development

**Randy Skelding, Chair**

**Rich Powers**

**Dave Finigan**

**Chris Massa**

**Bao Truong**

**Vision:** Plan high quality training events throughout the year for members that help them achieve their professional development goals. Offer ASEP-CSEP

## Communications

**Mike Tymm, Chair**

**Peter Huie**

**Amy Thompson**

**Stephen Nichols**

**Vision:** Communicate effectively with members of the chapter and INCOSE international. Communication methods should support all other committee goals and members should coordinate with other committees to send and receive their messages. Maintain chapter records.

# 2022 Operating Plan Highlights

- 2022 Operating Plan, Budget Review & Approval – February 2022 ([Fri 3/18](#))
- BoD Indoctrination / Training – February 2022 ([Thu 3/24](#))
- Outreach initiatives by officers and BoDs to chapter members for increased participation and engagement ([April](#))
- Monthly newsletter ([April](#))
- Recurring Meetings:
  - Monthly Operations meeting ([2<sup>nd</sup> Tue](#))
  - Monthly member meetings ([3<sup>rd</sup> Tue](#))
  - Quarterly BoD meetings ([Middle month, 2<sup>nd</sup> Tue](#))
  - Monthly committee meetings
- 2022 Events – SEP Cert Training, Student Poster, Fall Workshop

# Upcoming Chapter Events

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## INCOSE New England Chapter Outreach (Rao)

Objective & Goal: Chapter leadership to reach out to chapter members and discuss the value proposition on greater engagement with INCOSE NE including participation at the member meetings, participation with the five chapter committees and potential opportunities for leadership.

## INCOSE New England SEP Certification Training (Skelding)

- New approach to encourage certification study groups and getting certified
- Multipronged approach
  - Matchmaking service for small study groups
  - Monthly 1-1.5 hour certification meetings
  - Suggested supplemental trainings and books
  - Communications Campaign
- Mini course webinars



# 2022 New Members (+25)

- Ertan Ergezen
- Lewis Malaver
- Hanning Wong
- Jon Hodge
- Preston Wilkey
- Rodervin Urena
- Steven Thorwarth
- Geoffrey Lichtenheim
- Danielle Conneely
- Alexander Moon
- Brianne Hirschfeld
- Natasha Berner
- Mostafa Elshibiny
- Brian Baillie
- Lou Palecki
- Randy Mocadlo
- Andrew Hanshaw



**Welcome to INCOSE New England!!**

- Maxwell Brown
- Samuel Felton
- Lew Cote
- Scott Morris
- Todd Jackson
- Greer Koerner
- David Fontaine
- Rahmeh Fares

# 2022 Guest Speakers

Month	Guest Speaker	Organization	Title / Topic
Jan	Dr. Don Gelosh	WPI	INCOSE Professional Development Portal Initiative
Feb	Paul White	BAE Systems	Building the Digital Engineering Workforce of the Future
Mar	Cameron Hendricks	Raytheon (P&W)	Taming Unreliable Variables in Systems Engineering
Apr	Dan Burbank	Raytheon (Collins)	Reliability and Survivability in Crewed Spacecraft
May *	Dr. Phillip Palmer	Sunrise Labs	The Benefits of a Systems Engineering Approach: How to reduce risks and improve performance in medical device development
Jun	Guru Madhavan	National Academy of Engineering	
Jul			
Aug			
Sep			
Oct	<i>No meeting</i>		<i>New England Fall Workshop</i>
Nov			
Dec			

# Guest Speaker

## Reliability and Survivability in Crewed Spacecraft

### Bio:

Dan Burbank is a Senior Technical Fellow and the Systems Engineering Discipline Lead for Collins Aerospace. In this capacity he provides leadership in advancing execution excellence across Collins Aerospace through quality assurance reviews, new technology and methods development and employee development. Quality assurance reviews include non-advocate reviews, technology readiness reviews and design assurance reviews across the entire business. Mr. Burbank is a leader in Collins Aerospace's Mission Systems SBU's spaceflight hardware design and development efforts for spacesuits and spacecraft systems, including for the International Space Station (ISS), Orion, Space Launch System, Boeing CST-100 Starliner, Gateway and other Artemis platforms.

Prior to joining United Technologies in July 2018, Mr. Burbank served for 22 years as a NASA Astronaut. During his NASA career he flew two Space Shuttle missions (STS-106 and 115) to assemble and outfit the ISS. He also flew aboard Soyuz 28 and served as Flight Engineer during ISS Expedition 29 and as Commander of ISS Expedition 30 with a combined spaceflight mission duration of over six months. Other NASA assignments included Chief, Vehicle Integration Test Office, NASA Director of Operations – Russia, and Chief, Astronaut Office EVA (spacewalk) and Robotics Branch. Prior to his NASA career, Mr. Burbank served in the U.S. Coast Guard as an aviator and aeronautical engineer for 11 years, logging over 4000 flight hours in Coast Guard H-60 and H-3 helicopters including over 300 search and rescue missions.

Mr. Burbank is a member of the Association of Space Explorers, the U.S. Coast Guard Aviation Association, the Daedalians Society, the International Council on Systems Engineering (INCOSE) and the American Institute of Aeronautics and Astronautics (AIAA). Mr. Burbank earned a Bachelor of Science in Electrical Engineering from the U.S. Coast Guard Academy and a Master of Science in Aeronautical Science from Embry-Riddle Aeronautical University.



## Reliability and Survivability in Crewed Spacecraft

### Abstract:

This presentation will consider technical lessons learned from Apollo 1, Challenger and Columbia and how improvements to vehicle system reliability and redundancy as well as operational enhancements such as abort capability, safe havens and rescue contingency support can greatly improve crew survivability.



# Questions

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