



Dear Industry Representative,

Thank you for your interest in the Center for Friction Stir Processing (CFSP). We invite you to join our research programs, tailored to develop and promote the industrial application of friction stir welding and processing (FSW&P) and their variants.

The mission of the CFSP is to advance the science and technology of the many variants of FSW&P for accelerating its use in represented manufacturing sectors. Working together with our industrial advisory board, we are developing fundamental process knowledge, data for certification processes, and design for manufacturability (DFM) approaches to facilitate industrial implementation. Through the synergistic research carried out in the Center, we identify critical pathways to industrialization and conduct research programs through which member companies can best benefit from the respective technologies.

The Center provides science-based research to Center members in a consortium environment. This collaborative focus strengthens and enlarges the research capabilities of both the Center's academic and industry members through conducting cooperative interdisciplinary research programs with industry. Research topics range from fundamental research to applied development related to the different variants of friction stir related technologies, including additive manufacturing.

Key benefits and services available to CFSP members include:

- State-of-the-Art Technology: Stay current on the latest technologies in CFSP core research.
- Directed Research: Co-direct planning and implementation of Center research.
- Consortium Synergy: Multiply research funds by participating in collaborative programs.
- Competitive Deliverables: Obtain science-based deliverables from an array of projects.
- Pre-publications: Receive free copies of Center research papers, reprints, and posters.
- Lowered Indirect Costs (IDC): Conduct focused research at lowered overhead rates.

For additional fees at the lowered IDC rate, member companies may also employ other Center services:

- Interns & Workforce: Gain access to Center student researchers for interns and employees.
- Analytic Services: Access Center testing and analysis services at all Center University Sites.
- Workshops: Take training in Center research-related fields.
- Confidential Research: Pursue proprietary research as an individual CFSP member or as part of a subgroup of Center members.
- Intellectual Property (IP): Negotiate non-exclusive licenses (member IP is not disclosed).

By featuring faculty-led student research and lowered indirect costs (IDC), the CFSP provides industry members with increased purchasing power for their research budgets. In return, we ask Center member companies to commit to at least three years of funding to provide students with consistent support.

To join the CFSP, complete the attached application form per the instructions included. If you have questions about the Center or the application process, please feel free to contact us by calling (801)422-7858 or emailing us at cfsp@byu.edu. We look forward to working for you in the CFSP.

Sincerely,

Dr. Yuri Hovanski
CFSP Center Director



CFSP MEMBERSHIP APPLICATION FORM

PARTICIPATION LEVELS

Participation in CFSP research programs is carried out at three levels:

- Core-level projects
- Group-sponsored projects
- Company-specific projects

Core-level research projects are those projects which are funded with annual Center membership fees, are of general interest to CFSP members, and their outcomes are open and visible to all members. The number and scope of core-level projects are developed by the CFSP university faculty and staff in collaboration with Center industry members and are based on available resources.

In addition to core-level research sponsorship, CFSP members may elect to participate at two focused levels of research: 1) multiple member group-sponsored, and 2) single member company-specific. At these two levels, separate projects are identified and carried out based on the interests of individual Center members. Visibility to these focused research programs is limited to the Center members electing to pay the additional fees necessary to conduct the added investigations. For company-specific projects, programs are conducted on a proprietary basis between the Center and the individual member company.

PARTICIPATION FEES – 2022 FEE SCHEDULE

Center member companies pay annual membership fees for core-level research. The members are classified as follows for paying these fees:

- **Large entities:** more than 50 employees and/or affiliates
- **Small entities:** 50 or less employees and/or qualified SBE
- **Micro entities:** an entity with a maximum of \$200k qualifying gross income

The fee schedule for core-level participation in Center research and development programs is based on an annual fee as follows:

Large Entities	Small Entities	Micro Entities
\$50k	\$25k	\$12.5k

Additional fees required for group-sponsored projects and/or company-specific projects are individually determined and payments are arranged separately as noted in the prior section.

PARTICIPATION OPTIONS

To participate in focused research programs, CFSP members pay additional fees to fund program expenses based on the negotiated scope of the proposed programs. These fees are negotiated with the CFSP director and the respective university personnel engaged in the focused research and are billed and paid separately from the annual membership fees.

CFSP members may also fund student internships. Options include having students work on-site in the Center facilities, at a sponsor company's site, or both. Sponsored field trips to Center members' sites for academic members of the Center may also be arranged with individual industrial members. Fees for such arrangements are made separately from the annual membership. Contact the CFSP director, faculty, or staff for additional information.

PARTICIPATION INVOLVEMENT

Designated representatives from each Center member meet in conference with CFSP research faculty, staff, and students for planning and implementing research. Center-wide meetings are held twice each year with designated representatives in which they review project progress and provide industry guidance. Additional meetings are arranged through CFSP faculty and staff on a per project basis.

Project research is typically carried out by either undergraduate, graduate, or doctoral students or post-doctoral fellows. Through their involvement in the Center, members mentor students, allowing them to gain valuable skills and knowledge while working with industry members. Industry members, therefore, not only realize lower research costs by sponsoring student researchers, but they also gain access to a talented, emerging workforce from which to recruit employees.

JOINING THE CFSP

To participate in core-level CFSP research, select an Affiliate University(s) and complete the membership information below. Then email the application form to the Site Director(s):

<u>Affiliate University</u>	<u>Site Director</u>	<u>Contact email</u>
<input type="checkbox"/> University of North Texas	Prof. Rajiv Mishra	rajiv.mishra@unt.edu
<input type="checkbox"/> University of South Carolina	Prof. Tony Reynolds	apr@sc.edu
<input type="checkbox"/> Wichita State University	Prof. EK Boldsai Khan	enkhsaikhaneboldsaikhane@wichita.edu
<input type="checkbox"/> Brigham Young University	Prof. Yuri Hovanski	yuri.hovanski@byu.edu

Payment Arrangements will be made with the individual University Affiliate Director. CFSP members may hold more than one general core-level membership in the Center to accelerate or expand the scope of core-level research in a manner visible to all participants. When paying for more than one core-level membership, include a completed form for each membership and/or designated representative with your submission.

Name of Organization: _____	
Division: _____	
Membership(s) – Membership No. / Total Memberships: _____ / _____	
Address: _____	
Designated Representative: _____	
Title: _____	E-mail: _____
Tel: _____	Fax: _____

Authorizing Signature _____ Printed Name _____ Title _____ Date _____	
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<u>For CFSP Use Only</u>	
Membership # _____	
Payment # _____	
Date Received _____	
Status _____	