

Composite and Hybrid Materials Interfacing

Center Bylaws

Approved July 14, 2023

National Science Foundation

Industry/University Cooperative Research Center (IUCRC)

Georgia Institute of Technology (Lead Site)

Oakland University (Partner Site)

University of Tennessee/Knoxville (Partner Site)

Article I – Introduction

- 1.1. These Bylaws will be used to govern the Composite and Hybrid Materials Interfacing Center (“CHMI” or “the Center”), an Industry/University Cooperative Research Center (“IUCRC”) funded in part by the National Science Foundation (“NSF”).
- 1.2. These Bylaws will be reviewed by NSF for acceptability with the IUCRC program and amended for compliance.
- 1.3. The Bylaws may be amended at any time with approval by the Academic Leadership Team and the consent of two-thirds of the Industrial Advisory Board, as hereinafter defined.

1.4. DEFINITIONS

1.4.1. “Composite and Hybrid Materials Interfacing Center” or “CHMI” means the NSF Industry/University Cooperative Research Center (“IUCRC”) consisting of the following universities in a multi-university consortium:

- Georgia Institute of Technology (Lead Site)
- Oakland University (Partner Site)
- University of Tennessee/Knoxville (Partner Site)

These universities collectively can be referred to as the “University Sites”.

1.4.2. “Member” means a company (large and small businesses, startups, for-profit and non-profit entities) or government agency (federal, state and local) that meets the requirements for Members set forth in NSF Solicitation 20-570, including having an Employer Identification Number (“EIN”) issued by the U.S. Internal Revenue Service, has signed the Membership Agreement and is current in the payment of its membership fees.

1.4.3. “Full Member” means a Member that pays the full membership fee, and has one full voting right.

1.4.4. “Associate Member” means a Member that pays one-half of the Full Member fee, and has one-half of a voting right.

1.4.5. “Membership Agreement” means the CHMI Membership Agreement signed by a corresponding Member as attached hereto as Appendix A.

1.4.6. “Affiliate” Means an entity providing approved in-kind contribution, or an entity involved in the Center with conflict-of-interest that may wish to support the Center by contributing funds (at the associate membership or full membership level).

Affiliates do not count toward membership fees, have no voting rights and do not have exclusive or non-exclusive, royalty-free license access to the Center Intellectual Property

- 1.4.7. “Membership Year” means a twelve (12) month period beginning on October 1 and ending on September 30. See Article III for information on renewals.
- 1.4.8. “Site” means a University or Institution of Higher Learning participating in CHMI either as a Lead Site or a Partner Site. A [Site is a recipient of funding for research as described in the NSF IUCRC program solicitation NSF 20-570.
- 1.4.9. “Lead Site” means the Site with administrative and management responsibility for the Center-wide activities such as Member recruitment and retention, IAB meetings organization, collection and allocation of membership fees and other program income, and managing Center operations. The Lead Site administrative role and associated expenses are described in and budgeted according to a Memorandum of Understanding (“MOU”) that all Sites have executed.
- 1.4.10. “Partner Site” means a participating University Site that is not the Lead Site.
- 1.4.11. “Center Director” means the PI of the Center Lead Site who oversees Center operations and management, Center research programs and serves as the Center’s key point of contact.
- 1.4.12. “Site Director” means the PI for a Partner Site who serves on the Academic Leadership Team, manages the Site’s research program, and serves as the Site’s point of contact for Site-related activities.
- 1.4.13. “Project Principal Investigator” means a faculty member responsible for a specific project at one of the University Sites. ^[L]_[SEP]
- 1.4.14. “Collaborative Organization” is a non-profit organization with a least one researcher collaborating on a CHMI-supported research project, but the organization is not a Member of CHMI. Upon the Center Director’s approval of the project and prior to beginning a project, the Collaborative Organization(s) will receive a contract from the Lead Site on behalf of CMHI that grants Members the same rights to the Collaborative Organization’s intellectual property created through the project research as University Sites grant to Members under Article XIII of these Bylaws and through the Membership Agreement.
- 1.4.15. “Collaborator” is a researcher who works on a specific CHMI-supported project for a Collaborative Organization.
- 1.4.16. “External Collaborator” means an external entity or individual required to address a critical research need, subject to NSF and IAB approval and paid for from

Program Income. Any External Collaborator shall be required to execute any contracts, non-disclosure agreements, and memoranda of understanding necessary to comply with the NSF solicitation, Membership Agreement, these Bylaws and institutional requirements with the University Site leading the project or activity.

- 1.4.17. “Academic Leadership Team” means the team comprising the PIs and co-PIs of all Sites, with responsibility for overseeing and carrying out the IAB-recommended research activities and ensuring Center success.
- 1.4.18. “Academic Policy Committee” means the University unit at each Site that provides oversight and assists with ensuring compliance with NSF and University policies. This Committee is composed of members of the institution’s administration (for example, Vice President of Research, Dean, Associate Dean of Research, Vice Dean of Innovation, Department Chair, etc.). Examples of this committee’s responsibilities include managing Conflict of Interest or personnel performance issues within the Center/Site.
- 1.4.19. “Center Academic Policy Committee” means the board comprised of one administrative representative, the Chief Research Officer or designee, from each University Site with personnel and financial authority over the Center activities at his or her university. The Center Academic Policy Committee shall be responsible for administrative oversight and ensuring compliance with the policies, including but not limited to intellectual property policies, of the Center.
- 1.4.20. National Security Evaluation Committee (“NSEC”) is the Georgia Tech committee that oversees and provides guidance for issues related to: export control, foreign investment, Controlled Unclassified Information (CUI) compliance; and similar matters pertaining to National Security for Center activities at Georgia Tech. The NSEC coordinates with the Academic Policy Committee and with the Georgia Tech Office of Export Control and other appropriate offices.
- 1.4.21. Each Site will manage and be responsible for activities and National Security compliance at its Site. “Subject Invention” is an invention conceived or first actually reduced to practice in the course of research conducted by CHMI.
- 1.4.22. “Copyrightable Work(s)” is software or other original works of authorship developed in the course of research conducted by CHMI.
- 1.4.23. “Industry Liaison Officer” means the administrative support position at the lead site who is responsible for identifying and recruiting new Members, and building and maintaining existing industry relationships.

1.5. These Bylaws are hereby incorporated into and form a part of the Membership Agreement

between Members and University Sites. If there are any inconsistencies between the Bylaws and the Membership Agreement, or any Membership Agreement effective prior to the date of these Bylaws, the terms and conditions outlined in such Membership Agreement shall take precedence over these Bylaws and shall also take precedence over the Memorandum of Understanding between the University Sites. The Memorandum of Understanding between University Sites also takes precedence over these Bylaws.

Article II – CHMI Purpose

2.1 Vision Statement.

CHMI has a vision to transform the joining, bonding, and maintenance of structures of composite and hybrid materials by applying reliable, data-driven, automated processes using advanced analytical, computational, experimental, and digital techniques and tools.

The goal of CHMI is to significantly reduce cost, cycle time, and performance variability, and usher in a new era of reliable, cost-effective composite and hybrid materials for aircraft, automobile, infrastructure/alternative energy systems, and protective equipment.

2.2 Mission Statement. CHMI will identify and develop the innovative, breakthrough technologies, materials, tools, and methods that will revolutionize joining composite and hybrid materials manufacturing in the U.S. The mission of the proposed Center is to advance the science and technology, and develop workforce in the field of composite and hybrid materials interfacing by the convergence of the contributions from industry, government, and academic stakeholders. The three partner-universities will closely collaborate with industry members to develop and disseminate basic and applied, precompetitive research on methodologies, technologies, and tools.

2.3 Research Focus. CHMI will pursue a research program that is focused through continual feedback and engagement with Members and is informed by broad trends in the composite and hybrid materials interfacing sector. The Center has identified the following research focus areas:

- 2.3.1 Design, Modeling and Analysis for CHMI
 - 2.3.1.1 ICME and design for CHMI
 - 2.3.1.2 Damage tolerance for CHMI
 - 2.3.1.3 Database, standards and qualification
- 2.3.2 Materials and Process Engineering for CHMI

- 2.3.2.1 Advanced materials for CHMI
- 2.3.2.2 Surface engineering for CHMI applications
- 2.3.2.3 Hybrid-material joining process engineering
- 2.3.2.4 Robotics and process automation
- 2.3.3 Testing and Non-destructive Evaluation
 - 2.3.3.1 Advanced materials testing/characterization
 - 2.3.3.2 NDI for weak/“kissing” bonds detection
 - 2.3.3.3 Fast large-area structural inspection
- 2.3.4 Data Analytics and Secure Digital Technologies
 - 2.3.4.1 IoT and digital technologies for CHMI
 - 2.3.4.2 Diagnostics and prognostics
 - 2.3.4.3 Cybersecurity for CHMI applications
 - 2.3.4.4 AI/machine learning tools for CHMI operations

Article III – Membership

- 3.1. A Member becomes a member upon full execution of the membership agreement (Appendix A) and payment of the membership fee. A list of IUCRC Member Organizations as of the date of approval of these Bylaws is found in Appendix B.
- 3.2. A Member may acquire multiple memberships, but membership contributions in excess of two full memberships are capped at two voting rights, per NSF guidelines.
- 3.3. Memberships are renewed annually with a membership fee paid to the Lead Site for the Center Membership Year effective on October 1.
- 3.4. The Membership Fee is a monetary payment made annually. Membership fees are not prorated and are non-refundable.
- 3.5. A membership for which the renewal fee is not paid is considered lapsed. A lapsed membership can be renewed within 3 months of the annual fee payment date without loss of benefits. Longer lapsed memberships can rejoin, but fees will not be prorated and rights that would have accrued to the Member during the lapsed period are forfeited.
- 3.6. Membership fees will be used to support Center research with at least 90% supporting the direct cost of research. A Site or Collaborative Organization that uses Membership Fees will limit its Indirect Cost Rate applied to expenditure of those fees to 10% to support Center research in accordance with the requirements of the NSF.
- 3.7. Members shall join the Center as one of the following member types: Full Member or Associate Member. An Affiliate is not a member but may become a member.
 - 3.7.1. A Full Member shall pay the membership fee per year in support of the Center to

be recognized as a Member and receive the benefits of being a Member. The inaugural Full Member membership fee in 2020-21 is \$30,000 per year. The membership fees may be increased by up to 2% yearly beginning in 2023.

3.7.2. An Associate Member shall pay one-half of the membership fee per year to be recognized as an Associate Member and receive one-half of the benefits of being a Member. The inaugural Associate Member membership fee in 2020-2021 is \$15,000 per year. The membership fees may be increased by up to 2% yearly beginning in 2023.

Article IV – Organization

4.1. The Center shall be governed by the following Boards and individuals under the rules of the NSF Grant.

- Industry Advisory Board
- Center Director
- Site Directors
- Academic Leadership Team
- NSF External Evaluator
- Center Academic Policy Committee

4.2. Industry Advisory Board.

4.2.1. The “Industry Advisory Board” or “IAB” shall refer to a board comprised of one representative appointed by each of the Members. A list of IAB members as of the date of approval of these Bylaws is found in Appendix B. The IAB makes recommendations on: (a) CHMI’s research projects; (b) the apportionment of resources to these research projects, and (c) any needed changes to these Bylaws. The IAB ensures that the Sites are conducting research of relevance to the industry Members. The IAB helps to refine the mission, vision, and research roadmap for CHMI.

4.2.2. Full Members are allotted one voting right for one membership fee. Associate Members pay a reduced (one-half) membership fee, and thus have 0.5 voting rights. A Member may acquire multiple memberships, but membership contributions in excess of two full memberships are capped at two voting rights.

4.2.3. The IAB will meet twice per year to fulfill its responsibilities hereunder.

4.2.4. IAB members shall elect, by a simple majority vote of the IAB and the concurrence of the Center Director, a Chairperson and a Vice Chairperson. The election will occur at the first IAB Meeting during a membership year. The Chairperson and Vice Chairperson shall serve in a leadership role for two years starting with their election until the next election of Chairperson and Vice Chairperson is ratified by the IAB members at the first meeting upon expiration of the two-year term. The Chairperson and Vice Chairperson may run for re-election for an unrestricted number of subsequent 2-year terms. In the event that the Chairperson or Vice Chairperson is unable to complete the term of their leadership role, a replacement for the remainder of the term will be elected at the next IAB Meeting.

4.2.4.1. The Chairperson will work with the Center Director and Site Directors to help develop the agenda for the IAB Meeting, in accordance with and to fulfill NSF requirements for an IUCRC. Parts of the IAB Meeting are closed to the Center's academic faculty due to discussions of proprietary research information. The IAB Chairperson will chair the IAB Meeting; the IAB Chairperson will also provide minutes to the Boards and other individuals identified in section 4.1 in a timely fashion after the IAB Meeting (within a maximum time period of six (6) weeks from the end of the IAB Meeting). During the IAB Meeting, the IAB Chairperson will lead a Members-only meeting to discuss and vote on the research project presentations. The IAB Chairperson will provide the group's comments to the Center Director for reproduction and distribution to the researchers.

4.2.4.2. The Vice Chairperson will assume the duties of Chairperson in the event of the Chairperson has resigned from the IAB or is not available from the time of resignation until the next election. The Vice Chairperson will assist the Chairperson in the execution of their duties by mutual assent.

4.2.5. At all meetings of the IAB or committees thereof, two-thirds of the IAB or committee will constitute a quorum for the transaction of business. The act by affirmative vote of a majority of the members present at the IAB or committee meeting at which there is a quorum will be the act of the IAB or committee. If a quorum is not present at any meeting, the present representatives may adjourn the meeting to another place, time or date, until a quorum is present.

4.2.6. Members are expected to send a representative from their organization to participate in the IAB Meeting. Other members cannot serve as a proxy or substitute for an absent Member.

4.2.7. All Members are expected to participate in the strategic planning of CHMI, which may include, but is not limited to, (i) assisting a University Site faculty member in identifying pre-competitive, generic, industry-related, research problems; (ii) recommending research projects for future work; (iii) assisting in identifying internship opportunities offered at the Member's site for graduate students and postdoctoral associates; (iv) assisting the Center Director and Site Directors in identifying new potential Members; (v) reviewing the research and educational accomplishments of CHMI; (vi) voting on the selection of projects and funding allocation of the paid membership fees; and/or (vii) recommending restructuring and/or redirecting of on-going programs to meet Members' needs and concerns.

4.3. The Center Director.

4.3.1. The "Center Director" holds an appointment with the Lead University Site, as determined by the NSF, and conducts research in the area of the Center's Research Focus. The Center Director should be the lead PI on the NSF IUCRC grant. If a Center Director becomes unable to serve, the appropriate university will appoint a successor Site Director subject to confirmation by the other Sites and NSF.

4.3.2. The Center Director will have oversight authority for all CHMI Center activities and will report directly to the Center Academic Policy Committee and IAB. The Center Director will collaborate with the IAB Chairperson and Site Directors to fulfill their responsibilities. The Center director is responsible for ensuring that all site directors work together as the Academic Leadership Team .

4.4. Site Directors.

4.4.1. Each University Site must select a Site Director to oversee Center activities at its university. If a Site Director becomes unable to serve, the appropriate university will appoint a successor Site Director subject to confirmation by the other Sites and NSF.

4.4.2. The Site Directors will be responsible for Center activities at their university and will report directly to their respective university administrators and to the Center Director. The Site Directors will serve as a liaison between the Center and the appropriate departments of the University Sites. The Site Director(s) is responsible to participate as part of the Academic Leadership Team.

4.5. Project Principal Investigators. Project Principal Investigators will manage specific research projects funded by the Center and will report directly to the appropriate Site Director, university administrator, and to the IAB Member(s) supporting and mentoring the project. Project Principal Investigators will be identified in specific project proposals.

- 4.6. A Collaborative Organization is involved in the Center only while there is an active research project being pursued. A Collaborative Organization may not have more than two (2) Collaborators with active projects at one time and may not have more than two (2) total active projects led by Collaborators at one time. Each active Collaborative Organization project will be a subaward from the University Site of the project's Principal Investigator. A Collaborative Organization shall not have any voting rights on the IAB, Academic Leadership Team, or other CHMI entities.
- 4.7. NSF External Evaluator. The NSF Evaluator will assist the Center Director, Site Directors, and the IAB to organize CHMI and to provide an independent assessment of the operation. The Evaluator will gather data from observations and surveys of IAB members and faculty to provide objective feedback on Center processes and outcomes to the NSF and to the IAB and Center/Site Directors. The NSF Evaluator shall be appointed by the National Science Foundation or by its authorized representative.
- 4.8. Administrative Support Staff. The University Sites will provide a reasonable level of clerical and accounting support for the operation of the Center. Administrative staff will assist in maintaining the Center website, Center documentation, and access to documents through a secure system.
- 4.9. Center Academic Policy Committee. The Center Academic Policy Committee shall refer to a board comprised of one administrative representative, the Chief Research Officer or designee, from each University Site with personnel and financial authority over the Center activities at his or her university. The Center Academic Policy Committee shall be responsible for administrative oversight and ensuring compliance with the policies, including but not limited to intellectual property policies, of the Center. The Center Academic Policy Committee will 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. The Center Academic Policy Committee will work with Site Academic Policy Committees to assure faculty recognition for participation in the Center in tenure and promotion decisions, and assure that the research is appropriate for graduate education. The Center Academic Policy Committee, with the consent of the Industrial Advisory Board, may amend these Bylaws with any changes approved as outlined in 1.2.
- 4.10. Academic Leadership Team. The academic leadership team includes the PIs and co-PIs of all Sites and is responsible for overseeing and carrying out the IAB-recommended research activities. Collectively, the academic leadership team is responsible for the growth and success of the Center.

- 4.11. Site removal. The removal of Sites from the Center will be determined based on the NSF guidelines for the IUCRC.

Article V – Administration

- 5.1. The Center Director, Site Directors, and IAB will work together on strategic plans for the Center and on recruiting new members.
- 5.2. The IAB shall hold semi-annual meetings.
- 5.3. 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 budget will be available for review prior to the first IAB meeting each membership year.
- 5.4. The Center and Site Director(s), upon recommendation of the IAB, will authorize the use of membership fees by the Project Principal Investigators in support of Center research.
- 5.5. The Site Director(s) will work with the Project Principal Investigators and appropriate academic departments on recruiting graduate students for the Center and will set standards for student participation; monitor student progress; set goals for recruiting students; help students to apply for industry internships; and promote multi-disciplinary research relevant to the Center. The Site Director and project Principal Investigators will develop a strategy to integrate the technologies of the Center into the academic curriculum at each university to the maximum extent possible.

Article VI – Reports

- 6.1. The Center Director shall provide an annual report to the University Sites, Members, and to the National Science Foundation. This report will summarize the year's activities.
- 6.2. The Site Directors and Project Principal Investigators shall provide interim and final reports to the Center Director and to all Members at the completion of major research tasks or as set-forth in the proposal.
- 6.3. All administrative issues, concerns or conflicts regarding the activities of research and reporting are the responsibility of the Center Director, in cooperation with the Site Director(s).

Article VII – Meetings

- 7.1. The Center Director, Site Directors, and IAB Chairperson will establish the schedule and location of activities and meetings for the Center, as well as agenda for the semi-annual Research Review Meetings, in compliance with NSF's IUCRC requirements. The locations for the semi-annual Research Review meetings will be scheduled such that all Sites regularly host the meetings.
- 7.2. The IAB will meet at least twice a year to review research results, select projects for recommended funding, review budgets, and discuss the strategic plans for the Center. The IAB review meetings will coincide with the semi-annual Research Review Meetings. A Member may send more than one representative to the Industrial Advisory Board Meetings, but may only have one voting representative, who will cast the Member's vote(s) as determined by the Member's membership level, as outlined in Article III of these Bylaws.
- 7.3. Members are expected to:
 - (i) Attend both semi-annual IAB meetings, in person (barring circumstances out of their control.) Video- or tele-conference participation during project selection procedures is discouraged, but may be necessary in the event that travel and in-person events are restricted because of public health and other safety considerations;
 - (ii) Participate in the process of reviewing and selecting research to be funded; and
 - (iii) Vote on issues before the IAB.
- 7.4. A Member who fails to attend, participate or vote shall be deemed to have no objections to decisions made at such meetings, no objections to selections resulting from such reviews, and no objections to the outcome of such voting, respectively.
- 7.5. The semi-annual Research Review meetings may be 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 Members; and the Center Evaluator and other NSF personnel. Non-member individuals may attend a maximum of one meeting as long as there are no objections from any Member and as long as the visiting company executes the standard confidentiality agreement. The visiting company will have no rights, such as voting or access to reports. The Center Director will notify the IAB one week before a meeting, by email, of possible guests, including names, titles and affiliation.
- 7.6. The Center Academic Policy Committee will meet as necessary to discuss and resolve Center program and management issues. The Committee will report meeting outcomes to the Center and Site Directors. A quorum will be one representative from each Site.
- 7.7. The Academic Leadership Team Meetings will be held semi-annually in advance of the Center meeting. A quorum requires a representative from each partner site.

Article VIII – Research Project Selection Procedures

- 8.1. A project selection process will be developed and adopted by the members of the IAB in conjunction with the Site Directors and approval of the Center Director. The project selection process will allow Members to pre-review projects and express the level of interest in a particular project.
- 8.2. Members may 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 Members. These research topics will be made available to the Members and will form the basis for cooperative discussions among the University Site faculty and the Members. Each University Site will develop a set of pre-proposals consistent with the goals of their group, the interest of the Members, and the mission of CHMI. Proposal information will be made available at least two weeks prior to the IAB meetings.
- 8.3. All Members may participate in the selection and review of research projects. The number of votes each Member may cast during a particular project selection event shall be equal to the number of voting representatives that Member has as provided for under Section 4.2.2 of these Bylaws. Votes may be distributed across sites and projects in any manner the Member selects, from all votes on one project to some votes on many or all projects. The Center will use a priority-driven ranking mechanism by which the IAB can recommend funding to the Center and Site Directors (A voting method that allows one IAB Member to independently fully fund its project(s) of choice is viewed as supporting contract work and is disallowed under the IUCRC framework). Further, the Center will only consider research projects that are not a duplicate of, or substantially similar to, federal awards received by researchers participating in the Center's activities. The final research project selection session will consider the following factors: the number of votes for project, the project Site membership, and the distribution of projects at the Center. The Chairperson will lead the confidential final research project selection session, conduct the voting on the projects to be selected for support, and notify the Center and Site Directors of the new research projects recommended. Project budgets may be adjusted slightly on the basis of available funds from the pooled membership fees.
- 8.4. The IAB may consider new proposals when additional funding is available to support additional projects or when current projects have ended. The IAB may convene a special meeting (virtual or in person) to select from new and/or previously submitted proposals. This special meeting is subject to the same requirements as the regular semi-annual IAB meetings.
- 8.5. Projects will be typically no more than three (3) years in length and reviewed every six (6) months at the semi-annual IAB meetings.

8.6. The research projects shall be conducted by students (undergraduate, graduate, and/or postdoctoral), technical staff, and faculty at one or more of the University Sites or, when applicable, Collaborative Organizations. Each funded project selected by the IAB will include at least one collaborator from a University Site.

Article IX – Publicity

- 9.1. Members shall not use the name or trademark of any University Site or the Center in any publicity, advertising or news release without the prior written approval of an authorized representative of the affected university, or in the case of the Center, written approval of the Center Director. Likewise, no University Site may use the name of a Member in any publicity without the prior written approval of the Member. Notwithstanding the foregoing, Members agree to have their name listed on the public website and the parties may satisfy any reporting requirements of their respective organizations and of NSF. Members shall take no action that states or implies or allows another to infer that a University Site has approved or endorsed a Member's products or services.
- 9.2. The Center Director shall post the summary descriptions of all Center research projects on the Center website. The posted descriptions shall not contain confidential or proprietary information and may be published freely.
- 9.3. University Sites and Collaborative Organizations will not use in advertising, publicity or other marketing activities any name, trade name, trademark, or other designation of any Member without prior written agreement. Notwithstanding the foregoing, Members agree to have their name listed on the website as a Member. Members will not use any name, trade name, trademark, or other designation of any University Site or Collaborative Organization and will not state or imply that any University Site or Collaborative Organization endorses Member or its products / processes without University Site's or Collaborative Organization's prior written agreement.

Article X – Publications

- 10.1. Subject to University Sites' and Collaborative Organizations' publication policies, faculty engaged in Center research reserve the right to publish in scientific or engineering journals, academic or industry conferences, theses or dissertations, or other public venues the results of any research performed by the Center.

- 10.2. The Members shall have the opportunity to review any paper, presentation, or other public disclosure containing results of the research program of the Center prior to the public disclosure, and shall have the right to request a delay in public disclosure for a period not to exceed ninety (90) days from the date of submission to the Members, for proprietary or confidentiality reasons, providing that the Members make a written request and justification for such delay within ten (10) days from the date the proposed publication is submitted by Certified Mail to the assigned representative of each Member. The paper, presentation, or other public disclosure will be provided to the Members at least thirty (30) days in advance of publication.
- 10.3. Any confidential information provided by a Member to a Project Principal Investigator, Collaborator, or other members of the Center shall be provided under the protection of an independent confidentiality agreement between the Member and the appropriate University Site.
- 10.4. Center data that have been approved for publication, presentation, or public release may be used in additional publications or public forums without additional permission. Members will not have rights to unpublished Center data developed prior to the date of Membership Agreement execution.

Article XI – Benefits

- 11.1. All Member Institutions will have certain rights to the entire Center research portfolio under the conditions outlined in the Membership Agreement and in these Bylaws.
- 11.2. All Members will have an opportunity, but not an obligation, to directly participate in Center research and education programs by serving as industrial mentors and/or thesis committee members as appropriate and consistent with the policies and procedures of University Sites.
- 11.3. All Members will have an opportunity, but not obligation, to propose case study problems, specific research problems and focus areas for research.
- 11.4. Information transfer between the faculty research teams and Members may be promoted by: Graduate student industrial internships; the direct involvement of the industrial mentor on the research team; submission of reports; and/or^[1]semiannual meetings.
- 11.5. Each Member will vote at IAB Meetings on the selection of research projects supported by membership fees. They will also be eligible to vote at IAB Meetings on all other Center matters and to participate in the evaluation and discussion of research projects.
- 11.6. Selection of research projects to be carried out by University Sites and Collaborative Organizations shall be made by the Center and Site Directors, with the advice of the

Industrial Advisory Board, as described above.

- 11.7. Members will have an opportunity, but not obligation, to direct specific research projects through a separate research contract negotiated with the relevant Sites. Such contracts and grants, which are amenable to competition-sensitive research, shall be handled outside the Membership Agreement.

Article XII – Additional University Sites and Industry Members

- 12.1. Additional universities or colleges may request Site status into the Center. Each additional university requesting Site status shall initially obtain concurrence from the IAB, Center Director, Site Director(s), and the IUCRC Program Manager at the National Science Foundation prior to submitting a “Letter of Intent” to join the Center. Additional universities requesting Site status 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 the Center. Upon concurrence by the Center, the additional university requesting Site status may continue application per the applicable procedures of the prevailing National Science Foundation IUCRC program solicitation.
- 12.2. An additional university requesting to become a Site shall review its research objectives and program plans, and obtain and submit with its Planning Grant Proposal a “Letter of Support” from each of the current University Sites’ Site Directors.
- 12.3. An additional University Site will be required to sign the Memorandum of Understanding between University Sites.
- 12.4. New companies, federal research and development organizations, government- owned contractor operated laboratories or small businesses concerns may request, or be requested, to join the Center as a Member. These new organizations may join the Center upon signature of the applicable Membership Agreement, acceptance of the current Bylaws, and payment of the non-prorated annual membership fees. Application of these new membership fees may be made to existing research programs or held in reserve until the next IAB Meeting.
- 12.5. Members that join will be afforded the same Benefits identified in Article XI, including rights to the prospective intellectual property. Such new Members will not have rights to existing IP as of the effective date of the Member’s Membership Agreement.

Article XIII – Intellectual Property

- 13.1. General: In accordance with NSF IUCRC requirements and as provided in the CHMI Membership Agreement, all intellectual property (“IP”) derived from inventions conceived or first actually reduced to practice in the Center shall belong to the one or more Sites that conceived or first reduced the inventions to practice.
- 13.2. In accordance with NSF IUCRC requirements and as provided in the CHMI Membership Agreement, each Site agrees that it will take such action as is necessary to ensure that it has ownership of all patents developed from Center work and that it shall be responsible for ensuring compliance with Title 35 of the United States Code Chapter 18, commonly known as the Bayh Dole Act, as it pertains to the patentable inventions made from the Site’s Center work. The Bayh Dole Act and its implementing regulations govern matters related to inventions made at a university using federal funds, including priority of rights in the IP, the reservation of a non-exclusive license to the United States Government, assignment, commercialization, march-in rights, and restrictions on mandating the licensing of rights in university background IP.
- 13.3. Ownership of copyrights, mask works, trade secrets and other forms of IP aside from patents shall vest in the appropriate Site in accordance with federal IP laws.
- 13.4. IP Disclosure: University Sites and Collaborative Organizations will ensure that all employees are aware of the Bylaws and the Membership Agreement and shall be under the obligation to promptly disclose all IP to the appropriate office at the University Sites, which shall in turn promptly disclose such IP to the CHMI Lead Site. The Lead Site shall provide timely notice (by email or mail) of all IP disclosed by University Sites to the voting representative(s) of each Member.
- 13.4.1. Intellectual Property Protection. Each Site(s) shall have sole discretion to make the initial determination whether it will secure and maintain rights in IP that it generates through Center-funded research provided the Site complies with the Bayh Dole Act. The Site will then work with the other Member(s) to determine whether the inventing Site and/or another Site will pursue patent protection on a Subject Invention or pursue appropriate protection for other types of IP. Site will inform Member(s) of the filing decision within ninety (90) days of receiving the disclosure of the IP. All IP disclosures shall be considered confidential information of the University Site(s) and shall be held in strict confidence by Members.
- 13.4.2. Each Site, Collaborative Organization, and Member acknowledges and agrees that all contributions are “AS-IS, WHERE-IS,” without warranty of any kind (including, without limitation, warranties of merchantability, fitness for a particular

purpose, and non-infringement) and shall be used at a Member's own risk.

13.5. License Rights

13.5.1. Each Member in good standing shall be entitled to a non-exclusive, royalty-free, non-transferable license to use all IP created by or through any research funded using CHMI Member fees for its own internal research and development purposes, subject to compliance with all applicable export laws and regulations and subject to appropriate protections pending filing of patent applications.

13.5.2. Members that wish to exercise rights to a non-exclusive royalty-free license to a patentable invention hereby agree to pay all patent application and maintenance costs for the relevant invention. Such patent and other reasonable costs shall be shared equally by all members electing a non-exclusive license.

13.5.3. In addition to the entitlement of each Member in good standing to a non-exclusive, royalty-free, non-transferable license to use all CHMI software for internal research and development purposes, each Member in good standing will have the right to enhance and to re-market the enhanced or unenhanced software with royalties due to CHMI to be negotiated, based on the value of the initial software, but not to exceed 20 % of a fair license fee for the enhanced software product licensed by the Member to other parties. The Member that enhances or sublicenses or remarkets the CHMI software shall be responsible for complying with all relevant export licensing and similar requirements, including those for Technical Data, for its sublicensing or remarketing of the CHMI software.

13.5.4. In the event a Member wishes to obtain a license to use CHMI IP other than software for commercialization or manufacturing purposes, the Member may negotiate a [royalty-bearing] license with the Site that owns the CHMI IP. All licenses negotiated under this provision shall be subject to the rights of the Federal Government and of Site inventors under the Bayh Dole Act (for inventions), the Copyright Act (for copyrightable materials) or other applicable law. All licenses shall be consistent with the CHMI Membership Agreement and these Bylaws, which reserve the right to a non-exclusive license for internal research and development purposes to all Members.

13.5.5. Each license for commercialization and manufacturing purposes shall require that the Member:

(a) pay its pro rata share of any expenses associated with protecting the Subject IP;

(b) agree to indemnify University Sites for any claims resulting from the Member's practice of the IP;

- (c) agree to other reasonable and customary license terms and conditions including but not limited to insurance requirements;
- (d) agree to manufacture in the United States of America (U.S.) only or obtain approval in accordance with the Bayh Dole Act to manufacture outside the U.S.; and
- (e) report at least annually to CHMI Lead Site and/or Collaborative Organization on its activities under the said license.

Members that wish to exercise rights to the non-exclusive commercial license must notify the Lead Site and University Site(s); the rights will not be effective until Member(s) executes a separate license agreement with the University Site(s), which shall include the terms and conditions described in these Bylaws.

13.5.5.1. A Member that wishes to exercise rights to a non-exclusive commercial license shall have the right to sublicense such use to its wholly-owned U.S. subsidiaries and its U.S. Affiliates and shall be responsible for the performance of said subsidiaries and affiliates. A “U.S. Affiliate” for purposes of these Bylaws shall mean an entity formed, currently registered and headquartered in one of the states of the United States of America (USA) with its primary physical presence in the USA and that owns more than fifty percent (50%) of Member, or more than 50% of which is owned by Member or more than 50% of which is under common ownership with Member, with the common owner also a U.S. entity.

13.5.5.2. Members that wish to exercise rights to a non-exclusive commercial license may request the right to sublicense their rights to the License to entities other than their U.S. subsidiaries and affiliates, but solely in connection with their sublicense for which the CHMI IP is part of the manufacturing process and therefore would require a sublicense for sublicensee to practice such process. The following additional limitations will apply to the sublicense right to entities other than U.S. subsidiaries or affiliates:

(i) The Member will seek prior written consent from University Site(s) for the sublicense, (including the terms and conditions of the sublicense), which shall not be unreasonably withheld;

(ii) The Member shall remain responsible to the University Site(s) for its share

of all patent expenses (including those owed for their sublicensee);

(iii) The Member will pay a reasonable license fee for each sublicense to the Site(s) owning the sublicensed CHMI IP. Fees for any sublicense shall be determined based on fair market value, as determined through negotiations between the University Site holding the CHMI IP and Member(s); and

(iv) The Member will comply with all applicable export control restrictions and license requirements as well as foreign investment disclosure requirements.

13.5.5.3. The sublicense may not be further sublicensed, but may be assigned, subject to University Sites' prior written consent and subject to the consent of the Federal Government to assignment in accordance with the Bayh Dole Act, to an entity that has purchased all of the rights for which the Subject Invention is part of the manufacturing process.

13.6. Intellectual Property Review Process

13.6.1. During the proposal phase of a project, the Project Principal Investigator is expected to identify all potential Intellectual Property that may be generated during the project. This will help the IAB identify the nature of the project deliverables, understand potential license rights and requirements, and identify potential progress to track during the project. Intellectual Property in addition to the anticipated Intellectual Property may be developed and will be identified when developed; the statement of anticipated Intellectual Property is not intended to limit or expand the scope of any project.

13.6.2. The Project Collaborator(s), Principal Investigator(s) and student(s) shall review the status of all Intellectual Property created in the performance of the research project every three months, at a minimum, during project meetings, and the project team shall determine if any invention disclosures or other IP disclosures should be submitted.

13.6.3. When Intellectual Property reaches a status suitable for disclosure, the Principal Investigator or Collaborator shall file the invention, software or other disclosure with the Intellectual Property Office at the Site where the Intellectual Property was developed and notify that Site Director of the Disclosure.

13.6.4. The University Site's Intellectual Property Office shall prepare a summary of the Disclosure to be shared with the Center Director and the IAB.

- 13.6.5. The Center Director, or designee, shall send an email notifying the IAB Member Representative for each Member of the disclosed IP on behalf of CHMI. This notification shall occur within thirty (30) days of the disclosure to the University Site's or Collaborative Organization's Intellectual Property Office.
- 13.6.6. Each Member shall have 30 days from the date of notification to provide a response notification to CHMI expressing its interest in protecting and/or licensing of the IP.
- 13.6.6.1. Should the Intellectual Property be identified during the review of a publication, pursuant to Article X, then the 30-day period for providing response notification expressing interest in protecting and/or licensing of the Intellectual Property will be treated as concurrent with the publication review period; the Lead Site will, however, notify each Member promptly on behalf of CHMI that the Intellectual Property has been identified, and each Member shall have a minimum of fourteen (14) days to review the disclosure and respond with interest in protecting and/or licensing of the IP.
- 13.6.7. The Intellectual Property Office shall set up a conference call or meeting with all interested members to discuss patenting or other IP protection and licensing arrangements for the identified IP. The IP Office, Center Director or designee(s), and interested Members shall determine the details of the protecting and licensing of the IP consistent with and subject to the Bayh Dole Act, the CHMI Bylaws and the Membership Agreements. This step in the process should not exceed twenty-eight (28) days.
- 13.6.8. The Lead Site on behalf of CHMI shall notify all of the current IAB Members of the proposed plans for protecting and licensing the IP and shall provide each IAB Member a final thirty (30) day notice period in which the IAB Member may execute an option to pursue non-exclusive license rights to the IP.
- 13.6.9. The University Site and/or Collaborative Organization shall then proceed in accordance with Membership Agreement and enter into a Memorandum of Understanding with all Members that have expressed interest and based on the interest from Multiple Members, a Single Member or No Member pertaining to the protecting and licensing of the IP as negotiated by the University Site's IP Office, Center Director or designee(s), and Interested Members.
- 13.7. All data and records generated by funded activities and projects of CHMI shall be accessible to any member of the CHMI IUCRC in good standing. Upon request, the CHMI leadership shall see to it that data and/or records requested by IAB Members of

CHMI are provided in a timely fashion. Once a party's Membership with CHMI has been terminated, the party must request further data or records in writing and obtain approval of the Center Director or Designee.

Article XIV – Outreach and Broader Impacts

- 14.1. The Center Director and Site Director(s) will develop a Broader Impacts Plan to ensure that the Center promotes collaborations within the community through local, regional, and national participation in Center activities. This plan shall include solicitation of the National Science Foundation, Members, University Sites and external funding in support of these broader impact activities.
- 14.2. The Center Director and Site Directors will maintain a web site for dissemination of information. This web site will contain a public section and Member's only section.
- 14.3. The CHMI website will contain all documentation produced from CHMI meetings, including presentation materials, reports, manuscripts, and standard forms / formats.

Article XV – Financial

- 15.1. Financial summaries shall be presented by the Center Director at each of the semi-annual IAB meetings.
- 15.2. Unspent funds for a project during a particular year can be carried forward to the next year for the same project through an IAB approved no-cost extension, or returned to the Center project account and allocated to a different project with IAB approval.
 - 15.2.1. It is important that each project remain on schedule, and no-cost extensions should be granted only under extenuating circumstances and be for no more than six (6) months.

Article XVI – Limitation of Liability

- 16.1. Limitation of Remedies. The obligations of IUCRC Sites are set forth in the membership agreement and are in substitution for all other warranties, obligations and liabilities. There are no warranties, express or implied, arising by law or otherwise, including but not limited to, any implied warranty arising from course of performance, course of dealing or usage of trade. In no event shall the Center, a Site, or a Member be liable for any direct, indirect, incidental or consequential damages.
- 16.2. No Warranties. The Center, Sites and Members make no representations or warranties of any kind, express or implied, concerning the intellectual property rights and the rights

granted hereunder, including, without limitation, warranties of merchantability, fitness for a particular purpose, non-infringement, validity of patent rights claims, whether issued or pending, and the absence of latent or other defects, whether or not discoverable, and hereby disclaims the same. Specifically, and not to limit the foregoing, the Center, Sites and Members make no warranty or representation: (a) regarding the validity or scope of any of the claim(s), whether issued or pending, of any of the patent rights; and (b) that the exploitation of the intellectual property rights or any product or process will not infringe any patents or other intellectual property rights of the Center, of a Site, of a Center Member, or of any third party.

Appendix A-

**National Science Foundation
Industry/University Cooperative Research Center (IUCRC) Member Agreement
Composite and Hybrid Materials Interfacing**

Georgia Institute of Technology (Lead Site)

Oakland University (Partner Site)

University of Tennessee/Knoxville (Partner Site)

IUCRC Membership Agreement

This Agreement is made on INSERT date by and between the Universities listed in Appendix A, (hereinafter collectively called "UNIVERSITIES") and INSERT MEMBER (hereinafter called "MEMBER") for the Center for Composite and Hybrid Materials Interfacing (CHMI), comprised of UNIVERSITIES funded by the Industry–University Cooperative Research Center (IUCRC) Program of the National Science Foundation.

WHEREAS, the parties to this Agreement intend to join together in a cooperative effort to support an Industry–University Cooperative Research Center for CHMI (hereinafter called "CENTER") at the UNIVERSITIES to perform research, the parties hereby agree to the following terms and conditions:

A. CENTER will be operated as a consortium integrating industry, government, and academia. The industrial community includes but is not limited to major corporations, middle market companies, small businesses and startups. Public participants may range from local governments to divisions of federal agencies.

B. MEMBER agrees to contribute \$INSERT AMOUNT annually in support of the CENTER and thereby becomes a member. Membership fees are not refundable.

C. There will be an Industry Advisory Board (IAB) composed of one designated representative from each member. MEMBER shall designate a single representative to the Board, and shall notify UNIVERSITIES of the designation. MEMBER retains the right to change the designated representative at any time, provided MEMBER notifies the UNIVERSITIES of the change. This Board primarily makes recommendations on (a) the research projects to be carried out by CENTER, (b) changes in the bylaws, and (c) other supporting activities at the CENTER.

D. UNIVERSITIES reserve the right for their faculty, research staff, and students involved in Center research to publish the results of any research performed by CENTER. MEMBER, however, shall have the opportunity to review any publication containing results of the research program of CENTER prior to publication and shall have the right to request the CENTER for a delay in publication for a period not to exceed 90 day(s)/year(s) from the date of submission to MEMBER, provided that MEMBER makes a written request and justification for such delay within 30 days from the date the proposed publication is submitted by certified mail to MEMBER.

E. All intellectual property (IP) derived from inventions conceived or first actually reduced to practice within the CENTER shall belong to one or more of the UNIVERSITIES which own the said IP. UNIVERSITIES will take such action as is necessary to ensure that it/they has/have ownership of all patents developed from this work and shall be responsible for ensuring compliance with chapter 18 of title 35 of the United States Code, commonly called the Bayh-Dole Act.

F. UNIVERSITIES agree that all CENTER members are entitled to a nonexclusive royalty-free license. MEMBERS that wish to exercise rights to a royalty-free license agree to pay patent application and maintenance costs.

G. MEMBER shall be entitled to a nonexclusive, royalty-free license to all software developed by CENTER. MEMBER will have the right to enhance and to re-market enhanced or unenhanced software with royalties due to CENTER to be negotiated, based on the worth of the initial software, but not to exceed INSERT NUMBER % of a fair sale price of the enhanced software product sold or licensed by MEMBER.

H. Any royalties and fees received by UNIVERSITIES under this Agreement, over and above expenses incurred, will be distributed according to the universities' royalty distribution policies, with the understanding that INSERT NUMBER % (greater than or equal to 33%) will accrue to the CENTER operating account, or to the relevant UNIVERSITIES involved in the royalty/fee agreements in the event that the CENTER is no longer in operation.

I. This membership agreement remains valid until this Agreement is terminated in writing by:

1) The MEMBER giving Georgia Institute of Technology, INSERT NUMBER days written notice prior to the termination date; or

2) UNIVERSITIES giving MEMBER INSERT NUMBER days written notice prior to the termination date.

J. An individual UNIVERSITY may withdraw from the CENTER and no longer be obligated by this agreement, by giving MEMBER and the other UNIVERSITIES INSERT NUMBER days written notice prior to the withdrawal date from the CENTER. If an individual UNIVERSITY withdraws, this agreement remains in effect between the MEMBER and the other UNIVERSITIES.

K. An individual UNIVERSITY may join the CENTER and be obligated by this agreement by signing this agreement.

Non-governmental Entities:

L. Neither party is assuming any liability for the actions or omissions of the other party. Each party will forebear against making any claim against the other party for all claims, liability, injury, damage or cost based upon injury or death to persons, or loss of, damage to, or loss of use of property that arises out of the performance of this agreement to the extent that such claims, liability, damage, cost or expense result from the negligence of that party's own agents or employees.

Governmental Entities:

L. Each Party hereby waives any claim against the other Party, employees of the other Party, the other Party's Related Entities (including but not limited to contractors and subcontractors at any tier, grantees, investigators, customers, users, and their

contractors or subcontractor at any tier), or employees of the other Party's Related Entities for any injury to, or death of, the waiving Party's employees or the employees of its Related Entities, or for damage to, or loss of, the waiving Party's property or the property of its Related Entities arising from or related to activities conducted under this Agreement, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of gross negligence or willful misconduct.
 In witness whereof, the parties have caused this Agreement to be executed by their duly authorized representatives:

<p>MEMBER</p> <p>Authorized Officer:</p> <p>MEMBER name:</p> <p>Address:</p> <p>Date:</p>	<p>Authorized Officer Signature</p>
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Appendix A

<p>LEAD UNIVERSITY</p> <p>Authorized Officer:</p> <p>University name: Georgia Institute of Technology</p> <p>Address:</p> <p>Date:</p>	<p>Authorized Officer Signature</p>
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<p>PARTNER UNIVERSITY 1</p> <p>Authorized Officer:</p> <p>UNIVERSITY name: Oakland University</p> <p>Address:</p> <p>Date:</p>	<p>Authorized Officer Signature</p>
<p>PARTNER UNIVERSITY 2</p> <p>Authorized Officer:</p> <p>UNIVERSITY name: University of Tennessee-Knoxville</p> <p>Address:</p> <p>Date:</p>	<p>Authorized Officer Signature</p>

Appendix B-

**National Science Foundation
Industry/University Cooperative Research Center (IUCRC)**

List of IAB members as of the date of approval of these Bylaws

Composite and Hybrid Materials Interfacing

Georgia Institute of Technology (Lead Site)

Oakland University (Partner Site)

University of Tennessee/Knoxville (Partner Site)

