

MEMORANDUM OF UNDERSTANDING
Center for Freeform Optics

The University of Rochester and the University of North Carolina at Charlotte

This Memorandum of Understanding ("MOU") is effective this 21st day of May, 2015 between the University of Rochester and the University of North Carolina at Charlotte.

WHEREAS, the University of Rochester (hereinafter "UR"), and the University of North Carolina at Charlotte (hereinafter "UNC Charlotte"), intend to join together in a cooperative effort to create and support the Center for Freeform Optics (hereinafter referred to as "CENTER"). Both of the universities mentioned above shall be hereinafter referred to collectively as "INSTITUTIONS" or "Sites" and individually as an "INSTITUTION" or "Site." Additional educational institutions may be allowed to join into the CENTER and this MOU via the procedures outlined in Article 10.

WHEREAS, the activities of the CENTER are expected to be funded by: 1) the National Science Foundation (hereinafter "NSF"), 2) Industrial Members (hereinafter "MEMBERS"), and 3) other funds that may be received from time to time.

WHEREAS, INSTITUTIONS desire to formalize certain agreements between them with respect to the subject matter contained herein.

NOW THEREFORE, for and in consideration of the mutual promises and covenants herein contained and intending to be legally bound, INSTITUTIONS agree as follows:

1. Center Governance

- a. The CENTER will be governed by a common set of Bylaws. The CENTER will be advised by an Industrial Advisory Board (hereinafter referred to as "IAB"), with composition and duties as prescribed in the Bylaws and each party's Membership Agreement. The IAB recommends policy and project funding to the CENTER's Directors' Board. The IAB shall elect a Chair of the Industrial Advisory Board (the "IAB Chair") from among its members by a majority vote of the entire IAB. The IAB Chair shall preside over IAB meetings.
- b. The CENTER shall have a LEAD INSTITUTION that shall be the fiscal agent of the CENTER and shall be responsible for administering membership dues obtained by all the INSTITUTIONS from MEMBERS through any Membership Agreement. The LEAD INSTITUTION shall be the Grantee of NSF lead institution administrative support for the CENTER. The Membership Agreement is attached as Attachment A. The LEAD INSTITUTION will also be responsible for disbursing funds to projects at all INSTITUTIONS (or other non-CENTER institutions) that are approved by the Directors' Board upon recommendation of the IAB, as outlined below. The LEAD INSTITUTION shall be UR. Should conditions arise requiring that another INSTITUTION be named the LEAD INSTITUTION, the new LEAD INSTITUTION shall be chosen by a majority vote of the Directors' Board combined with all members of the IAB, subject to approval by NSF. The former LEAD INSTITUTION shall transfer unallocated membership dues to the new LEAD INSTITUTION for administration and shall provide an accounting of all funds previously received and/or distributed by or on behalf of the CENTER.
- c. The LEAD INSTITUTION will collect membership fees from all MEMBERS.

d. The Directors' Board is composed of the Center Director and the Site Directors, including all Co-Directors, of each University Affiliate. The Center Director is responsible for overall management of the CENTER. The Center Director shall coordinate CENTER information, and coordinate the CENTER operation. The Site Directors are selected and appointed in accordance with the policies and procedures of each INSTITUTION. Site Directors are responsible for coordinating the CENTER funded research at their respective Sites and interact with the IAB to identify key technology areas and establish long-range goals and short-range planning procedures necessary for an overall research program. Each Site Director shall provide to the Center Director regular reports of research activities and programmatic and fiscal matters associated with CENTER.

e. Each INSTITUTION may solicit Membership Agreements with potential MEMBERS.

2. Center Funding & Cost Sharing

- a. Each INSTITUTION shall be the Grantee of NSF support for the CENTER with its own overhead rate negotiated with the NSF.
- b. Membership fees from all Membership Agreements shall be pooled and deposited into a single account at the Lead Institution. The IAB shall recommend and the Directors' Board shall authorize the allocation of funds for each CENTER project, as specified in the Bylaws.
- c. The Directors' Board shall vote on recommendations from the IAB's semi-annual meeting regarding the allocation of funds for each CENTER project. Projects undertaken at each INSTITUTION will be funded in accordance with the result of such vote from pooled membership fees collected by the LEAD INSTITUTION.
- d. Overhead rates imposed by an INSTITUTION on CENTER projects shall be capped at 10% of direct costs. Each INSTITUTION agrees that the difference between their overhead rate negotiated with the NSF and 10% will be their Cost-Sharing contribution to the CENTER. Each Site Director is responsible for documenting that this Cost Sharing occurs and will provide this documentation to the Directors' Board upon request.

3. Funding of Research Projects

Research projects are approved by the Directors' Board. The project PI will submit a project budget and summary to the Directors' Board in order to facilitate the drafting of the subcontract to the INSTITUTION. The transfer of funds derived from membership fees to support research projects selected by the Directors' Board at INSTITUTIONS other than the LEAD INSTITUTION will be made via a subcontract from the LEAD INSTITUTION to the recipient INSTITUTION. If the project is multi-year, the budget will be presented by year.

- a. Invoices will be generated by the subcontractor on a per-project basis per year and will be paid by the LEAD INSTITUTION for the full annual project amount on 30-day terms. Unexpended funds at the end of each year can be used for the following year if the project remains as an approved project by the IAB and the Director's Board.
- b. Unexpended funds, defined as unused funds paid to an INSTITUTION for a given project, should be refunded to the Lead Institution at the conclusion of the project or the termination of the project by the IAB.

- c. Expenditure reports will be required annually and each project should be tracked separately. INSTITUTIONS will submit expenditure reports to the Directors' Board.
- d. Each INSTITUTION will segregate the funds by Project in order to facilitate reporting of fiscal matters by project to the Directors' Board.
- e. Each project-specific subcontract will assess overhead at the rate of 10% of direct costs where the project is performed and the LEAD INSTITUTION will not recover 10% overhead on any of the subcontracted value to each INSTITUTION.

4. Ownership and Administration of Intellectual Property.

- a. Inventions and patents issuing thereon, made during the course of a research project funded by the CENTER by a single investigator or multiple investigators from one INSTITUTION, will be owned solely by that INSTITUTION and said INSTITUTION shall be responsible for managing the invention, including patent filing, marketing and negotiation of all relevant agreements.
- b. The inventions and patents issuing thereon, made during the course of a research project funded by the CENTER by investigators from two or more INSTITUTIONS, will be jointly owned by the INSTITUTIONS employing the respective investigators.
- c. Inventions made with support from the National Science Foundation shall be subject to the provisions of 37 CFR, Part 401.
- d. Investigators who make an invention, discovery or improvement, or develop software during the course of a project funded in part or in whole by the CENTER shall disclose promptly such invention to the Directors' Board and/or the appropriate policy committee of the INSTITUTION with which the Investigator is affiliated, and such disclosure shall reference the CENTER's funding of that invention, discovery or improvement. In the case of inventions owned jointly by two or more INSTITUTIONS, once an invention disclosure concerning a jointly owned invention is filed, the participating INSTITUTIONS will decide on a case-by-case basis which INSTITUTION will manage the technology, including patent filing, marketing and negotiation of all relevant agreements. The joint owning INSTITUTIONS shall negotiate in good faith an Inter-Institutional Intellectual Property Agreement, which agreement shall contain, *inter alia*, terms and conditions concerning the sharing of royalties and costs associated with the jointly owned invention. The INSTITUTION administering any IP shall keep the other INSTITUTION advised as to the activities in administering the IP including any progress on commercialization, patent prosecution, or copyright protection. Subject to the INSTITUTIONS' rights to publish as set forth in Article 5, all such information received by either INSTITUTION shall be deemed confidential.
- e. No INSTITUTION shall be obligated to underwrite any costs for patenting any invention funded by the CENTER, and if no MEMBER is willing to underwrite such costs then no INSTITUTION shall be required to file a patent on any such invention. Regardless of patentability, each MEMBER who was current in its membership fees at the time such invention was created and each INSTITUTION shall have an automatic, royalty-free, non-transferrable, non-exclusive license (without the right to sublicense) to use any invention funded by the CENTER solely for that MEMBER or INSTITUTION's internal research purposes. Each MEMBER who was current in its membership fees at the time such invention was created shall also have the right to obtain a royalty-free, non-transferrable, non-exclusive commercial license (with the

right to sublicense to its subsidiaries and affiliates only but not to other entities) to such intellectual property, provided that in the case of patentable inventions whose patent protection was funded by the CENTER or as Enhancement Projects (as defined in Article 6), such non-exclusive commercial licenses shall be contingent upon the MEMBER's obligation to underwrite the costs of patent filing, prosecution, and maintenance with such costs being shared equally among all MEMBERS acquiring such licenses. MEMBERS not current in membership fees at the time such intellectual property was created or which join the CENTER subsequent to the creation of such intellectual property shall be granted a non-exclusive, royalty free license to use such intellectual property for their own internal research and development purposes and shall, provided such intellectual property is then available for further licensing, be entitled to obtain a commercial license to such intellectual property upon financial terms to be determined by the owner(s) of the intellectual property and approved by the IAB, but in no event upon terms more favorable than those previously granted to any other MEMBER. Should only one MEMBER request a license to any intellectual property resulting solely from CENTER-funded research or from Enhancement Projects during the six-month period following disclosure of that intellectual property to all the MEMBERS or be the first MEMBER to request a license after the six-month period expires, that MEMBER shall be entitled to request a royalty-bearing, exclusive commercial license to such intellectual property on terms to be negotiated between that MEMBER and the owner(s) of such intellectual property. Negotiations for such a license must be completed within three (3) months following MEMBER's request for the exclusive license unless the owner(s) of the intellectual property agree otherwise. In the event no MEMBER elects to exercise its option for a license as set forth herein, the INSTITUTION(S) who own(s) the Intellectual Property may file for intellectual property protection at its own expense and no MEMBER shall have further rights to that Intellectual Property under the terms specified herein. If no MEMBER desires a license to CENTER patents or software, the INSTITUTION that generated the patents or software shall be free to grant royalty-bearing licenses to said patents or software to third parties any time after six (6) months following notice to member companies that the patents or software were available for licensing, provided that such third parties first become MEMBERS of the CENTER. If one or more MEMBERS elect to take only nonexclusive licenses to patents or software under this paragraph, the INSTITUTION that generated the patents or software shall be free to grant royalty-bearing, nonexclusive licenses to third parties any time after twelve (12) months following notice to member companies that the patents or software are available for licensing, again provided that such third parties become MEMBERS of the CENTER prior to the granting of such licenses.

- f. Taking into account any preexisting obligations, all intellectual property, including research results, data, invention disclosures, filed and assigned patents, as well as copyrights, (excluding copyrights in academic works of authorship such as publications, theses, dissertations) resulting from research funded solely by the CENTER or as Enhancement Projects (as defined in Article 6) will be disclosed to MEMBERS of the CENTER under confidentiality in order to preserve patent rights.
- g. Separate agreements will be developed, on a case-by-case basis, to cover CENTER-funded project inventions conceived jointly between CENTER investigators and inventors from other (non-CENTER) universities, federal agencies, industry or other organizations or for inventions funded partially by the CENTER and partially by third parties other than agencies of the United States government.
- h. Any income realized by an INSTITUTION from licensing patentable inventions or copyrightable materials funded solely by the CENTER or by Enhancement Projects

shall first be applied to defraying any remaining costs of intellectual property protection and any costs of marketing and/or licensing of the inventions or materials. Any remaining income shall be distributed in accordance with the INSTITUTION's policies, provided that so long as the CENTER remains in existence the INSTITUTION's CENTER-related facilities that are overseen by that INSTITUTION's Site Director will be treated as the originating entity under the INSTITUTION's distribution policy.

- i. The Directors' Board will encourage investigators and students to file invention disclosures. Appropriate record-keeping practices and information on the maintenance of proper legal records of ideas and inventions will be promoted. The patenting and marketing progress of invention disclosures generated by all participating CENTER personnel will be closely monitored by the appropriate INSTITUTION'S affiliated Technology Transfer Offices in conjunction with the Site Directors to ensure timely knowledge transfer and notification to MEMBERS.

5. Publication of Research Results on Jointly Owned Intellectual Property.

Each INSTITUTION shall have the right to publish research results on jointly owned IP. It is provided, however, that the INSTITUTION desiring to publish such research results shall submit a draft of any such proposed publication to the other INSTITUTION at least thirty (30) days prior to the submission of the research results for publication. Either INSTITUTION shall have the right to delay any publication for a period of not more than an additional sixty (60) days for the purposes of obtaining patent protection by giving the other INSTITUTION notice before the end of the thirty (30) day notice period provided hereinabove. For the purposes of this MOU, cataloging and placing reports of research results in the library of any INSTITUTION shall be deemed to be a "publication."

6. Enhancement Projects and Independent Developments

- a. One or more MEMBERS may enter into agreements with one or more INSTITUTIONS to undertake projects in specific areas within the technological focus of the CENTER. Funding for such projects shall be provided by the interested MEMBER(s) and such funding shall be in addition to that MEMBER(s)'s membership fees. Overhead rates imposed by the INSTITUTION(s) shall be no more than the rates imposed by the INSTITUTION(s) on CENTER projects. Such projects shall be designated as Enhancement Projects. Such projects should be similar in scope and budget to the CENTER's typical projects. The relevant Site Directors must obtain appropriate approval at each relevant INSTITUTION. Enhancement Projects are administered solely by the INSTITUTION entering into a separate agreement with the MEMBER and not fiscally managed by the LEAD INSTITUTION.
- b. Nothing in this MOU, any Membership Agreement, or the Bylaws of the CENTER shall prevent any INSTITUTION from entering into research projects of any nature with MEMBERS or with third parties which are similar to activities undertaken by the CENTER or from independently developing (either through third parties or through the use of its own personnel) or from acquiring from third parties, technologies or products which are similar to and/or competitive with intellectual property resulting from projects funded partially or wholly by the CENTER.

7. Governing Documents

The operation of the CENTER shall be governed by this MOU, the Membership Agreement, and the "Center for Freeform Optics Bylaws". As a matter of interpretation, these documents shall be

interpreted with the following priority: first, the Membership Agreement; second, this MOU; and finally the "Center for Freeform Optics Bylaws." If there are any inconsistencies between this MOU and the Membership Agreement, the terms and conditions outlined in the Membership Agreement take precedence over the MOU.

8. Term

- a. Subject to extension by mutual consent of the INSTITUTIONS, this MOU shall remain in full force and effect in concurrence with the Center's contract with NSF, unless sooner terminated by mutual agreement by all INSTITUTIONS to terminate the Center.
- b. Except as otherwise provided by law, the obligations of confidentiality imposed by this MOU shall survive termination of this MOU.
- c. If any INSTITUTION defaults in performance of any of its obligations hereunder, which default continues for a period of thirty (30) days after written notice thereof, then the Directors' Board representing the non-defaulting INSTITUTIONS, in addition to pursuing all other rights, remedies and recourses available at law, may terminate the defaulting INSTITUTION's participation under this MOU by written notice to the defaulting INSTITUTION. In the case of non-monetary defaults, if within the thirty (30) day cure period, the defaulting INSTITUTION diligently pursues a cure of the default, then, while the defaulting INSTITUTION continues to diligently pursue a cure, the defaulting INSTITUTION will have a reasonable period to cure such default (not to exceed 90 additional days) during which it may cure the default.
- d. Any INSTITUTION may withdraw its participation in this MOU by providing ninety (90) days written notice (or upon the greatest amount of notice allowed under the law or regulation if less than ninety days) if a change of law or regulation necessitates that INSTITUTION's withdrawal for compliance with such law or regulation.
- e. The withdrawing or defaulting INSTITUTION upon withdrawal or termination shall be removed from the Directors' Board of the CENTER and shall no longer have a vote on any CENTER matter.
- f. The withdrawing or defaulting INSTITUTION shall in good faith coordinate with the CENTER to assign to one or more other INSTITUTIONS all contracts entered into with third-parties by means of that INSTITUTION's affiliation with the CENTER and to assign, resolve or otherwise terminate all research grants and contracts with third-parties entered into by the withdrawing or defaulting INSTITUTION through its affiliation with CENTER.

9. Interest

The INSTITUTIONS share an equal interest in CENTER. The INSTITUTIONS shall have equal involvement with CENTER and equal representation on its Board of Directors.

10. Addition of New University Affiliates as Sites

From time to time, new INSTITUTIONS may apply to join the CENTER as affiliated Sites, by first obtaining concurrence from the Center Director, Site Directors, and the I/UCRC Program Manager at the National Science Foundation. Upon said concurrence, such new INSTITUTION may continue application per the applicable procedures of the

then-current National Science Foundation I/UCRC program solicitation, including as the first step, submitting a "Letter of Intent" to apply to join the CENTER.

The applying INSTITUTION shall, in its application, review its research objectives and program plans and must demonstrate its ability to perform synergistic research within the focused research areas of the CENTER and its willingness to work within the structure, policies and procedures of the CENTER. The applying university shall also obtain and submit within their application material a "Letter of Support" from the Site Director at each of the current CENTER Sites.

When an applying INSTITUTION is approved and accepted as a new Site, said INSTITUTION shall indicate its acceptance of the terms of this MOU by completing and executing copies of an "Acceptance of MOU" agreement in the form attached hereto as Appendix A and submitting such executed copies of that document to each of the INSTITUTIONS that are members of the CENTER at the time of execution of that document. Upon execution of the signed "Acceptance of MOU" document, the applying INSTITUTION shall be deemed to have joined the CENTER and to be a party to this MOU.

11. Independent Contractor

The relationship between all INSTITUTIONS under this MOU will be that of Independent Contractors and not agents, joint ventures or partners. Each INSTITUTION assumes all risk and responsibility for research conducted pursuant to this MOU and will, during the course of this MOU, maintain in force adequate insurance to cover risk of liability resulting from this work.

12. Force Majeure

The INSTITUTIONS shall not be liable for any failure to perform this MOU to the extent such failure to perform is caused by any reason beyond the control of the INSTITUTIONS, or by reason of any of the following: labor disturbances or disputes of any kind, accidents, failure of any required governmental approval, civil disorders, acts of aggression, acts of God, energy or other conservation measures, failure of utilities, mechanical breakdowns, material shortage, disease, or similar occurrences.

13. Miscellaneous Provisions

- a. Modification of MOU No waiver, alteration or modification of any of the provisions of this MOU shall be binding unless mutually agreed upon by the INSTITUTIONS. Any such changes must be expressed in written amendments to this MOU, and must be signed by the authorized representatives of each of the parties.
- b. Severability In the event that a court of competent jurisdiction holds any of the terms, provisions, or covenants contained in this MOU to be partially or wholly invalid or unenforceable for any reason whatsoever, such holding shall not affect, alter, modify, or impair in any manner whatsoever any of the remaining terms, provisions, or covenants of this MOU, and they shall continue in full force and effect.
- c. Assignment No INSTITUTION may assign its rights and obligations hereunder without the prior written consent of the other INSTITUTION.
- d. Waiver The failure by any INSTITUTION to promptly exercise a right hereunder, or to seek a remedy available hereunder because of a breach of this MOU, shall not

be construed as a waiver of that right or waiver of any remedy for that breach or any future breach of this MOU.

- e. Headings All section and item headings are inserted for convenience only and do not expressly or by implication limit, define, or extend the specific terms of the section so designated.

14. Notice

Any notice to any of the INSTITUTIONS hereunder must be in writing and signed by the INSTITUTION giving it, and shall be deemed given when mailed postage prepaid by U.S. Postal Service, first class, certified, or express mail, or other overnight mail service, or hand delivered to the addressee, when addressed as follows:

To UR

Donna L. Beyea
Associate Director

University of Rochester

Office of Research & Project
Administration
518 Hylan Building – Box 270140

Rochester, NY 14627

To UNC Charlotte:

Deborah L. Bolick
Contracts Manager

The University of North Carolina at
Charlotte

9201 University City Blvd.

Charlotte, NC 28223

or to such other addressee as may be hereafter designated by written notice. All such notices shall be effective only when received by addressee.

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be duly executed by their duly authorized officers as of the day and year set forth next to each signature.

The University of Rochester

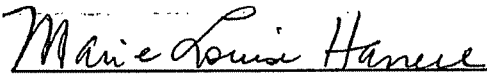


Name: Donna L. Beyea

Title: Associate Director, Office of Research & Project Administration

Date: 5-21-15

The University of North Carolina at Charlotte



Name: Deborah L. Bolick

Title: Contracts Manager

Date: 6-2-15

MARIE LOUISE HARRELL

EXECUTIVE DIRECTOR

GRANTS & CONTRACTS ADMINISTRATION

Appendix A
Acceptance of MOU

<Name of applying INSTITUTION represents that it accepts and intends to be bound by the Memorandum of Understanding for the Center for Freeform Optics and Sites and that it has completed all actions required to join that Center as a Site (as that term is used in the Memorandum of Understanding), effective as of the date written below.

Address for Notices:

IN WITNESS WHEREOF, the <name of applying INSTITUTION> has caused this "Acceptance of MOU" to be duly executed by its duly authorized officer as of the day and year written below.

<Name of applying INSTITUTION>

Name: _____

Title: _____

Date: _____