

Member Agencies:

*American Bureau of Shipping
Defence Research and Development Canada
Maritime Administration
Military Sealift Command
Naval Sea Systems Command
Office of Naval Research
Society of Naval Architects & Marine Engineers
Transport Canada
USCG Commercial Vessel Engineering
United States Coast Guard Fleet Engineering*



Ship
Structure
Committee

Address Correspondence to:

COMMANDANT (CG-ENG-2/SSC)
ATTN (EXECUTIVE DIRECTOR/SHIP
STRUCTURE COMMITTEE)
US COAST GUARD
2703 MLK Jr. Ave. SE Mailstop 7509
WASHINGTON DC 20593-7509
Website: <http://www.shipstructure.org>

5420/SSC
January 18, 2024

Dear Valued SSC Members, Partners, and Liaisons:

The Ship Structure Committee (SSC) is pleased to announce the beginning of the 2024 Project Year!

We are looking forward to another successful year of improving the safety of life at sea through ship structures-related research. The SSC is seeking research project proposals that fall within the following focus areas:

- I. Machine Learning and Artificial Intelligence use cases for vessel design and lifecycle analysis:
 - Machine learning uses for efficient structural design.
 - Use of artificial intelligence to analyze design data for improved lifecycle efficiency.
 - Instrumentation for structural health monitoring system; data analysis methods; “digital twin”.
- II. Arctic Construction, Operations, Technology and Effects
 - Structural materials for polar operation, with respect to strength and temperature.
 - Efficient ice strengthening in structural design.
 - Evaluation/prediction of ice loads.
 - Operational guidance methodologies for ships in ice based on structural assessment.
- III. Novel Materials and Manufacturing
 - Additive Manufacturing uses in vessel construction and NDT techniques.
 - Materials associated with alternative fuels (e.g. hydrogen, liquefied gases).
 - Use of corrosion-resistant steels (e.g. COR-TEN) in marine application.
- IV. SSC Follow-Up Report
 - Follow-on report to existing, outdated SSC report.

More details can be found on the [SSC website](#). If you have a project idea that does not fall within the listed focus areas, please consider submitting it. We are interested in all ideas for projects that could meaningfully advance ship structures research.

**Please consider the following when submitting your research project proposals.

- *Fiscal Limitation:* The SSC typically funds one or two projects each year (approximately \$100,000 per project).
- *Timeline Information:* Please submit all research recommendations electronically to the Executive Director, (SSC@uscg.mil) no later than **March 15, 2024**.
 - Compiled research recommendations will be distributed to SSC members shortly after the due date. Proposed projects will be reviewed by the Committee at the annual meeting.
 - Projects selected to be funded should begin the contracting phase in June 2024.
- *Submission Instructions:*
 - Use the template/outline format found [HERE](#).
 - Do not include proprietary information.
 - Only MS Word Document (.doc, .docx) format will be accepted.
 - Do not include any graphics, tables or sketches.
 - Keep the task descriptions brief - the entire document should be no more than 4 pages in length.
- *Contracting Information:* Submitters will be notified if their project proposal has been selected for funding with details on the bidding process. Please note that selection of a proposed research project reflects the Committee's judgment that there is an immediate need for this research in the field of vessel structures. Selection by the Committee DOES NOT mean the submitter will necessarily be contracted for the work. The SSC member organizations will determine the appropriate contract mechanism or researcher to carry out the recommended project. Upon completion, the research project report will be made available to the public on the Ship Structure Committee website, www.shipstructure.org.

Please forward this message to other interested members of your organization.

If you have any questions, please do not hesitate to contact the SSC via email (SSC@uscg.mil). Thank you for your continued support of the Ship Structure Committee!

Sincerely,

Bryan Andrews, LCDR USCG
Executive Director,
Ship Structure Committee