

Center for Particulate and Surfactant Systems (CPaSS)

University of Florida, Gainesville, FL, Lead University;
Columbia University, New York, NY, Partner University

- CENTER BYLAWS -

ARTICLE I - INTRODUCTION

- 1.1 The following Bylaws will be used to govern the Center for Particulate and Surfactant Systems (CPASS), an NSF Industry/University Cooperative Research Center (I/UCRC).
- 1.2 The Bylaws can be amended at any time by an affirmative vote of two thirds of the members of the Industrial Advisory Board (IAB).
- 1.3 The CPASS is a university consortium comprised of the following participating universities:
 - University of Florida, Gainesville, FL (Lead University)
 - Columbia University, New York, NY (Partner University)
- 1.4 These Bylaws form part of the Membership Agreement with participating Sponsors. Any conflict between a Membership Agreement and these Bylaws resulting in discrepancy will require review and approval by the Center Director, the Site Directors, and two thirds of the IAB representatives.

ARTICLE II - PURPOSE

Vision Statement

- 2.1 CPASS is designed to provide a forum for industry/university cooperative research for *advancing applied research in particulate and surfactant systems for economically viable enhanced performance with minimal environmental footprint.*

Mission Statement

- 2.2 The mission of the Center for Particulate and Surfactant Systems is to advance, develop and promote fundamental understanding of particulate and surfactant systems leading to their industrial application with enhanced performance, cost structure, and minimal environmental footprint. This mission will be accomplished by achieving the following goals,
 1. advancing the fundamental understanding of the particulate – surfactant interactions;
 2. advancing the application of this fundamental understanding to industrial relevant needs;
 3. establishing a venue for industrial/academic interactions for conducting industrially relevant research;
 4. exploring high-risk, high impact research that could lead to technological innovations;
and
 5. promoting education and training of students in this important field.

Research Focus

- 2.3 The common research platform for CPASS is the development of structure – property- performance correlations for designing engineered particulates & surfactant systems for optimal performance in industrial applications.
- 2.4 CPaSS faculty, staff and students are currently conducting, or plan to undertake, research projects in the following areas that have been identified by the Center researchers and industry partners.
- Consumer products to include Detergents, Household Cleaning, Cosmetics and Health care Products
 - Targeted Drug Delivery Systems
 - Cohesive Powder Flow
 - Dispersion of Soft and Hard Solids
 - Advanced Particulate/Mineral Separations
 - Filtration and Dewatering of Fines
 - Waste Minimization, Reuse, and Remediation
 - Toxicity of Nanostructures/Nanoparticles

ARTICLE III - SPONSORSHIP

- 3.1 The CPASS sponsorship (membership) fees are: large companies (500 or more full time employees) - \$25,000, medium companies (more than 100 but less than 500 full time employees) - \$15,000 and small companies (up to 100 full time employees) - \$5,000. Affiliates contribute \$5,000 membership fee, irrespective of their size, have significantly reduced privileges and do not vote on projects. Affiliates must decide after one year to join as full member, or opt out of joining the Center. Membership fees will be used to support Center research.
- 3.2 A Company, Corporation, or Organization may support the Center with two or more sponsorships.
- 3.3 A participating university that receives and uses sponsorship (membership) fees will provide a 25% cost share match in connection with the sponsor's cash fees to support Center research in accordance with the requirements of the National Science Foundation I/UCRC Program Solicitation NSF01116.
- 3.4 An "In-Kind" sponsorship (membership) is possible upon approval by the Center Director, and all University Site Directors with the consensus of the IAB. A member Organization that provides "In-Kind" membership fees in lieu of cash payments will provide a listing of categorized items to be considered as its "In-Kind" support for approval.

ARTICLE IV- SPONSORSHIP MODALITIES

- 4.1 **Research Project:** Precompetitive research projects proposed by faculty researchers in response to industry identified needs. They are supported by CPASS membership fees as voted by the IAB.
- 4.2 **Enhancement Project:** Additional funds provided by an interested company or companies (beyond membership fees) can be used as supplemental funding for research projects with the clear understanding that knowledge and information generated will be equally shared among all IAB members.

- 4.3 **Mini - Consortium:** Supported by a group of IAB Member companies providing additional funds (beyond membership fees) for a specific project of their interest. Knowledge and IP generated by this type of projects will be restricted to the group of companies that funded the research. CPASS membership fees will not be used to support this type of projects.
- 4.5 **Company Sponsored Project:** Supported by a company providing additional funds for a specific project of their interest. Knowledge and IP generated by this type of projects will be restricted to the specific company that funded the research. Sponsored Projects will not be included in the I/UCRC research portfolio nor will be supported by CPASS funding.

ARTICLE V- ORGANIZATION

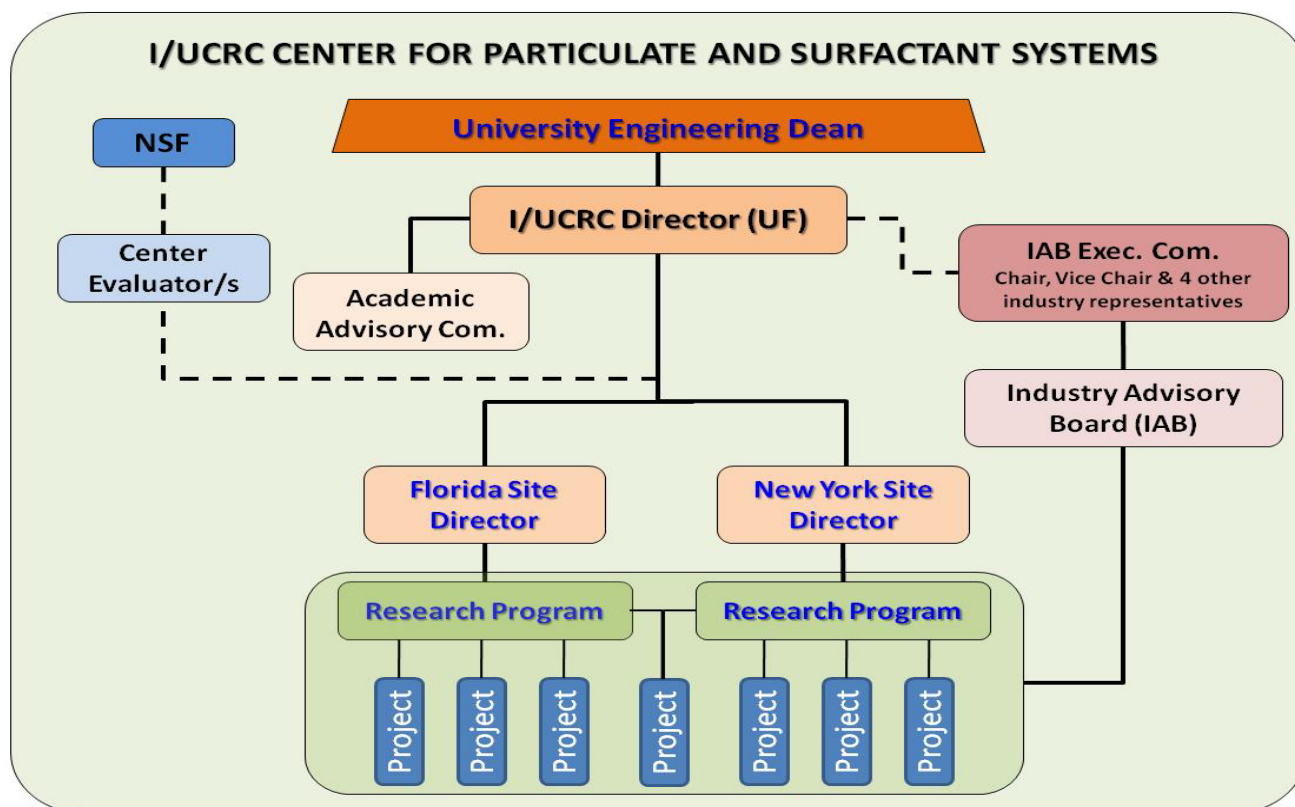


Figure 1. CPASS Organizational structure.

- 5.1 Although individual Sponsors of the Center join the Center through one of the University Sites, there is only one IAB for the Center. The IAB comprises one representative of each member company. A member company can send as many delegates to the IAB meetings as it considers appropriate.
- 5.2 The IAB will select a Chair and a Vice Chair for a two-year term after approval of the Bylaws and no less than every two years thereafter. Generally the Vice Chair will become the IAB Chair when a new Vice Chair will be elected by the IAB members.

- 5.3. The Chair and Vice Chair will be assisted by an Executive Committee (EC) of up to four other members. Members from both sites should be represented in the EC. The EC members will have a two year term and members will be elected or renewed at the same time that the Chair and Vice Chair are elected. The main role of the EC members is to assist the IAB Chair and Vice Chair on executive tasks and coordination of CPASS activities with the Director of the Center.
- 5.4 Sponsors paying membership fees and the Sponsors providing "In-Kind" sponsorship will have one representative on the IAB. An Organization providing additional sponsorships will be entitled to have one voting representative on the IAB for every sponsorship paid in full. Voting procedure detailed in Article XIII
- 5.5 All IAB members will participate in the strategic planning of the Center and will assist the participating faculty in identifying pre-competitive, generic, industry-related, research problems in particulate and surfactants systems. Furthermore IAB members will recommend research projects for future work; assist in identifying appropriate industrial internship opportunities for students; assist the Center Director and Site Directors in recruiting new sponsors; review the research and educational programs and accomplishments of the Center; and recommend mid-course changes to meet IAB needs and concerns.
- 5.6 The Center Director will be responsible for all Center activities and will report directly to the Dean of Engineering at the University of Florida and the IAB. The CPASS Center Director will be Dr. Brij Moudgil. In the event Dr. Moudgil is unable to serve, the Dean of Engineering at the University of Florida will appoint a successor CPASS Center Director subject to confirmation by the members of the university consortium.
- 5.7 The Site Directors at the Lead and Partner Universities will be responsible for Center activities at their respective institutions. They will report directly to their respective appropriate university administrators and to the Center Director. The Site Directors will provide liaison between the Center and the appropriate academic departments of the member universities.
- 5.8 Project Principal Investigators will manage specific research projects funded by the Center and will report directly to the appropriate Site Director. Project Principal Investigators will be identified in specific project proposals.
- 5.9 The CPASS Site Directors will be:
 - University of Florida - Dr. Maria Palazuelos
 - Columbia University - Dr. P. SomasundaranIf a Site Director becomes unable to serve, the participating university will appoint a successor director subject to confirmation by the other members of the university consortium.
- 5.10 A Center External Evaluator, appointed by the National Science Foundation, will assist the Center Director, Site Directors, and the Industrial Advisory Board to organize the Center and provide an independent assessment of the operation. The Center External Evaluator will report directly to the I/UCRC Program Manager at the National Science Foundation. Travel expenses for the Center External Evaluator will be paid by the participating universities from I/UCRC sources and shall be limited to travel to the IAB meetings and one program review trip to each participating university per calendar year. The participating university hosting the IAB meeting will incur the cost of the Center External Evaluator travel expenses for that meeting.

- 5.11 Academic Advisory Committee: The Center will form a multi-university administrative oversight and policy committee consisting of the College Dean at each university to resolve any and all Center administrative issues, including review of academic standards, recruitment strategies, retention issues, funding issues, space requirements, and equipment requirements related to the Center.
- 5.12 Administrative Support Staff: The Lead University and each Participating University will provide a reasonable level of clerical and accounting support for the operation of the Center.

ARTICLE VI- ADMINISTRATION

- 6.1 The Center Director and Site Directors will work with the Industrial Advisory Board on strategic plans for the Center and on recruiting new Sponsors.
- 6.2 A CPaSS Faculty Steering Committee will be constituted to assist the Director and the Site Directors with operational procedure and policy matters. CPaSS Executive Board will comprise of at least three UF and two Columbia faculty members. The faculty Steering Committee will meet at least once every month.
- 6.3 The Center Director in cooperation with the Site Directors will submit an annual operating and research budget to the IAB for review and recommendations. This will be available for review prior to the Spring IAB Meeting each year.
- 6.4 The Site Directors, upon recommendation of the Industrial Advisory Board and the Center Director, will authorize the use of membership fees by the Project Principal Investigators in support of Center research.
- 6.5 The Site Directors will work with the appropriate departments on recruiting graduate students for the Center and will set standards for student participation; monitor student progress towards a degree; set goals for recruiting students (especially minority and women); promote multidisciplinary nature of the research program; and, help students to organize industrial internships. The Site Director will develop a strategy to integrate the technologies of the CPASS into the academic curriculum at each participating university to the maximum extent possible.
- 6.6 Each CPASS graduate student will have a Center faculty mentor and, if available, at least one Center industrial advisor. The faculty mentor is responsible for advising the student on university, departmental, and Center policies.

ARTICLE VII- REPORTS

- 7.1 The Center Director shall provide a semiannual report to the Sponsors and to the National Science Foundation.
- 7.2 The Site Directors and Principal Investigators shall provide interim reports to the Center Director and to the Sponsors as necessary at the completion of major research tasks. These interim reports will be distributed via the Center web site and email notification to all sponsors once posted.
- 7.3 All administrative issues, concerns or conflicts regarding the activities of research and reporting are responsibilities of the Center Director.

ARTICLE VIII- MEETINGS

- 8.1 The Center Director, Site Directors and the IAB Chair will establish the schedule of activities and meetings for the Center as well as the agenda for the semiannual research review meetings.
- 8.2 The participating universities and IAB members for the CPASS will meet twice a year (spring and fall). The participating universities will host the Center meetings on a rotating basis with the date and location determined at the previous IAB meeting. CPASS IAB members are welcome to host/sponsor a Center meeting with the consensus of the IAB.
- 8.3 The IAB will meet twice a year to review research results, select projects, review budgets, and discuss the strategic plans for the Center. The IAB review meetings will coincide with the semiannual CPASS meetings. A Sponsor may send more than one representative to the IAB meetings, but may only have one voting representative per paid membership.
- 8.4 The University Policy Committee will meet as necessary to discuss and resolve Center program and management issues.
- 8.5 Center meetings are closed to the public, because of proprietary Center information that will be discussed. Attendance is limited to faculty, staff, and students affiliated with the Center; representatives of Center Sponsors; and the Center Evaluator and other NSF personnel.

ARTICLE IX- RESEARCH PROJECT SELECTION PROCEDURE

- 9.1 An algorithm for selecting projects will be developed and adopted by the members of the Industrial Advisory Board.
- 9.2 The Center Director, Site Directors, and the IAB will jointly approve first-year start-up projects in support of the Center mission with special consideration given to first year sponsor research needs. This interim provision will be replaced by a strategy described below as amended and approved by the Industrial Advisory Board.
- 9.3 A CPASS research project will usually require two or more industrial sponsors. Therefore, membership fees from several Sponsors may be used to support individual projects of common interest to the Sponsors. The CPASS research projects will be conducted by students (undergraduate, graduate, and/or postdoctoral) and faculty at one or more of the Participating Universities.
- 9.4 All Center Members (Sponsors) paying membership fees in cash may participate in the selection and evaluation of research projects. Individual organizations may acquire multiple Center memberships, and therefore will have a corresponding number of voting representatives on the IAB.
- 9.5 Typically, individual Sponsors will propose general industry-oriented research topics of interest to their organization. A portfolio of relevant research topics will be compiled based on the interest of the Sponsors. These research topics will be posted on the Center web site (restricted) and will form the basis for cooperative discussions among the faculty and the industrial members. Each participating university will develop a set of pre-proposals consistent with the goals of their group, the interest of the Sponsors, and the mission of the Center. The pre-proposals will be posted on the Center web site prior to the Spring IAB meeting. At the research review meeting, faculty/student teams will discuss their proposals with IAB members.

- 9.6 Sponsors will have an opportunity to fund one or more projects at different universities or at the same university. Members of the IAB will recommend funding of projects and will cooperate with the Center Director to establish an annual budget for each project.
- 9.7 Proprietary company sponsored projects will still be available to existing and non member companies; however there will be negotiated overhead fees.

ARTICLE X- PUBLICITY

- 10.1 A Sponsor shall not use the name of any University in the Consortium in any publicity, advertising or news release without the prior written approval of an authorized representative of the affected University. Likewise, no Consortium University may use the name of a Sponsor in any publicity without the prior written approval of the Sponsor. Press releases will be coordinated between the Center Director and participating university press office. Notwithstanding the forgoing the parties may satisfy any reporting requirements of their respective organizations.
- 10.2 Subject to the recommendations of the IAB, the Center Director shall post the descriptions of all CPASS research projects on the Center web site. The descriptions shall not contain confidential or proprietary information and may be published freely.

ARTICLE XI- PUBLICATIONS

- 11.1 Researchers engaged in CPASS research shall be permitted to disclose the methods and results of their research after a review by the Sponsors for proprietary materials as outlined in the Membership Agreement.
- 11.2 At any time a Site Director may request permission to publish Center information presented in summaries, semiannual reports, annual reports, or final reports; or arising out of or resulting from research projects; in the form of abstracts, presentations, or manuscripts. To receive permission, the Site Director shall submit a "Request for Permission to Publish" containing the information to be published in the form in which publication will be sought to the Sponsors. The Request will be sent by email to the primary contact for each Sponsor with read receipt requested and posted to the Center website. It shall be incumbent upon the Site Director to obtain documented evidence that the primary contact for each sponsor company has received the Request. The information in the Request may be published in a substantial form (as submitted with the Request) if within thirty (30) days after obtaining evidence that all Sponsors have received the Request, no Sponsor has objected in writing to the publication of such information. A Sponsor may object if the publication contains patentable subject matter that requires protection and/or the publication contains Sponsor's confidential information. In such cases, publication will be delayed up to ninety (90) days to allow for patent applications to be filed or confidential information to be removed. It is understood that in no case can this provision for delay of publication cause an unreasonable delay in the normal academic progress of a graduate student of participating University with respect to preparation and submission of a graduate thesis or dissertation.
- 11.3 Any confidential information provided by Sponsors to CPASS researchers shall be provided under the protection of the Membership Agreement between the Sponsor and the appropriate university.

ARTICLE XII- BENEFITS

- 12.1 All Sponsors will have non-exclusive rights to the entire CPASS research portfolio under the conditions outlined in the Membership Agreement.
- 12.2 All Sponsors will have an opportunity to directly contribute to CPASS research and education programs by serving as industrial mentors and/or thesis committee members as appropriate and consistent with the policies and procedures of participating Universities.
- 12.3 All Sponsors will have an opportunity to propose case study problems, specific research problems, and focus areas for research.
- 12.4 All Sponsors will have an opportunity to host postdoctoral research associates, graduate and undergraduate students as industrial interns.
- 12.5 Technology transfer between the faculty/student research teams and Sponsors will be promoted by:
 - Pre-doctoral and post-doctoral industrial internships;
 - The direct involvement of the industrial advisor on the research team;
 - Web based submission of reports; and,
- 12.6 Each Sponsor that joins the Center by paying a cash membership fee will vote on the selection of research projects supported by membership fees. They will also be eligible to vote on all other Center matters and participate in the evaluation and discussion of research projects. Voting procedure is outlined below.

ARTICLE XIII- VOTING PROCEDURE

- 13.1 Voting on CPASS project selection will be based on membership fees (cash contributions only). A Sponsor will get one vote for every \$1K of annual membership fee paid, e.g. \$25K annual membership fee is equivalent to 25 votes that a Sponsor can cast as it best fits its interests; all of its 25 votes for one project, or distribute them over several projects.
- 13.2 The number of votes allocated to each Sponsor is only determined by the membership fees paid by that company irrespectively of the numbers of delegates it may have associated with CPASS at any given time. A sponsor will have one voting representative for each full membership fee paid.
- 13.3 Voting on any issues related to CPASS, other than project selection (e.g. policies and operations), will be based on one vote per Sponsor.
- 13.4 Each Sponsor that joins the Center on an approved “In-Kind” basis will be allowed to vote on all other Center matters except project selection. However, such members can participate in the evaluation and discussion of research projects.

ARTICLE XIX- NEW UNIVERSITY AFFILIATES AND INDUSTRIAL SPONSORS

- 14.1 New universities may request membership into the CPASS as an affiliated site. Each new university requesting membership shall initially obtain concurrence from the Center Director, Site Directors, and the IUCRC Program Manager at the National Science Foundation prior to submitting a “Letter of Intent” to join CPASS. Universities requesting membership as an affiliated site must demonstrate their ability to perform synergistic research within the focused research areas of the Center and their willingness to work within the structure, policies and procedures of

CPASS. Upon concurrence by the Center, the new university requesting membership as an affiliated site may continue application per the applicable procedures of the current National Science Foundation I/UCRC program solicitation.

- 14.2 A new university requesting membership into CPASS shall review their research objectives and program plans, and, obtain and submit within their Planning Grant Proposal a “Letter of Support” from the Site Director at each of the current Center university members.
- 14.3 New Companies, Corporations, or Organizations may request, or be requested, to join a university affiliated site of CPASS as a Sponsor (member). These new Companies, Corporations, or Organizations may join CPASS upon signature of the existing consortium Membership Agreement, acceptance of the current Bylaws, and payment of the NON-PRORATED annual membership fee. Application of these new membership fees shall be made to existing research programs at the affiliated site unless a new “interim” research program is otherwise approved by the Center Director, Site Directors, and the Chairman of the IAB. Continued funding of the “interim” research program is subject to IAB approval at the next annual IAB meeting under the terms of these Bylaws.

ARTICLE XV- OUTREACH AND BROADER IMPACTS

- 15.1 The Center Director and Site Directors at each university will develop a Broader Impacts Plan to ensure that CPASS promotes collaborations within the community through local, regional, national and international participation in the center activities. Teaming arrangements between the participating universities, minority, and community technical colleges for the purpose of technology transfer and collaborative educational opportunities are to be encouraged. This plan shall include solicitation of National Science Foundation, Sponsor, university, and state funding in support in these broader impact activities.
- 15.2 The Center Director and Site Directors at each university will develop within the Broader Impacts Plan a strategy to ensure that the CPASS promotes collaborations within the community through technology demonstrations, tours, and student research projects. This plan shall include solicitation of National Science Foundation, Sponsor, university, and state funding in support in these broader impact activities. The site directors shall report on their annual progress of the activities required to be performed under this bylaw, as part of their project progress reports delivered at the Spring IAB meeting.