



Society of Allied Weight Engineers, Inc.

Aerospace • Marine • Offshore • Land • Allied Industries

Welcome to the SAWE Southeast Region



**A Proud Chapter of the
Society of Allied Weight Engineers**



Who is SAWE?

- **We are a non-profit International Organization of Mass Properties Engineers founded in 1939, incorporated in 1941**
- **Our Purpose:**
 - To promote the Mass Properties discipline
 - 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
- **22 Chapters in the US, Canada, South America, UK and Europe**
- **18 Corporate Partners and over 500 members**

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	Damian Yañez	Gulfstream Aerospace Corporation
Executive VP	Darren Gamble	Bombardier
Senior VP	Fred Brown	Huntington Ingalls Industries
VP Publications	Nicholas Marickovich	Huntington Ingalls Industries
VP Technical	Robert Zimmerman	Lockheed Martin - Retired
VP Training	Dan Rowley	Northrop Grumman Corporation
VP Vendor Relations	Clint Stephenson	The Boeing Company
VP Internet	Greg Ray	Bell Textron
VP Standards & Practices	Douglas Fisher	Collins Aerospace
VP Academic Affairs	Dr. Donna Gerren	University of Colorado Boulder
Executive Director	Bill Boze	Huntington Ingalls Industries

Our Chapter History

1982

Our Beginnings

In 1982 the Atlanta Chapter of the Society of Allied Weight Engineers was created to serve those Mass Properties Engineers primarily affiliated with Lockheed Martin and Delta Airlines in the Atlanta area. The chapter included members with backgrounds in military transport and fighter aircraft, as well as airline operations.



PRESENT

Welcoming New Members

Our Chapter welcomes all those interested in estimating, calculating, managing and measuring the mass properties of all types of products from the aerospace, land, offshore, marine and other allied industries. We are especially excited that members from Boeing in South Carolina are now part of our chapter. Our goal is to provide our members a place to meet others in the Mass Properties field, and share ideas, innovations and opportunities.



2011

Expansion

As the membership shifted away from Atlanta, a new focal point was created in Savannah, Georgia to serve those primarily at Gulfstream Aerospace, as well as others in the commercial aircraft and space community. The Chapter was renamed and expanded to include all of Georgia, South Carolina, and North Carolina.





Our Chapter Leadership Team



OFFICERS

Our Current Leadership Team



Tom Tanner

International Director



Ross Campbell

President



Peter Stubbers

Vice President



Santiago Cortina

Secretary



Adam Cox

Treasurer



Why is Mass Properties Control important?

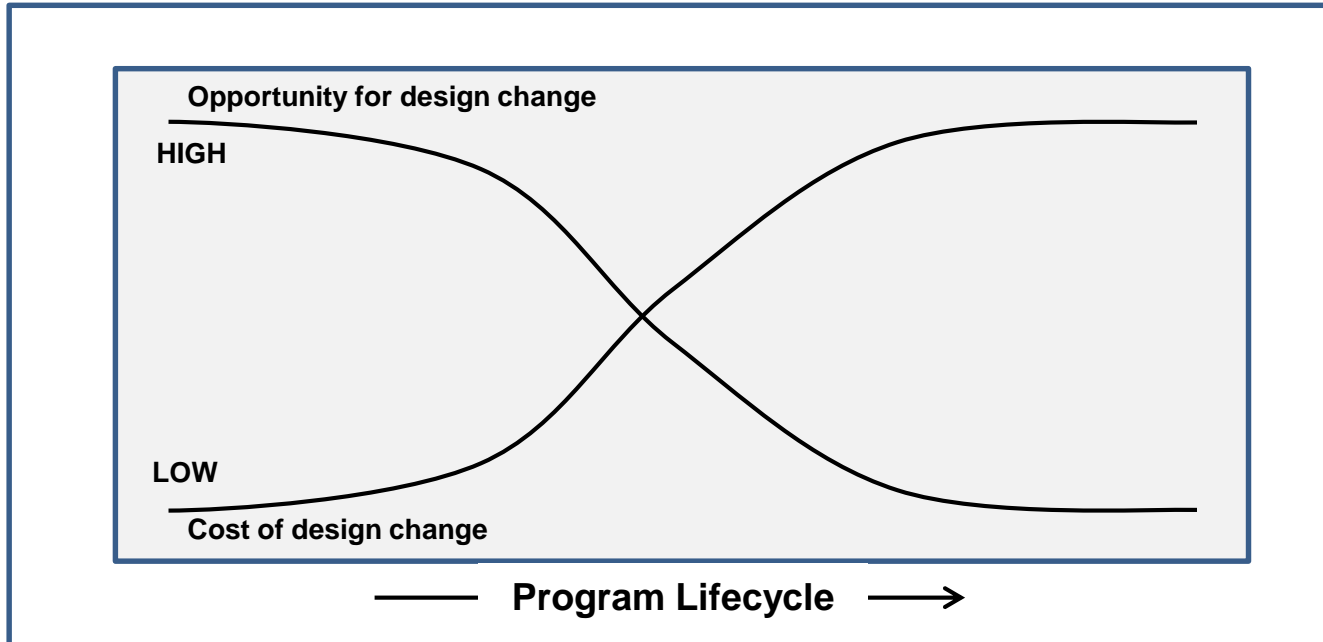
- Weight, Center of Gravity, Moments and Products of Inertia are **critical** for vehicle safety and performance





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
 - Aging workforce in this crucial discipline
 - 62% retiring over next 10 years*
- **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

**The Health of Mass Properties Engineering - 2018 Industry Survey*

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



Upcoming International Conferences

2021 Cocoa Beach, FL

2022 Savannah, GA

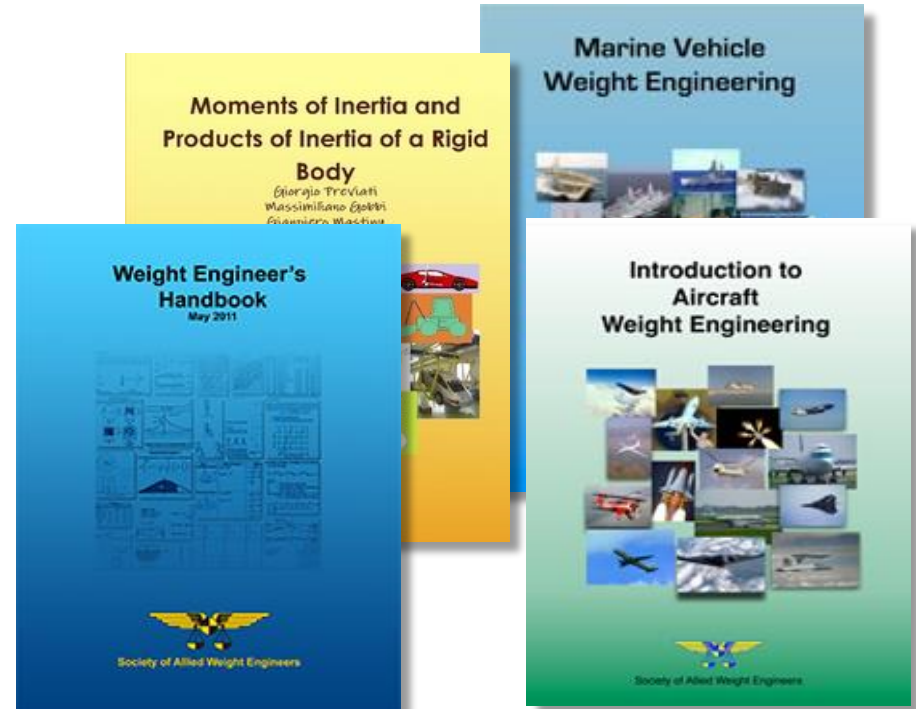
Why should I be a member?

- **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

- **Conference Papers and Exhibitor Information provided to Registrants and Corporate Partners**

* 10 free downloads/year



Why should I be a member?

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



Classroom



Hands on



Why should I be a member?

- **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



Why should I be a member?

- **Recognition**

- Awards for advancing the Mass Properties discipline
 - Best Student Paper Award
 - Best Student Presentation
 - 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





Why should I be a member?

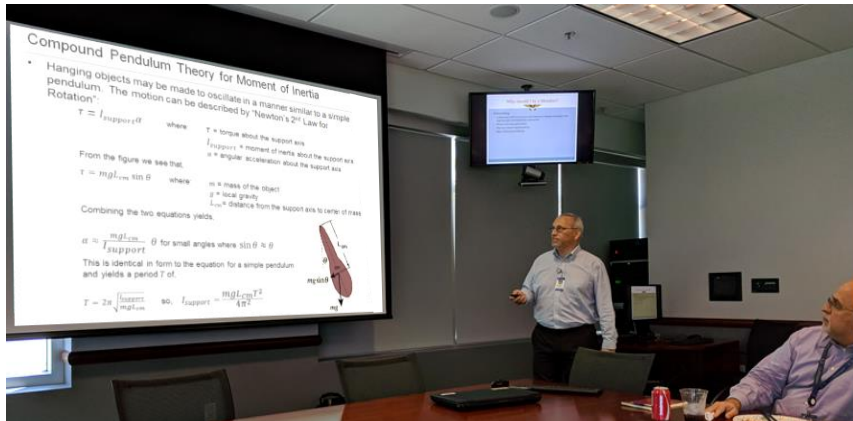
- **Leadership Development**
 - SAWE helps you:
 - Innovate
 - Create
 - Solve problems
 - Make a difference locally and globally!
 - Numerous opportunities to get involved and lead
 - Local Chapter Positions
 - International Officer Positions
 - Committee Chairs



How does my company 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 does my company 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 90024, 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>Serving the Aerospace - Shipbuilding - Land Vehicle and Allied Industries</i> Executive Secretary P.O. Box 90024, 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 90024, Terminal Annex Los Angeles, CA 90060	RECOMMENDED PRACTICE NUMBER <u>9</u> Date Issued <u>03 June 2000</u>
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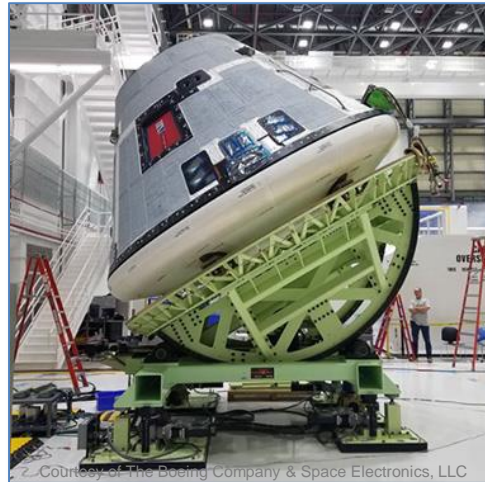
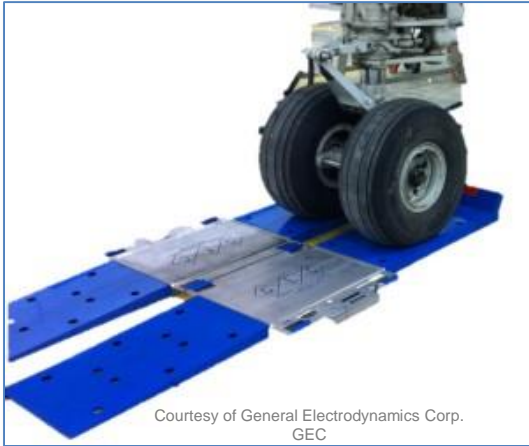
**WEIGHT AND BALANCE CONTROL
FOR
GUIDED MISSILES**

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

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How does my company benefit?

- **Technology Awareness**
 - Keep abreast of the latest equipment, software and services available
 - Share your innovations with potential customers / collaborators





How much does Membership cost?

Level	Cost
Individual	
<ul style="list-style-type: none">• New Member• Member• Retired Member• Student Member• Lifetime	<p>\$40/1st year \$80/year \$40/year Free (pending verification) \$900</p>

Special Deal - Gulfstream reimburses half of annual dues for employees!



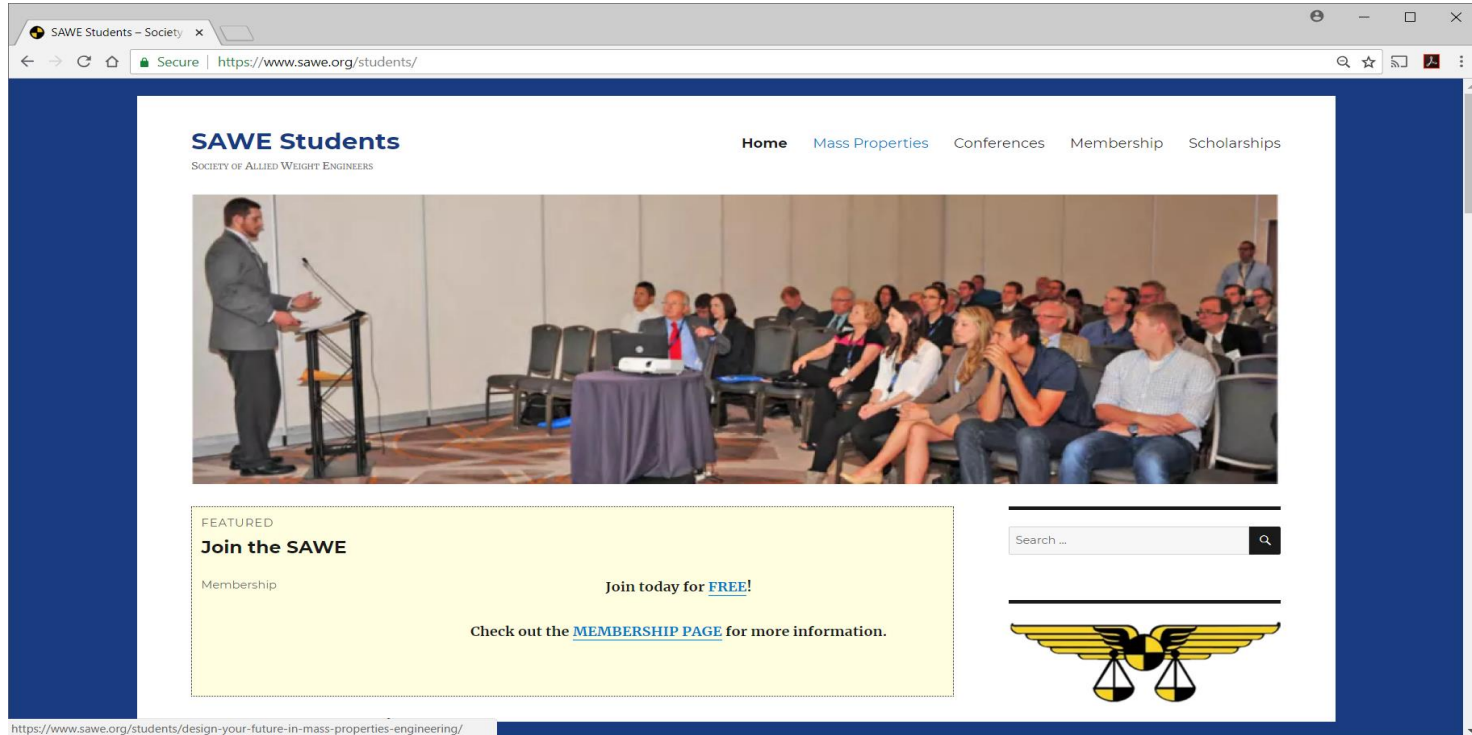
Where can I learn more?

- <http://www.sersawe.org> and <https://www.sawe.org>



Where can I learn more?

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



SAWE Students
SOCIETY OF ALLIED WEIGHT ENGINEERS

Home Mass Properties Conferences Membership Scholarships

FEATURED


Join the SAWE

Membership

Join today for **FREE!**

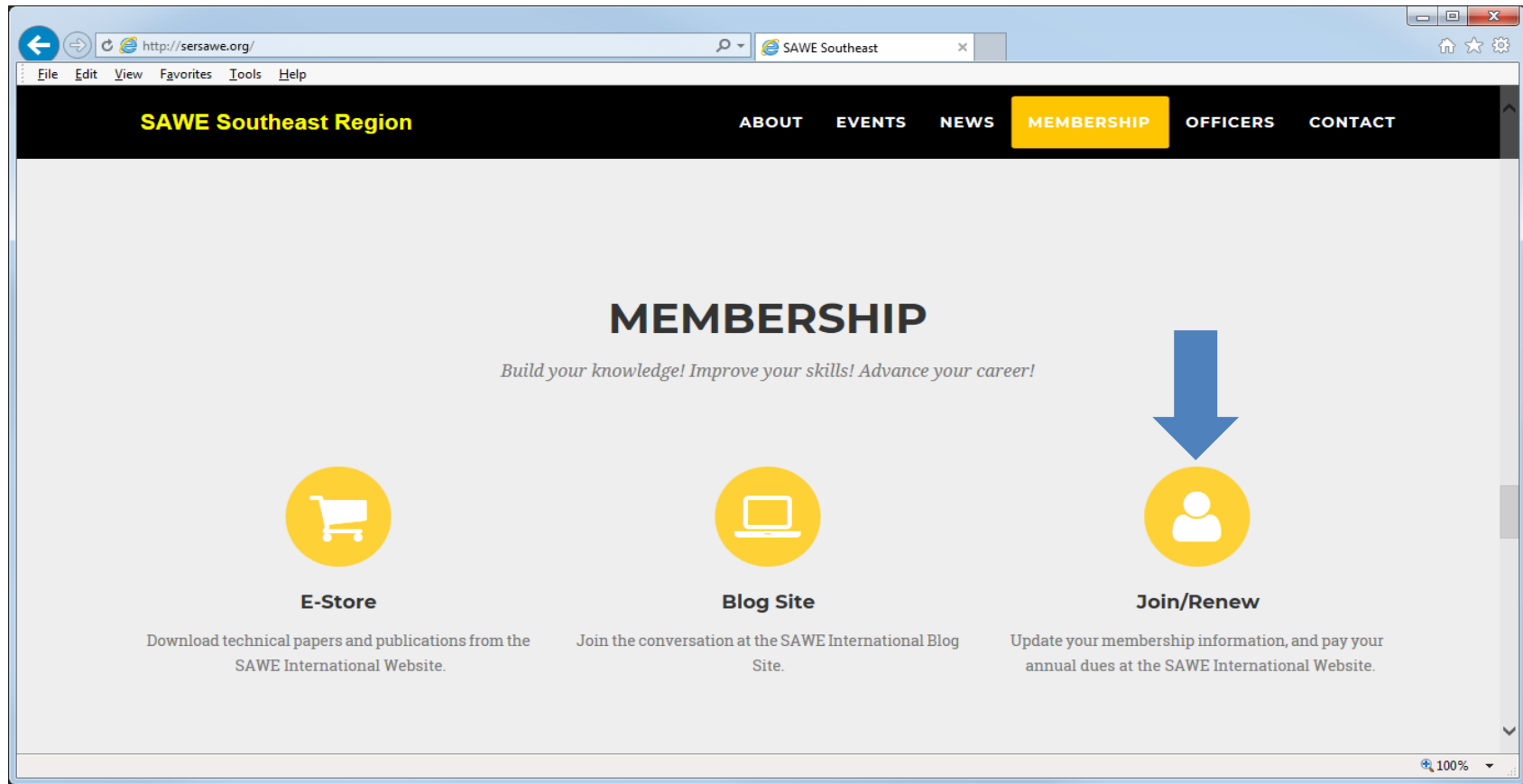
Check out the [MEMBERSHIP PAGE](#) for more information.

Search ...



<https://www.sawe.org/students/design-your-future-in-mass-properties-engineering/>

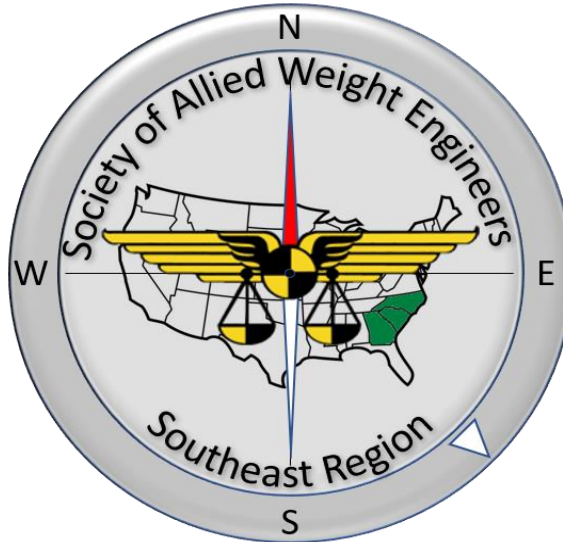
How do I join?





Come and Join Us!

- We encourage you to join us at our quarterly meetings
- Help us keep our critical discipline alive and well
 - Write a paper, attend a conference, help with chapter projects



Help Us Help YOU!