



# June 2019 Newsletter

<https://sdincose.org>

# From our Chapter President



Abbas Rostami

We had an eventful first quarter as reflected in our March Newsletter and have planned more SE-enriching activities for the second quarter and beyond as listed below.

- June-15 - first Tutorial (Model Based Systems Engineering and SysML using NoMagic)
- July-31 – second social event and celebration of our chapter Platinum award
- September-28 – STEM Family Night
- Early November – Mini-conference in conjunction with our second tutorial and CSEP Paper exam

I hope you can join us and participate in these events. For further details please visit our website at [www.sdincose.org](http://www.sdincose.org).

Our San Diego chapter is enjoying a very strong constituency of 230 members as of the end of May, 2019. Beyond the value that our members and prospective members receive through our nearly monthly SE-related presentation events, we are also sponsoring an incredibly valuable tutorial training opportunity this month on Model Based Systems Engineering and SysML using NoMagic. If you have not already registered for this event, you need to act quickly as we are nearly sold-out!

We continue to grow our robust membership base through our Ambassador Program. This successful outreach focuses on ensuring that San Diego's Systems Engineering companies are fully aware of our organization and the training value that we offer to their employees.

To further support San Diego's SE community, we are hosting a local CSEP paper exam opportunity that will run in conjunction with our annual mini-conference in November.

Of course, we eagerly welcome your suggestions and recommendations on how we can extend our services to our local community and further grow the value of our chapter membership.

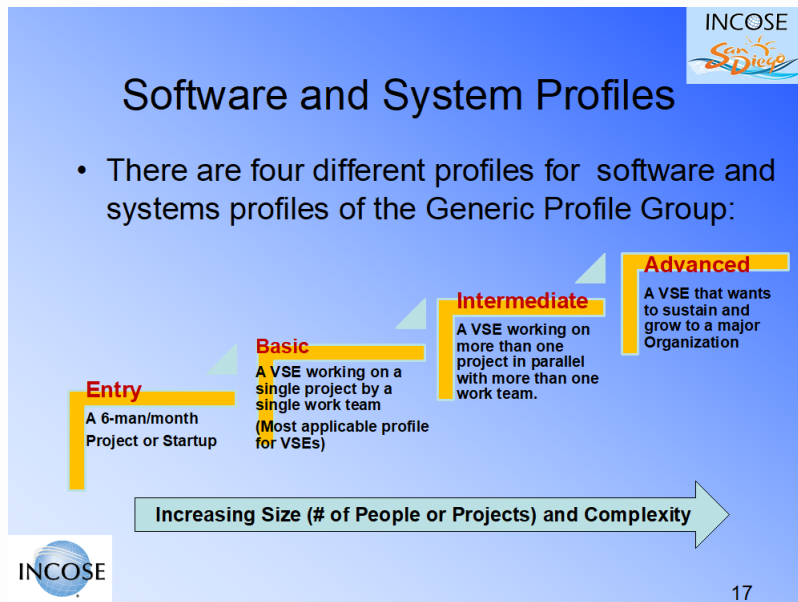
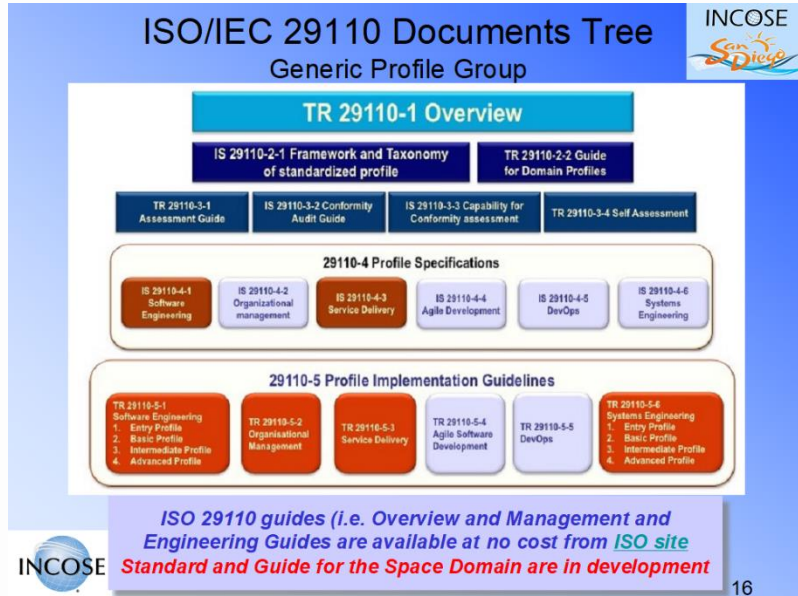
This past January, I had the opportunity to attend the International Workshop (IW-2019) in Torrance, California. Quite simply, that was a terrific experience and education.

Among the many compelling initiatives and working groups, I attended the Small Business Systems Engineering – Working Group (SBSE-WG) meeting to learn about their activities and goals. Based on some additional research and information I gathered, I provided a presentation to our local members in April. Here is a short summary of my presentation (click to view the full [presentation](#)).

*For many years there had been a concern that Very Small Entities (VSEs) have difficulties to apply the System and SW engineering standards (ISO/IEC 15288 & ISO/IEC 12207) in their processes due to their complexity and related cost. This concern led to a worldwide survey of many different domain VSEs and it was verified that existing ISO standards were “too complicated” for use by VSEs.*

*In 2005, the first meeting of ISO/IEC JTC1 SC7 Working Group (WG) 24 was held, and the work on ISO/IEC 29110 series began to develop a set of standards and technical reports to be more applicable to VSEs. These publications are based on and mapped to the ISO/IEC-15288 & 12207 but tailored to a VSE product or project needs and requirements. Worldwide, hundreds of VSEs have implemented the ISO/IEC-29110 and been certified for the Basic Profile. The standards are also available in French, Portuguese, Spanish, and Czech.*

*The following diagrams show the document-tree of existing work products published or being worked on by the team and also different profiles supported by the Generic Profile Group.*

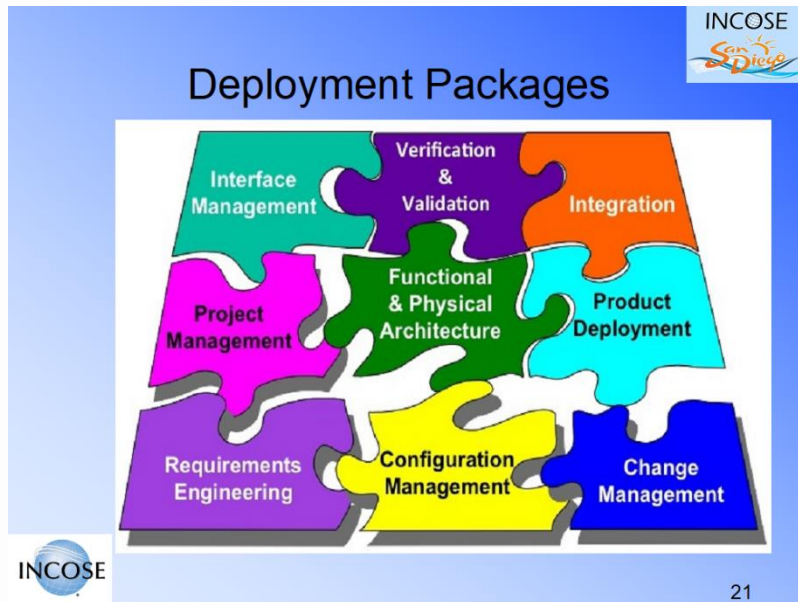


In 2009, INCOSE and the Association Française d'Ingénierie Système (AFIS) (French INCOSE Chapter) established the SE for Very Small and Micro Enterprises (VSMEs) WG. The SBSE-WG (formerly VSE-WG) has supported deployment of the ISO 29110 standards and continues their work developing a set Deployment Packages (DPs for the benefit of and critical to VSEs success.

These DPs provide:

- Systems Engineering process information tailored and scaled for use by the VSEs.
- Systems Engineering tasks and activities for quick and efficient implementation.
- DPs are derived from ISO Standards (15288, 29110, 12207) and the INCOSE SE Handbook.

The following diagram shows DPs related to the Basic Profile for Systems Engineering implementation.



SBSE-WG Major goals are:

- To improve and make product development within Small Business' more efficient by using Systems Engineering concepts.
- To elaborate tailored guidance to apply, in the context of either a **prime or subcontractor** role to small projects.
- To contribute to **standardization** in the context of Systems Engineering.

For more information about the ISO/IEC 29110 please refer to the [www.iso.org](http://www.iso.org) some of the technical reports can be downloaded free of charge.

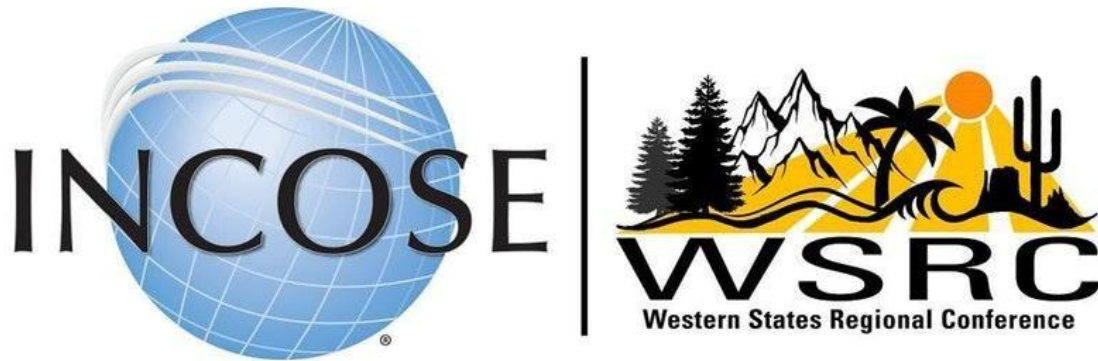
For more information about the SBSE-WG visit the site at the following link (need to be INCOSE member) or contact me [abbas.rostami@gmail.com](mailto:abbas.rostami@gmail.com).

<https://connect.incose.org/WorkingGroups/VSE/Pages/Home.aspx>

I am looking forward to a productive third quarter with all of your support.

Best Regards,

Abbas Rostami – San Diego INCOSE President



## Western States Regional Conference 2019

**You don't want to miss this!**

The Los Angeles Chapter of INCOSE is hosting the second annual **Western States Regional Conference (WSRC)** on **Sept 13-15th, 2019, in Los Angeles**, serving the systems engineering communities across the western United States and beyond.

The venue is Loyola Marymount University, located less than 15 minutes north of Los Angeles International airport (LAX), and convenient to numerous business and entertainment opportunities.

The theme of this event is "Systems Engineering Relevance: Time for a Sea Change!"

### Why should you attend?

Today's environments are getting more and more complex. Systems Engineering's focus on holistic solutions, life cycle considerations, and balanced tradeoffs helps organizations create superior systems solutions that delight their stakeholders.

The program agenda will be posted later this month with registration starting later this month. WSRC Program Committee invites you to submit a proposal for a presentation, panel discussion, or tutorial.

### Who should attend WSRC2019?

Traditionally, most WSRC attendees have been Systems Engineers from various industries and domains. However, more and more industries and domains are recognizing the value and return on investment in taking a more holistic, systems approach. WSRC is tailoring the content of the technical program to be relevant to a broad set of interests. You should attend WSRC2019 if you fit into any of the following categories:

**Practicing Systems Engineers:** in any domain (automotive, biomedical & healthcare, defense & aerospace, energy, infrastructure, etc.) or those involved in New Product Development (NPD).

**Aspiring Systems Engineers:** such as lead software and hardware engineers who want to become systems engineers, and non-engineers who want a more holistic and balanced approach.

**Systems Engineering Students:** including graduate students in Systems Engineering or related fields, undergraduate students wishing to learn a systems approach to mechatronic problems and solutions.

**People Who Interact with Systems Engineers:** including Program and Project Managers, Marketing/Business Development, Regulatory Compliance, Specialty Engineering (Safety, Human Factors, Reliability, Sustainability, etc.)

**People Who Have Systems Challenges or Systems Interests:** including leaders, private citizens, students, or anyone who faces systemic challenges or opportunities

For full details, please visit the WSRC2019 website [HERE!](#)



# Upcoming June Tutorial!



## Model Based Systems Engineering and SysML using NoMagic! (Saturday, June 15, 2019)

You asked for more information on Model Based Systems Engineering and SysML. We heard you loud and clear! Please join us for this insightful presentation and workshop! If you cannot join us for the classroom presentation, you can still benefit by attending the morning session remotely.

Please sign up [HERE](#) for the classroom session.

Please sign up [HERE](#) for the virtual session.

The SysML slide deck is available [HERE](#), and on [www.sdincose.org](http://www.sdincose.org).

**Date:** Saturday, June 15, 2019

**Schedule:** 8am-8:50am: on-site registration, lite breakfast and networking – 9am to 12pm – MSBE and SysML presentation, 12:45pm – 4pm – NoMagic MBSE software presentation and workshop. Lunch (12 – 12:45pm).

**Address:** BIOVIA, Inc. 5005 Wateridge Vista Drive, San Diego, CA 92121 (Free Parking)



**Pre-event Classroom Cost:** Registration until Friday June 14<sup>th</sup>. \$35 INCOSE member – \$50 non-INCOSE member – \$30 Student

**Day of event Classroom Cost (Cash/Check):** \$45 INCOSE member – \$60 non-INCOSE member – \$40 Student

**Virtual Attendance Cost (morning session only):** \$17.50 INCOSE member – \$25 non-INCOSE member – \$15 Student

**Lunch:** Lunch plus breakfast coffee and snacks are provided. Please contact us if you prefer a vegetarian option.

**Limited to 50 classroom students – unlimited virtual students**

**Software:** Please download and install a trial version of the MagicDraw software on your personal computer at the following address (an activation key will be provided at the event). Due to limited laptops available, you are encouraged to bring your own.

[https://www.magicdraw.com/main.php?ts=navig&cmd\\_go\\_to\\_login\\_custom\\_pages=1&menu=download\\_trials&back\\_cmd=cmd\\_show](https://www.magicdraw.com/main.php?ts=navig&cmd_go_to_login_custom_pages=1&menu=download_trials&back_cmd=cmd_show)

**Virtual Meeting Information:**

[Join Skype Meeting](#)

Trouble Joining? [Try Skype Web App](#)

**Join by phone**

<a href="#">+1 508-573-1035</a> (USA – East)	English (United States)
<a href="#">+1 929-270-4011</a> (USA – East)	English (United States)

[Find a local number](#)

Conference ID: 4383561

[Forgot your dial-in PIN?](#) | [Help](#) | [Legal](#)

**NOTE:** For those who are virtual, we will have breaks for questions. Please refrain from asking during the presentation. You may also type your questions into the Skype panels and we will cover those during the breaks as well.

**Abstract:** We have all heard of Model Based Systems Engineering (MBSE) and SysML. It is now time to find out more!

Please join us for a full day tutorial on MBSE and SysML, with hands-on exercises with No Magic's Cameo Systems Modeler. Prior experience with SysML or Cameo Systems Modeler is not required.

The INCOSE SE Vision 2020 defines model-based systems engineering (MBSE) as the formalized application of modeling to support system requirements, design, analysis, verification and validation activities beginning in the conceptual design phase and continuing throughout development and later life cycle phases. These models provide an efficient way to explore, update, verify, and communicate system aspects to stakeholders, while significantly reducing or eliminating dependence on traditional documents.

During the morning session, the presenters will provide a brief overview of MBSE and the Systems Modeling Language (SysML), a general-purpose graphical modeling language for specifying, analyzing, designing, and verifying complex systems that may include hardware, software, information, personnel, procedures, and facilities. The afternoon session of the tutorial will provide participants with hands-on application of SysML using Cameo Systems Modeler.

The morning presentation featuring MBSE and MBSE Adoption is available! Please click [HERE](#) to view Rick Hefner and Jason Wilson's presentation.

#### **Instructors:**

**Rick Hefner, PhD**, specializes in systems development and maintenance; project management; Lean Six Sigma; process improvement, and risk management. He has worked for over 40 years with companies in the aerospace, communications, electronics, and health sciences industries, including AeroVironment, Applied Physics Laboratory, Applied Materials, Ares Management, Boeing, DRS Technologies, Halliburton, Herbalife, Honeywell, Jet Propulsion Laboratory, John Deere, L-3 WESCAM, Maytag, Motorola, Northrop Grumman, Pacific Bell, Raytheon, Schlumberger, Southern California Edison, St. Jude Medical, Toshiba, TRW, U.S. Navy, and Xerox.



Dr. Hefner currently serves as Program Director for the Caltech Center for Technology and Management Education, where he designs and delivers education solutions for technology-driven companies.

**Jason Wilson** is currently the Senior Sales Director for North America and a Solution Architect, responsible for new customer development, partnerships, sales, and client

solutions. Jason has been with No Magic going on ten years and has had various roles, from Product Management, Business development and even a Project Manager.



Jason is part of and contributes to the OMG (Object Management Group), IIBA (International Institute of Business Analysis, Dallas), ASEE (American Society for Engineering Education) and INCOSE (International Council on Systems Engineering) and is proud to be a Toastmaster. Jason resides in McKinney, Texas with his wife, their two children. When not working, Jason enjoys the outdoors, sports and time with family.

**ATTENTION:**

As mentioned above, we have opened additional spots for classroom attendance!!! For those that cannot attend in person, we still will be offering the morning session (only) for virtual attendance via webcasting. The webcasting option will also include the afternoon session's NoMagic slides, for your own reading and experimentation; however, the afternoon session will not be webcast.

Please sign up [HERE](#) for the classroom session.

Please sign up [HERE](#) for the virtual session.

Please note that the afternoon session will not be webcast, but the SysML slide deck is available [HERE](#).

# Getting ready to earn your SEP Certification? We can help!

## Multi-Level Base Credentials

The Base ASEP, CSEP, and ESEP credentials cover the breadth of systems engineering at increasing levels of leadership, accomplishments and experience.



The [Systems Engineering Professional \(SEP\) Certification](#) is a formal process whereby a community of knowledgeable, experienced, and skilled representatives of INCOSE, provides confirmation of an individual's competency (demonstrated knowledge, education, and experience) in Systems Engineering profession. The INCOSE Certification Program has an entry level "Associate Systems Engineering Professional" (ASEP) for junior or recently graduated engineers who do not yet have the requisite years of SE experience. The ASEP requires and uses the same exam as CSEP. Upon achieving at least five years of SE experience the ASEP can transition to CSEP. In 2010, INCOSE introduced the "Expert Systems Engineering Professional" (ESEP) designation for senior systems engineers with at least 25 years of recognized systems engineering experience (20 years if already a CSEP) and demonstrated systems engineering accomplishments.

Our San Diego INCOSE Chapter is sponsoring a 3-month training cohort for those interested in acquiring their INCOSE SEP Certification (ASEP, CSEP, ESEP). During the 3 months, a weekly conference telecon will be conducted during lunch hour. The sessions will entail one-hour student led review of the SE Handbook chapters and application preparation. The main emphasis will be to review the entire SE Handbook which provides the material necessary to take the SEP Exam. The end goal is to prepare the students to take and pass the certification exam for the first time!

**As an added bonus, the San Diego Chapter is providing for free a paper-based SEP exam during the November mini-conference!** The cohort is expected to finish just prior to this test event so the material is fresh to the student.

**IMPORTANT:** Considering past experiences with cohorts, we are seeking 15-25+ students to

make this successful. If your serious about your SE career then this has proven to be one of the best methods to keep students focused, dedicated, and engaged. So don't delay to RSVP!

Timeframe: The proposed time to start is July 17th and finish by late-October.  
Registration Deadline: June 28th

After the registration deadline, we'll send out an email to schedule the 1st meeting (kick-off) and determine the best day and time to meet on a weekly basis.

Presentation material will be distributed to you before the virtual class session.

Please register [HERE](#)

**SPECIAL  
RECOGNITION  
AWARD**



**Help us recognize someone  
deserving!**

As you may know, INCOSE strives to recognize those who contribute to the advancement of the systems engineering profession as well as the advancement of our organization.

Help us determine those that deserve our heart-felt appreciation for their significant efforts and allow us to more formally honor their contributions.

Here are the award categories from which to nominate a fellow friend or colleague:

- **Pioneer Award** - Someone who has used Systems Engineering to develop a successful product or service
- **Founders Award** - Someone who has made significant contribution to INCOSE.
- **Fellows Award** - Someone who has made significant contribution to Systems Engineering. This person has done research, practice, as well as teaching.
- **Outstanding Service Award** - Someone who has been a member of INCOSE for 5 years at least. This person has done a lot of exemplary volunteer work.
- **Working Group Award** - Someone who has produced INCOSE product, had sustained performance over a number of years, collaborated successfully with a number of INCOSE stakeholders, done significant development for INCOSE either outside the aerospace domain or outside the us, or has been a working group that has significantly contributed to the Systems Engineering Vision 2020.

If you know someone that you believe should be recognized, please contact email your nominee's information to our chapter director Dr. Julia Taylor  
@ [drjulia@taylorsuccesssystems.com](mailto:drjulia@taylorsuccesssystems.com).

Thank you in advance for your support!!!

# STEM



Science • Technology • Engineering • Math

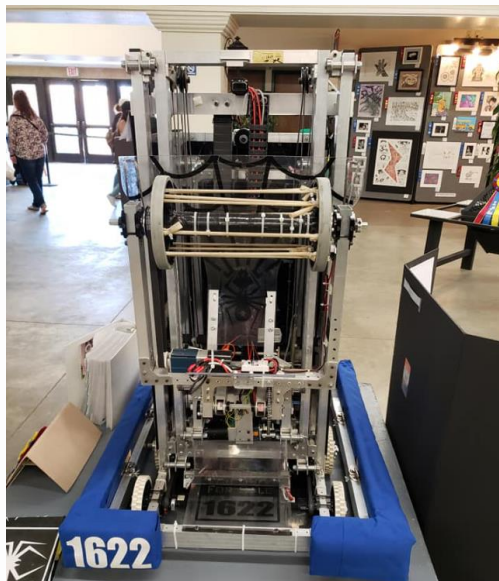
## Our Support of STEM

Every year the San Diego INCOSE chapter and Foundation of INCOSE along with our corporate sponsors open up opportunities for Teachers to apply for grants related to STEM (Science, Technology, Engineering, and Math) that range from \$400-\$1100 for classroom or extended education programs to fund STEM related activities that will excite students and encourage them to consider careers in science, engineering, math, or other technology related areas.





Our last event was at the San Diego's Children's Discovery Museum which is our annual Family STEM event. At this event we honor the teachers who were awarded a grant by INCOSE to facilitate STEM learning in the classroom.



Please join us with a hearty congratulations to San Diego INCOSE sponsored Poway High School's Team Spider as they took 1st Place Robotics award at this year's Del Mar/San Diego County Fair!

# Interesting System Engineering Articles

We hope that you find these articles as interesting as we did!

Why we need MBSE

<https://blog.innoslate.com/why-do-we-need-model-based-systems-engineering/>

3 Ways MBSE will help you

<https://www.ptc.com/en/integrity-blog/3-ways-model-based-systems-engineering-mbse-will-help-you>

How Systems Engineering can fix health care

<https://hbr.org/2017/02/how-systems-engineering-can-help-fix-health-care>

Why it is a great time to be a Systems Engineer (and how to become one)

<https://formalmind.com/blog/great-time-to-be-a-systems-engineer/>

Enjoy!

## INCOSE San Diego Welcomes 22 New Members

INCOSE San Diego is pleased to welcome **22 new members** to our chapter! We now have over 200 active members, an all-time high! San Diego continues to be a hub for systems engineering in the medical community, department of defense, telecommunications, start-ups, and with a wide range of other industries.

New to our chapter:

**Sarah Ahmad** - Dassault Systems

**Charles Gousha** - SAIC

**Jeremy Callahan** - SAIC

**Dennis Hafer** - SAIC

**Barry Bakos** - SAIC

**Haski Beher** - SAIC  
**John Thomas** - SAIC  
**Steven Hypnarowski** - Brain Corporation  
**Andrew Scicluna** - Metro Trains Melbourne  
**Patrick Mulvihill** - SAIC  
**Myles Ishihara** - BAH  
**Matthew Morovich** - Quidel Corp  
**Dustin Sutcliffe**  
**Michael Wallace** - SAIC  
**Stephan Hurley** - SAIC  
**James Biancavilla** - BAH  
**Vicente Ruiz** - VR Capital Project  
**Tyler Jackson** - BAH  
**Gary Erdell** - Quality Management Solutions  
**Keith Macklis** - SAIC  
**Travis Tredway** - BAH  
**Michael Aden** - Raytheon Corporation

Please introduce yourself to a new member at one of our many events!

## 2019 INCOSE San Diego Board Contacts

Please feel free to contact a board member with suggestions or comments:

**President** - Abbas Rostami, [abbas.rostami@gmail.com](mailto:abbas.rostami@gmail.com)

**Past-President** - Ted Mulder, [tedmulder@gmail.com](mailto:tedmulder@gmail.com)

**President-Elect** - Greg Bulla, [gbulla@yahoo.com](mailto:gbulla@yahoo.com)

**Secretary** - Keith Conway, [keith\\_conway@yahoo.com](mailto:keith_conway@yahoo.com)

**Treasurer** - Mike DiPaolo, [michael.j.dipaolo@saic.com](mailto:michael.j.dipaolo@saic.com)

**VP Administration, Webmaster** - Gary Saner, [gsaner@primerosystems.com](mailto:gsaner@primerosystems.com)

**VP Chapter Development** - Howen Fernando, [hqfernando@gmail.com](mailto:hqfernando@gmail.com)

**VP Technical Development** - Ray Madachy, [madachy@gmail.com](mailto:madachy@gmail.com)

**2nd-Year Director** - Susanna Faruque, [susanna.faruque@ngc.com](mailto:susanna.faruque@ngc.com)

**1st-Year Director** - Dr. Julia Taylor, [drjulia2taylorsuccesssystems@gmail.com](mailto:drjulia2taylorsuccesssystems@gmail.com)

**Ambassador Program Director** - Jim Gottfried, [gottjim50@gmail.com](mailto:gottjim50@gmail.com)

You can also send general questions to: [info@sdincose.org](mailto:info@sdincose.org)

### Links:

[info@sdincose.org](mailto:info@sdincose.org)

[INCOSE San Diego - Website](#)

[INCOSE San Diego Chapter - LinkedIn](#)