



Society of Allied Weight Engineers, Inc.

Aerospace • Marine • Offshore • Land • Allied Industries

Welcome to SAWE





Who is SAWE?

- **We are a Non-Profit International Organization of Mass Properties Engineers founded in 1939 and incorporated in 1941**
- **Our Purpose:**
 - To promote and sustain the Mass Properties discipline through training and mentoring
 - To provide a medium for exchanging recommended practices based on experience and innovation
 - To foster technical excellence and superior quality in mass properties prediction, control and validation
- **20 Chapters in the US, Canada, South America, UK and Europe**
- **13 Corporate Members and Partners**

Industries Served by SAWE

- **Initially - Society of Aeronautical Weight Engineers**
- **1973 - Renamed Society of Allied Weight Engineers to include:**
 - Aerospace – aircraft, missiles, space, electronics, ...
 - Marine – surface, cargo, submarines, ...
 - Offshore Platforms – oil and gas, launch/landing, ...
 - Land Vehicles – automotive, armored, construction, ...
 - Allied Industries – scales, equipment, software, ...





SAWE International Leadership Team

Position	Officer	Organization
President	Robert Hundl	Fluor Corporation
Executive VP	Jason Booth	The Boeing Company
Senior VP	Chris Wandell	Northrop Grumman Corporation
VP Publications	Melissa Gray	United States Air Force
VP Technical	Robert Zimmerman	Lockheed Martin - Retired
VP Training	Dan Rowley	Northrop Grumman Corporation
VP Standards & Practices	Jorge Bes	Airbus
VP Vendor Relations	Clint Stephenson	The Boeing Company
VP Internet	Greg Ray	The Boeing Company
VP Academic Affairs	Open	
Director Certification	Dirk Petersen	Airbus - Retired
Executive Director	Bill Boze	HII

Why is Mass Properties Control important?

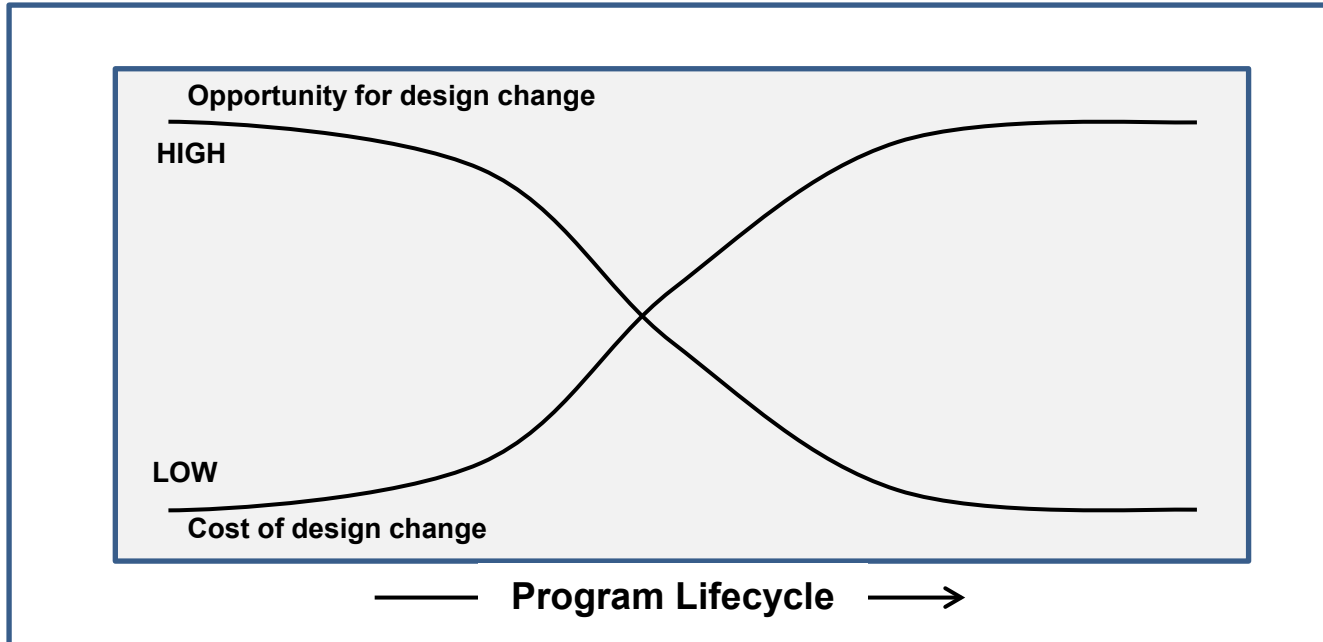
- Weight, Center of Gravity, Moments and Products of Inertia are **critical** for vehicle safety and performance





Why is Mass Properties Control important?

- **Cost of weight growth and balance issues increases dramatically as your programs progress**





Why is SAWE important?

- **Mass Properties discipline often overlooked**
 - Not specifically in college curriculum even though it is integral to every product and system
 - Company Management mistakenly thinks CAD can do it all
 - Inadequate staffing/skills increases program risk
 - Substantial attrition in skilled workforce in this crucial discipline
- **SAWE provides:**
 - Proven processes and experience for mass properties control
 - Educational resources for ensuring a skilled workforce
 - International collaboration between industry and governments
 - Venue for sharing and discovering new methods and lessons learned

Why should I be a member?

- **Networking**

- Collaborate with peers at chapter meetings, virtual forums, and regional and international conferences
- Mentor the next generation and learn from experts
- Discover career opportunities
- Make lifelong friendships



Join us Online

 Society of Allied Weight Engineers, Inc.
Aerospace • Marine • Offshore • Land Vehicle • Allied Industries
The World's Premier Source of Mass Properties Knowledge and Technical Excellence since 1939

**83rd International Conference
on Mass Properties**
May 20-22, 2024

Upcoming International Conferences

2024 Virtual Conference

2025 Albuquerque, NM

How do Individual Members benefit?

- **Publications**

- Members Only access to the premier source for Mass Properties literature
- Extensive Library of over 3000 Technical Papers*
- 3 issues of Weight Engineering Journal per year
- SAWE Blog
- Discounts for all SAWE publications and textbooks
- Free SAWE Handbook (digital) plus updates

* 10 free downloads/year



How do Individual Members benefit?

- **Training**

- Variety of courses from analytical methods to measurement techniques taught by experts online, onsite, or at conferences
- Improve your technical capabilities and skills



Classroom



Hands on



How do Individual Members benefit?

- **Scholarships***

- SAWE Scholarship - \$1000 (2 awarded/year typically)
 - Applicants must be high school seniors or graduates who plan to enroll or students who are already enrolled in a full-time undergraduate course of study at an accredited four- year college or university.
- Frank Fong Memorial Scholarship - \$1000 (1 awarded/year)
 - Same requirements as above, but applicant must be majoring in a scientific field (e.g., engineering, physics, mathematics, computer sciences, etc.)
- Annual Conference Scholarship - \$1000 (1 awarded/year)
- Chapter Scholarships
 - Amount determined by individual Chapter

*For student members and children or grandchildren of members active for at least 1 year. Amounts may vary.



How do Individual Members benefit?

- **Recognition**

- Awards for advancing the Mass Properties discipline
 - Best Student Paper Award
 - Ed Payne Young Engineer Award
 - L. R. “Mike” Hackney Best Paper Award
 - Special Merit Award
 - SAWE Fellow
 - SAWE Honorary Fellow
 - SAWE Richard Boynton Lifetime Achievement Award





How do Individual Members benefit?

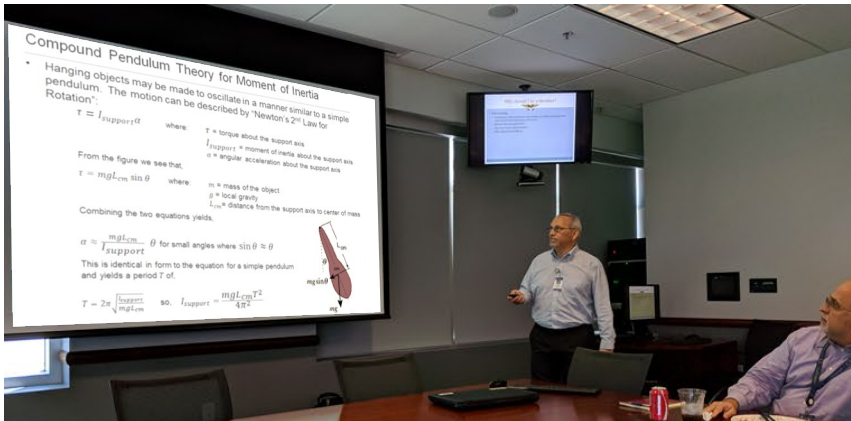
- **Leadership Development**
 - SAWE helps you:
 - Innovate
 - Create
 - Solve problems
 - Make a difference locally and globally!
 - Numerous opportunities to get involved and lead
 - Local Chapter Positions
 - International Officer Positions
 - Committee Chairs



How do Company Members benefit?


- **Skilled Workforce**

- Mass Properties Engineers properly trained with access to the latest knowledge base
- Program risk reduced through proper application of proven processes
- Lessons learned passed on to younger generation starting at the college level



How do Company Members benefit?

- **Standards**
 - Gain access to proven recommended practices created through years of SAWE, industry and government collaboration
 - Help shape these standards


 INTERNATIONAL SOCIETY OF ALLIED WEIGHT ENGINEERS, INC. <i>Serving the Aerospace - Shipbuilding - Land Vehicle and Allied Industries</i> Executive Director P.O. Box 60024, Terminal Annex Los Angeles, CA 90060	RECOMMENDED PRACTICE NUMBER <u>7</u> Date Issued <u>May 18, 2004</u>
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**MASS PROPERTIES
MANAGEMENT AND CONTROL
FOR MILITARY AIRCRAFT**

Revision Letter D

Prepared by
Government - Industry Workshop
Society of Allied Weight Engineers, Inc.

All SAWE technical reports, including standards applied and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAWE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the SAWE will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents. Notwithstanding the above, if the recommended practice is incorporated into a contract, it shall be binding to the extent specified in the contract.

 SAWE RECOMMENDED PRACTICE


 INTERNATIONAL SOCIETY OF ALLIED WEIGHT ENGINEERS, INC. <i>Aerospace - Marine - Offshore - Land Vehicle - Allied Industries</i> Executive Secretary P.O. Box 60024, Terminal Annex Los Angeles, CA 90060	RECOMMENDED PRACTICE NUMBER <u>8/A-7</u> Date Issued <u>July 1, 2015</u>
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**Weight and Balance Data Reporting Forms
for Aircraft (including Rotorcraft and
Air-Breathing Unmanned Aerial Vehicles)**

Revision B

Prepared by
Standards and Practices Committee
Society of Allied Weight Engineers

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 S.A.W.E. RECOMMENDED PRACTICE

 INTERNATIONAL SOCIETY OF ALLIED WEIGHTS ENGINEERS, INC. <i>Serving the Aerospace - Shipbuilding - Land Vehicle and Allied Industries</i> Executive Director P.O. Box 60024, Terminal Annex Los Angeles, CA 90060	RECOMMENDED PRACTICE NUMBER <u>9</u> Date Issued <u>03 June 2000</u>
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**WEIGHT AND BALANCE CONTROL
FOR
GUIDED MISSILES**

Prepared by
Government - Industry Workshop
Society of Allied Weight Engineers, Inc.

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How much does it cost?

Level	Cost
Company	
<ul style="list-style-type: none">• Gold Partner• Silver Partner• Member Level 2• Member Level 1	<ul style="list-style-type: none">\$15,000/year\$6,000/year\$1,500/year\$1,000/year
Individual	
<ul style="list-style-type: none">• New Member• Member• Retired Member• Student Member• Lifetime	<ul style="list-style-type: none">\$40/1st year\$80/year\$40/yearFree (pending verification)\$1,200



What is included in Company Membership?

Benefit	Level 1	Level 2	Silver	Gold
Annual International Conference Proceedings	✓	✓	✓	✓
Presentation opportunity at International Conference	✓	✓	✓	✓
SAWE Weight Engineering Journal	✓	✓	✓	✓
Listing on SAWE Website at appropriate level	✓	✓	✓	✓
Open access to SAWE Technical Library (* up to 100 downloads/year, ** up to 200/year)	✓*	✓**	✓	✓
Open access to SAWE Standards and Practices	✓	✓	✓	✓
10% Discount on Annual Advertising Rates	✓	✓	✓	✓
Reduced rate for Onsite Group Training	5%	5%	10%	15%
Complimentary Individual Memberships		1	3	5
Seat on Board of Directors		✓	✓	✓
Voting privileges on Board of Directors			✓	✓
Standards and Practices Committee Memberships			1	2
One 3-day International Conference Exhibit Space			✓	✓
3-day International Conference Registrations			2	6
One 1-day Training Course Registration				✓
Job Postings for Open Mass Properties Positions on SAWE Website				✓
Color Ad in the International Conference Program			½-page	Full-page
Choice of ½-Page Color Ad in one edition of Weight Engineering Journal or 3-month Ad on Website			✓	
One full-page Color Ad in each edition of Weight Engineering Journal and full-year ad on Website				✓



Where can you learn more?

- <https://www.sawe.org>

SOCIETY OF ALLIED WEIGHT ENGINEERS
Aerospace • Marine • Offshore • Land Vehicle • Allied Industries

The world's premiere source of mass properties knowledge and technical excellence since 1939.

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Paper Database

- SAWE Paper Database
- Conference Proceedings
- Ordering and Downloading Papers
- Call for Papers

SAWE Workspaces

- SAWE NextCloud

Member Login

Username or e-mail *
Password *

The Society of Allied Weight Engineers (SAWE) is an international organization whose purpose is to promote the mass properties discipline and provide members and industry a medium for exchanging practices and experiences with the objective of fostering a higher degree of quality in mass properties control. Regular chapter meetings, regional and international conferences, plus an array of technical papers, reference books, industry standards and training curriculum provide mass properties engineers and industry that opportunity to learn, collaborate, create, and broaden the capability of the mass properties engineer, organization or program. The Society is organized into 22 chapters with members from across the United States, Brazil, Europe, United Kingdom, and Canada.

Weight Engineering - Winter 2022

WEIGHT ENGINEERING
SAWE INTERNATIONAL JOURNAL OF WEIGHT ENGINEERING
Volume 81 - Winter 2022 - No. 1

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L.R. "MIKE" HACKNEY AWARD WINNING PAPER

Mass Properties and Automotive Directional Stability
by Brian Paul Wiegand, P.E.

OTHER

President's Message
SAWE Corporate Partners

Upcoming Events

- 81st SAWE International Conference on Mass Properties Engineering May 21, 2022 to May 25, 2022
- 82nd SAWE International Conference on Mass Properties Engineering May 20, 2023 to May 24, 2023

SAWE Blog

- The Fallacy of Scaling, or Why You Need Highly Knowledgeable Experts
- 2021 80th International Conference – UPDATE
- Boeing Orbital Flight Test 2 (OFT2)
- SAWE Scholarships – 2021 Winners Announced!
- Standards and Practices: Missiles and Space Second Quarterly Meeting on Friday, June 04, 2021

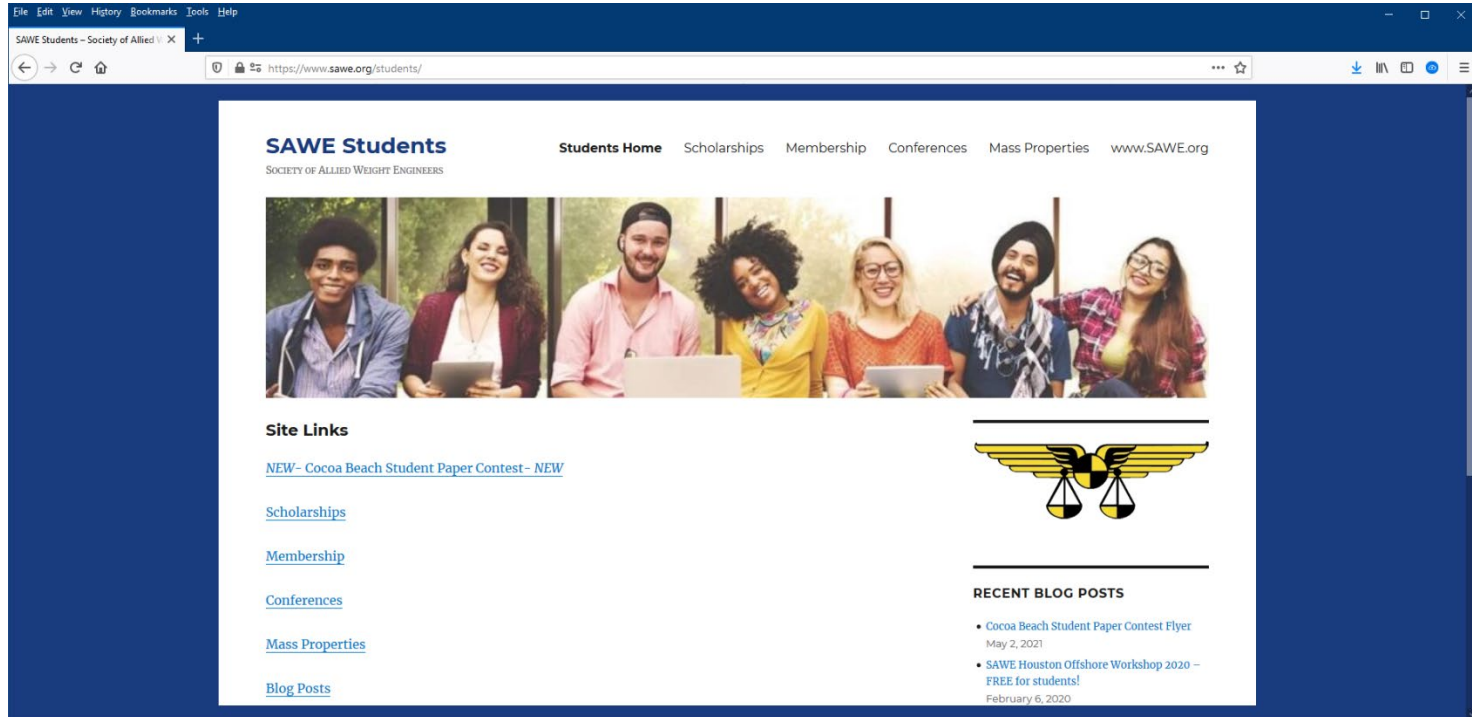
[More](#)

Silver Corporate



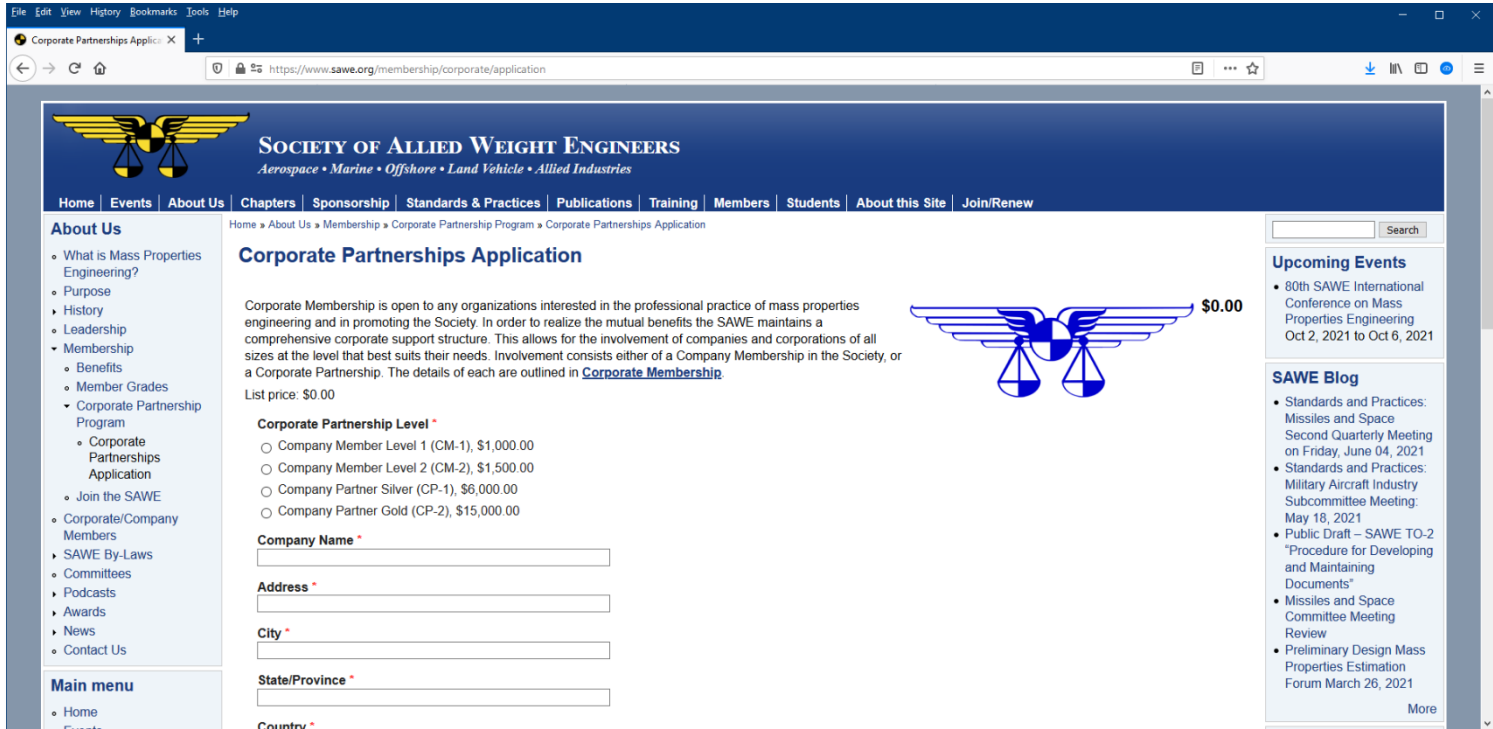
Where can you learn more?

- <https://www.sawe.org/students/>



How can you partner with us?


- <https://www.sawe.org/membership/corporate/application>

A screenshot of a web browser displaying the SAWE Corporate Partnerships Application page. The browser's address bar shows the URL "https://www.sawe.org/membership/corporate/application". The page has a dark blue header with the SAWE logo and the text "SOCIETY OF ALLIED WEIGHT ENGINEERS" and "Aerospace • Marine • Offshore • Land Vehicle • Allied Industries". Below the header is a navigation menu with links: Home, Events, About Us, Chapters, Sponsorship, Standards & Practices, Publications, Training, Members, Students, About this Site, and Join/Renew. The main content area is titled "Corporate Partnerships Application" and includes a description of corporate membership, a list of membership levels with prices, and a form with fields for Company Name, Address, City, State/Province, and Country. A large blue winged figure logo is also visible on the right side of the main content area. The right sidebar contains sections for "Upcoming Events" and "SAWE Blog".

File Edit View History Bookmarks Tools Help

Corporate Partnerships Appli X

https://www.sawe.org/membership/corporate/application

 **SOCIETY OF ALLIED WEIGHT ENGINEERS**
Aerospace • Marine • Offshore • Land Vehicle • Allied Industries

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About Us

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 - Member Grades
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 - Corporate Partnerships Application
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- Corporate/Company Members
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Corporate Partnerships Application

Corporate Membership is open to any organizations interested in the professional practice of mass properties engineering and in promoting the Society. In order to realize the mutual benefits the SAWE maintains a comprehensive corporate support structure. This allows for the involvement of companies and corporations of all sizes at the level that best suits their needs. Involvement consists either of a Company Membership in the Society, or a Corporate Partnership. The details of each are outlined in [Corporate Membership](#).

List price: \$0.00

Corporate Partnership Level *

- ☐ Company Member Level 1 (CM-1), \$1,000.00
- ☐ Company Member Level 2 (CM-2), \$1,500.00
- ☐ Company Partner Silver (CP-1), \$6,000.00
- ☐ Company Partner Gold (CP-2), \$15,000.00


Company Name *

Address *

City *

State/Province *

Country *

 **\$0.00**

Upcoming Events

- 80th SAWE International Conference on Mass Properties Engineering Oct 2, 2021 to Oct 6, 2021

SAWE Blog

- Standards and Practices: Missiles and Space Second Quarterly Meeting on Friday, June 04, 2021
- Standards and Practices: Military Aircraft Industry Subcommittee Meeting: May 18, 2021
- Public Draft – SAWE TO-2 "Procedure for Developing and Maintaining Documents"
- Missiles and Space Committee Meeting Review
- Preliminary Design Mass Properties Estimation Forum March 26, 2021

More

Come and Join Us!

- **Help us ensure the high quality of Mass Properties Engineering for your company**
- **Help us keep our critical discipline alive and well**
 - Encourage your peers or employees to become members
 - Create technical papers
 - Attend conferences and training, and become certified
 - Support SAWE at the Chapter and International levels
- **Your Company and SAWE share the same goals for excellence in Mass Properties Engineering**

Help Us Help YOU!

