### COLLABORATION MEMORANDUM OF UNDERSTANDING

#### Between

# PURDUE UNIVERSITY and GENERAL ELECTRIC

### **OVERVIEW**

This Memorandum of Understanding ("MOU") between Purdue University, a non-profit, educational institution organized and existing under the laws of the State of Indiana with administrative offices at 610 Purdue Mall, West Lafayette, IN 47907 ("Purdue") and General Electric Company, including its subsidiaries and affiliates ("GE"), acting through GE Global Research, a corporation with offices at One Research Circle, Niskayuna, NY 12309 ("GE"), either or both of which may also hereinafter be referred to respectively as a "Party" or the "Parties," serves as a statement of broad mutual understanding between our two organizations regarding our strategic collaboration, approaches to cooperation, and indicators of success. Purdue bases its engagement with GE on its strategic goals for University-level industry engagement. GE bases its engagement with Purdue on corporate strategic objectives.

We recognize the autonomy of each organization and enter into this MOU in a spirit of mutual trust, respect and a shared commitment to collaborative activities, research and discovery. This MOU is therefore a statement of mutual intent. The MOU expresses a commitment by both parties to explore opportunities and engage resources (e.g. staff, faculty, curriculum, materials, research and development) for the advancement of collaboration projects and goals.

This collaboration focuses on successful cooperative opportunities in the area of advanced manufacturing. Through a strengthened relationship, GE and Purdue seek to further each other's missions through enhancing institutional and organization engagements in such work.

Support for this institutional collaboration is endorsed at the executive levels of the administration of GE and Purdue, as evidenced by the signatures below.

## TERM OF COLLABORATION

The term of this MOU shall extend from October 1, 2014 to September 30, 2019, unless earlier terminated in accordance with the provisions set forth in this MOU. This MOU may be extended upon mutual written agreement by the Parties. For the purposes of this agreement, all referenced years are ealendar years.

### RESEARCH AND DEVELOPMENT OPPORTUNITIES

GE and Purdue commit to basing this collaboration on the following key areas:

- Advanced manufacturing
- Technology transition
- Manufacturing innovation
- Enhanced engagement opportunities

From GE's perspective, the partnership between GE and Purdue is expected to create value to achieve the objectives of its corporate strategy in the following ways:

- Recruitment of top notch, 21st Century advanced manufacturing technologists
- Advancement of manufacturing technologies through sponsored research
- Acceleration of advanced manufacturing technology introduction by leveraging extensive expertise and facilities
- Expansion of continuing education opportunities in advanced manufacturing for GE professionals

From Purdue's perspective, the partnership is expected to create value in the following ways:

- Sponsored research
- · Experiential and project-based learning for graduate and undergraduate students
- Real-world problem solving

Specific, mutually agreeable collaborative opportunities in the advanced manufacturing space could take many forms including but not limited to:

- Sponsored research projects
- Teaming on Federal funding opportunities
- Voluntary Support (gift funding)

For specific collaborations under this MOU, it is anticipated that separate written agreements will be entered into by GE and Purdue for Research and Development activities in the advanced manufacturing space. Such agreements may take the form of sponsored research agreements, research collaboration agreements, or other types of agreements (each such agreement generally referred to within this MOU as a "Program Agreement" for ease of reference).

The Parties agree to conduct regular meetings in order to discuss the progress of existing activities and to identify new opportunities for engagement.

### STUDENT ENGAGEMENT OPPORTUNITIES

In order to engage students in the partnership, the Parties wish to support specific activities that directly involve Purdue students with GE in a variety of ways. Examples of student engagement activities include student organizations, case competitions, senior design projects and others. Support for student activities will be provided by GE independent of the funding provided for in this MOU.

### OTHER COLLABORATIVE OPPORTUNITIES

The establishment of this MOU shall in no way limit the additional collaborative opportunities that may exist or become available to the Parties. These additional opportunities may be discussed as ideas are conceived by either Party and may include the funding of an advanced manufacturing lab at Purdue, the construction of an educational and research facility on Purdue's campus, endowments, or any other activity that is mutually agreeable to the Parties.

### FINANCIAL MATTERS

GE Support for this effort is expected to be achieved through a combination of 1) Sponsored Research, 2) other types of funding ("GE Contribution") and 3) GE Cost Share. The total program funding provided

by GE, including Sponsored Research, GE Contributions and GE Cost Share activities on this program, over the course of the term, shall not exceed \$10,000,000. The Parties' obligation to collaborate on any specific activity as part of this collaboration will be subject to the execution of a specific Program Agreement (or instance of an existing Program Agreement) governing that activity.

<u>Sponsored Research</u>: Sponsored Research funding shall be paid as defined in the appropriate Program Agreement employed to govern such Sponsored Research. The general expectation is to allow for an initial payment upon the signing of the appropriate Program Agreement followed by subsequent payments based on completion of jointly identified deliverables.

GE Contribution: Expenditures of GE Contributions shall conform to existing University policy and shall be used to support the collaborative interests of the parties. Such GE Contributions may include, but are not necessarily limited to, education (including research projects); acquisition of equipment; development and enhancement of educational and outreach programs; and for travel, planning, coordinating and other administrative expenses, as well as support for students including undergraduate, graduate, and postdoctoral fellowships. In no case shall expenditures of GE Contributions exceed the funds made available by GE for this purpose in any given year, and any available monies not awarded in a particular year shall be added to funds available for expenditure in the following year. GE will make a 2014 GE Contribution in the amount of \$75,000. For each of the following years of the term, GE shall consider additional annual GE Contributions. These funds are not intended to be invested in the University's endowment but rather used in their entirety for the purposes stated herein. Annual GE Contributions shall be paid semi-annually (in equal portions) and are due as of February 1st and August 1st each year in the term of the program.

<u>GE Cost Share</u>: The elements of GE cost share are generally anticipated to include travel and related expenses to allow for GE employees to consistently connect with Purdue personnel and students on Purdue's campus to further the objectives set forth under this agreement.

Purdue shall annually provide supportfor general research endeavors in the area of advanced manufacturing in an amount equivalent to the GE Sponsored Research funding. It is expected that the majority of this support will be achieved through 3<sup>rd</sup> party sponsored research, participation in advanced manufacturing-based consortiums, cost share and other activities. The degree to which a given element of support fulfills the intent of this agreement shall be made by mutual consent between the parties.

### USE OF NAME

All public announcements or media contact relating to this MOU shall be pre-approved by each Party in writing. Each Party shall make such efforts as are feasible and practical to notify the other prior to responding to unsolicited media inquiries, or, if such notice is not feasible or practical, notify the other Party of any inquiry immediately thereafter.

Each Party agrees that neither shall use the names, trademarks or logos of the other Party or of its employees (including, but not limited to, in any document intended to be made public, any press releases, public announcements, Publications or fundraising endeavors) without the prior written consent of the other Party.

### TERMINATION

Either Party may terminate this MOU with or without cause at any time by giving thirty (30) days written notice when it is determined that termination is in either party's best interest. Any individual activity agreement in effect at the time of termination of this MOU will remain in effect under the terms of the activity agreement.

## **GOVERNING LAW**

This MOU shall be governed and construed in accordance with the laws of the State of Indiana.

### RELATIONSHIP OF THE PARTIES

The Parties agree that in the performance of this contract, the Parties are acting as independent contractors and not as agents, an employee, partners, joint ventures or associates of one another. Neither Party is authorized to act on behalf of the other for any purpose.

# NON-DISCLOSURE OF CONFIDENTIAL INFORMATION

The Parties hereto agree that in their performance under this MOU all information or intellectual property marked or characterized as confidential or proprietary to Purdue or GE will be managed pursuant to a standard of care normally given to sensitive or confidential information. When further warranted or requested by either of the Parties hereto, acceptable forms of Non-Disclosure Agreement will be executed as further evidence of the mutual commitment.

### NOTICES

All notices and communications under this MOU shall be addressed to the person below. All notices shall be effective upon receipt. Either party may unilaterally change the contact person below by giving written notice to the other Party.

If to GE:

Name: Tom Shaginaw

Title: University Research Program Manager

Organization: GE Global Research Address: One Research Circle

K1-5A40A

Niskayuna, NY 12309

Tel: (518) 387-4259

Email: GEGR, URPM(a)ge.com

If to Purdue:

Name: Jeffrey L. Kanable

Title: Asst. Director, SPS Contracting

Organization: Purdue University

Address: 610 Purdue Mall, Hovde Hall of Administration

West Lafayette, IN 47907

 Tel:
 (765) 494-6210

 Email:
 spscontr@purdue.edu

#### GENERAL

This instrument contains the entire agreement between the parties with respect to the subject matter hereof, and any representation, promise or condition in connection therewith not incorporated herein shall not be binding on either Party. No modification of the terms of this MOU shall be valid unless made in writing and signed by authorized representatives of the Parties.

**IN WITNESS THEREOF**, the parties have executed this agreement as of the day and year last written below.

GENERAL ELECTRIC COMPANY

By: Walchill

Michael S. Idelchik Vice President – Advanced Technology GE Global Research

73 Date: Sep 26, 2014

**PURDUE UNIVERSITY** 

By: Mainly

Suresh Garimella, Ph.D Executive Vice President for Research and Partnerships

JK Date: Septem 26,2014