

**Affiliates Program for Support of the Human Motion Simulation (HUMOSIM) Laboratory**

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**Bylaws**

The University of Michigan, College of Engineering, Center for Ergonomics (the University) will create an Affiliates Program for Support of the Human Motion Simulation Laboratory (hereinafter the “HUMOSIM” or the “Laboratory”) to be operated in accordance with these bylaws and the policies and regulations of the University of Michigan. University of Michigan faculty in close collaboration with a group of companies who either use human motion simulation or produce technologies that enable its measurement or simulation initiated the concept of the HUMOSIM laboratory.

**Vision**

The research conducted by the University as part of the HUMOSIM consortium will produce new methods, databases and models, (i.e., the necessary science) needed for the technology of human motion simulation to be accurate and useful in ergonomic and CAD applications. By being involved as collaborating partners in this research process at the University the partners gain:

1. A fundamental and timely understanding of the science involved in this rapidly developing technology, thus being better able to judge the quality of the technology and its commercial value.
2. An opportunity to guide the direction of the research and shape its impact on the technology of human motion prediction in the future.
3. An understanding of the people involved in this field (including faculty, staff and students) and how they could contribute to a company's future interest in using this technology.
4. A means to influence how the technology may be best transferred to their own organization and other groups in the future.
5. A means to become recognized by their peers and others in their market segment as a technology driven organization.

**I. Management**

- A. Faculty and Staff Leadership and Administration

1. A University of Michigan employee will direct HUMOSIM and have overall responsibility for its management (the “Director”) and primary responsibility for both technical and budgetary planning. This Director will convene the Regular Members and Technology Partners through the Industrial Advisory Committee (“IAC”). The Director will have final authority over the research program and allocation of resources.
2. The Director will assign appropriate administrative staff to coordinate and supervise the support services required by HUMOSIM including: fiscal management of HUMOSIM funds, supervision of clerical support staff, coordination purchasing and personnel matters, organization of the meetings and visits as required, maintenance of records, including minutes of meetings, and management of publications (brochures, technical reports, etc.).

B. Industrial Advisory Committee

HUMOSIM will have an Industrial Advisory Committee (“IAC”) consisting of one voting representative from each Regular Member.

1. The IAC will advise the Director on the technological opportunities and approaches to be taken by the Laboratory and assist in identifying or providing additional resources when needed.
2. When voting on major issues, each Regular Member will have one vote per membership fee per year (e.g., a large Regular Member who pays \$100,000 will have two votes). Regular Members that do not have a representative present at a meeting at which a vote is taken will forfeit their vote on any issues discussed by the IAC at that particular meeting.
3. The IAC will meet at least annually to review technical progress and plans and make recommendations on research priorities, program redirection/modification and on any other aspects of Laboratory operations to the Director.
  - a. The Director will submit a research proposal and a fiscal proposal to the IAC. The IAC members will review the research proposal. The IAC may provide recommendations regarding individual projects described in the research proposal or recommend other projects for consideration, which were not originated by the Director.
  - b. The IAC may advise the Director on how the program funds should be used. The recommendations of the IAC will be forwarded to the Director for final decision. The Director will consider the educational needs of the student research assistants in evaluating the IAC's recommendations. In particular, the Director will avoid terminating a project if such an action directly jeopardizes the completion of a student's thesis.
  - c. The IAC will elect a chairperson from among the IAC members.

C. Program Planning Committee

HUMOSIM will have a Planning Committee.

1. The Planning Committee will be chaired by the Director and will consist of the University faculty and research staff actively engaged in research in the center.
2. The Planning Committee will:
  - a. Assist the Director in assessing whether the research proposed to the IAC is consistent with University goals, such as the scholarly standards of the faculty and the educational goals of the student research assistants.
  - b. Assist the Director in preparing the research proposal for review by the IAC and the Research Review Workshop for the Members.
  - c. Make recommendations to the Director about manpower, space and equipment requirements of the Laboratory.
  - d. Provide direct information to the academic departments regarding the activities of faculty members and research staff contributing to the Laboratory.

**II. HUMOSIM Laboratory Membership**

A. Regular Members

A company, research organization, or agency that either uses human motion simulation or produces technologies that enable its measurement or simulation may become a regular member (“Regular Member”) of HUMOSIM upon approval of the Director, following consultation with and advice of the IAC.

1. All Regular Members will:
  - a. Be provided preferential access to program outcomes as set forth in these Bylaws and the signed Affiliate Agreement; and
  - b. Be eligible to have representative serve as Chair of the IAC.
2. There will be two categories of Regular Membership Fees, Large and Small.
  - a. A Regular Member is eligible to be considered a “Small” Regular Member if it complies with the federal Small Business Administration’s definition of a small business, i.e., number of company employees, including company’s affiliates, does not exceed 500. In addition a company may be given the “Small” designation at the discretion of the Director, following consultation with and advice of the IAC.
  - b. Each Large Regular Member will pay a minimum membership fee of \$50,000 per year per vote.

- c. Each Small Regular Member will pay a minimum membership fee of \$25,000 per year per vote.
3. Membership Entry Fee
  - a. Given that HUMOSIM was established April 1, 1998, and subsequently carried out research that produced software and intellectual property, a company who joins HUMOSIM as a Large or Small Regular member during or after calendar year 2002 shall pay an additional one-time entry fee of \$75,000 (large company) or \$25,000 (small company).
  - b. This one-time entry fee shall be decreased to \$50,000 (large company) if the company commits to funding two or more seats, or commits to fund three or more years.
  - c. A company joining the laboratory may defer payment of the Membership Entry Fee for up to three years. During the time of deferment, the company will be considered a Provisional Member. A Provisional Member is not eligible to vote, but otherwise has the same privileges and responsibilities as a Regular Member.
  - d. The Director may waive the Membership Entry Fee for a company that has contributed the large- or small-company membership fee for three consecutive years or an equivalent amount of funding. Upon the waiver of the fee, a Provisional Member will become a Regular Member. The Director will notify the Provisional Member of the waiver of the Membership Entry Fee and advancement to Regular Member status.
4. Regular Membership Requirements and Procedures
  - a. Each Regular Member in HUMOSIM will agree to abide by the HUMOSIM Bylaws which are posted on the HUMOSIM website by signing a Membership Agreement that references these Bylaws or by otherwise indicating their intent to become a Regular Member through the provision of the appropriate membership fee. By provision of the membership fee a Regular Member will be presumed to agree to the terms of the Membership Agreement. However, no indication of intent to become a Regular Member will include terms and conditions of membership other than as described in these Bylaws. Membership will be effective upon receipt by the Director of the Membership Agreement or membership fee.
  - b. The University may provide Implementation Manuals and other materials to the Regular Member that describe algorithms, models, and other functionality for motion simulation and ergonomic analysis. The Regular Member may use the contents of the implementation manuals and any accompanying demonstration software in any way, provided that the requirements of these Bylaws and the accompanying Regular Member Agreement are met. Provision of Implementation Manuals, software and other documents to the Regular Member is done in a trusting relationship and does not constitute publication or public disclosure of the information therein. The Regular Member agrees to take

reasonable precautions to prevent Implementation Manuals, software and the contents of other documents from becoming public or being disclosed outside of its organization.

- c. A Regular Member agrees not to disclose to any non-member individual, entity, or organization any media provided to the Regular Member at HUMOSIM Partner meetings under the terms of these Bylaws or the signed Regular Member agreement without written consent of the Director, including but not limited to reports, presentations, simulations and other documentation.
- d. A Regular Member may terminate its membership by providing a six (6) month notice in writing to the Director of its intention to do so. Termination of membership does not relieve the company of the obligations described in this Article II.A.

#### 5. Equivalent Dues

- a. In lieu of cash, and with the permission of the Director, a Regular Member may make a membership contribution to the Laboratory of software, equipment, services, or other value determined by the Director to be equivalent to the membership fee otherwise appropriate for that company. This non-monetary membership fee shall be defined as "equivalent dues" and shall entitle the company to Regular Member status for one or more years as determined by the Director.
- b. At the discretion of the Director, financial support provided by a Regular Member through other mechanisms, such as contracts or gifts, may be considered to be "equivalent dues" offsetting all or part of the Regular Member's annual contribution. If the Regular Member employs this mechanism to obtain membership the terms of these bylaws will control and take precedence over any inconsistent terms contained in any agreement pertaining to the contract or gift that comprises the "equivalent dues". The Regular Member will be solely responsible for any tax or other consequences of the change in such terms.

#### B. Technology Partners

A company that develops software products that either use human motion simulation or enable its measurement or simulation may become a Technology Partner ("Technology Partner") of HUMOSIM upon approval of the Director, following consultation with and advice of the IAC.

1. Technology Partners will be provided preferential access to program results as set forth in these Bylaws and the signed Technology Partner Membership Agreement.
2. Technology Partner Requirements and Procedures
  - a. Each Technology Partner will agree to abide by the HUMOSIM Bylaws by signing a Membership Agreement that references these Bylaws. No other terms

and conditions of membership other than as described in these Bylaws and in the Membership Agreement will apply. Membership will be effective upon receipt by the Director of the Membership Agreement.

- b. The Technology Partner may participate in the meetings of the IAC but is not eligible to vote.
- c. The University may provide Implementation Manuals and other materials to the Technology Partner that describe algorithms, models, and other functionality for motion simulation and ergonomic analysis. The Technology Partner may use the contents of the implementation manuals and any accompanying demonstration software in any way, provided that the requirements of these Bylaws and the accompanying Technology Partner Agreement are met. Provision of Implementation Manuals, software and other documents to the Technology Partner is done in a trusting relationship and does not constitute publication or public disclosure of the information therein. The Technology Partner agrees to take reasonable precautions to prevent Implementation Manuals, software and the contents of other documents from becoming public or being disclosed outside of its organization.
- d. A Technology Partner agrees not to disclose to any non-member individual, entity, or organization any media provided to the Technology Partner at HUMOSIM Partner meetings under the terms of these Bylaws or the signed Technology Partner agreement without written consent of the Director, including but not limited to reports, presentations, simulations and other documentation.
- e. Although the Technology Partner must adhere to Sections II.B.2.c and II.B.2.d regarding disclosure of materials listed in those Sections and provided to the Technology Partner, the Technology Partner may use these files and information for purposes of developing its products and product derivatives in accordance with these Bylaws and the Technology Partner Membership Agreement.
- f. The Technology Partner may demonstrate, market, distribute, license and sublicense Technology Partner products or product derivatives that are developed or enhanced by Technology Partner with HUMOSIM outcomes as described in Section II.B.2.e above.
- g. A Technology Partner may terminate its membership by providing twelve (12) months notice in writing to the Director of its intention to do so.
- h. The Technology Partner will credit the HUMOSIM technology through citation in the product documentation and on-line help.
- i. The Technology Partner agrees to provide to the HUMOSIM laboratory, at the request of the Director and free of charge, installation media, licenses, and training materials for not fewer than five seats of each of its human modeling software products. The licenses shall be updated in a timely manner as new versions of the software become available.

### **III. Operating Procedures**

#### **A. Annual Research Report**

A written research report will be provided to the IAC members at least annually.

#### **B. Research Review Workshop**

A research review workshop for Regular Members and Technology Partners will be held at least annually. The research review will consist of oral presentations of the research accomplishments from the period since the prior review. The faculty, students, and other researchers performing the research will make the presentations.

#### **C. Meetings of the Industrial Advisory Committee**

1. IAC meetings will be held on the same day as the research review. The Director in conjunction with the IAC Chair will determine the agenda for these meetings.
2. At the IAC meeting, the Director will present a research proposal and a budget for the allocation of Laboratory resources. These proposals will be considered by the IAC and recommendations provided to the Director. The IAC members may initiate proposals of their own and recommend these to the Director for consideration.

### **IV. Inventions and Software**

A. Inventions made during and in the conduct of research in HUMOSIM by one or more employees of the University will remain the property of the University (“Inventions”). The Director will notify Regular Members and Technology Partners when an Invention has been disclosed. The University will negotiate use or commercialization licenses with Regular Members and Technology Partners upon request and on reasonable terms and conditions to be determined on a case-by-case basis. The University reserves the right to grant commercialization and sublicensing rights to Inventions to non-members as necessary to make such Inventions available for the public benefit.

B. Regular Members shall have a nonexclusive, royalty-free right to use HUMOSIM Software and unpatented Inventions developed by the University faculty and research staff using funds provided by the Laboratory, within their organization for any purpose.

C. Software made during and in the conduct of research in HUMOSIM by employees of the University will remain the property of the University (“HUMOSIM Software”).

1. Regular Members may obtain a non-exclusive, royalty-free license, without the right to sublicense, for internal use of HUMOSIM Software. Internal use includes, but is not limited to, automotive seat/interior development, design, testing and evaluation (including systems, subsystems and components).

2. The University reserves the right to grant commercialization and sublicensing rights to Software as necessary to make such Software available to the public benefit.

## **V. Miscellaneous**

### A. Amendment of Bylaws

The IAC may, by three-quarters vote, adopt, amend or repeal the HUMOSIM Bylaws. Any amendments to Bylaws impacting Intellectual Property rights shall only apply to those rights accrued by the Member after the amendment is adopted. Any modifications to the HUMOSIM Bylaws shall be consistent with the written policies of the University of Michigan. Any actions of the IAC relative to the HUMOSIM Bylaws may be taken by electronic vote provided the identity of the voter is clear and documentable.

### B. Independent Contracts

Nothing in these Bylaws shall restrict a Member's right to negotiate and contract with the University independently of the HUMOSIM for any purpose.

## **VI. Laboratory Mechanisms for Effective Technology Transfer**

### A. Research Contracts

Members may support further development of research projects performed in the Laboratory under separate contracts to be negotiated with the University. The membership fees paid to the Laboratory do not cover financial arrangements for such contracts. These separately funded contracts may be negotiated between the University and the Member pursuant to standard University policies and procedures regarding sponsored activity.

### B. Consulting

Consulting arrangements between Regular Member organizations and Technology Partner organizations and University faculty are encouraged particularly as necessary to foster implementation of Laboratory research results in Member companies. Consulting arrangements are subject to University conflict of interest and conflict of commitment policies.

### C. Laboratory Visits

Members are encouraged to visit the Laboratory at any time with prior notice and arrangement with University researchers.

### D. Student Interaction and Recruitment

Members are encouraged to meet participating students and to provide onsite educational experiences for them at their companies. Upon request of a Member and with permission of the student, the Director will coordinate interviews and provision of resumes and other student credentials to interested Members.