COLLEGE OF ENGINEERING

Leah H. Jamieson
John A. Edwardson Dean of Engineering
Ransburg Distinguished Professor
of Electrical & Computer Engineering

To: Debasish Dutta, Provost and Executive Vice President for Academic Affairs and Diversity
From: Leah H. Jamieson, The John A Edwardson Dean of Engineering
Date: April 4, 2016
Subj: Recommendation for Distinguished Professorship

I am pleased to recommend that Professor Jan-Anders Månson be appointed a Distinguished Professor of Materials and Chemical Engineering. Professor Månson’s case has been recommended by the Materials Engineering promotions committee and the Engineering Area Promotions Committee.

Attached are the following documents:

- Jan-Anders Månson’s Full CV
- Jan-Anders Månson’s Abbreviated CV and Summary
- Special Panel Recommendation and Approval

Approval Recommended: 

Debasish Dutta, Provost and Executive Vice President for Academic Affairs and Diversity

Date: 4-5-16

Approved:

Mitchell E. Daniels, Jr., President

Date: 4/5/16

Enclosures

Cc: D. Bahr
   A. Varma
   K. Kokini
   J. Dietz
Memorandum

To: David Bahr, Professor and Head of Materials Engineering
From: Arvind Varma
R. Games Slayter Distinguished Professor of Chemical Engineering
Jay and Cynthia Ihlenfeld Head of Chemical Engineering
Date: March 19, 2016
Re: Chemical Engineering faculty approval for the appointment of Prof. Jan-Anders Manson as Professor of Chemical Engineering

The Chemical Engineering faculty met on March 10, when it unanimously approved (18-0) the appointment of Prof. Jan-Anders Manson as Professor of Chemical Engineering (Appointment: 50% ChE; 50% MSE; tenure home MSE). The faculty believed that Prof. Manson brings demonstrated world class scholarship as well as unique vision and leadership in education, entrepreneurship and large scale, integrated research. The Chemical Engineering faculty strongly supports his 50% appointment in the School of Chemical Engineering at Purdue. The specific details considered by the Chemical Engineering faculty are described below.

Scholarship
With nearly 350 peer-reviewed publications in tier 1 research journals, 2 books and 8 book chapters, Prof. Manson’ scholarship is at the highest level. He is considered one of the top researchers in the world in both the development of new polymer composite technologies and in understanding the fundamental physical and chemical processes that underpin these composite technologies. Of particular importance has been his research in composite manufacturing, which is typically a key barrier to the introduction of new composite technologies into practice. It is rare to find an individual who is equally proficient in the development of new materials for important applications, as well as developing fundamental models to describe the manufacture and use of the materials.

In particular, Prof. Manson has identified that the use of composites in sports is the most effective way to introduce new technologies. Specifically, the avoidance of risk in the aerospace industry and the need for low cost materials and manufacturing processes in the automotive industries makes the introduction of new composite technologies extremely slow. In contrast, sports applications from tennis to skiing to fencing to bicycle racing are always looking for new materials technologies that give the participants a competitive edge, where cost and risk are not as important. With the identification of sports equipment as the entry point for composite technologies, Prof. Manson has developed the societally driven application platform that enables a unique research program in composite materials. It is rare to find an individual who understands as well as effectively engages the societal drivers that enable a fundamental research program – world class scholarship with a direct societal pull.
He is a member of the Royal Swedish Academy of Engineering Sciences and the Swiss Academy of Engineering Sciences.

**Academic Leadership**

Prof. Manson has provided research leadership at the highest level at his home institution, Ecole Polytechnique Federale de Lausanne (EPFL). EPFL is the premier engineering university in Switzerland, where he is currently the Director of the Laboratoire de Technologies des Composites et Polymères (LTC) and directs a large group of researchers in polymer composites technologies. Under Prof. Manson’s leadership, this group has thrived where there have been 61 PhD students, 161 MS students, and over 400 other student projects with total external funding of $36 million and internal funding of $30 million.

During 2004-2008, he was Vice-President at EPFL with responsibility for innovation and technology transfer. In addition, since 2008 he has been President of International Academy of Sports Science and Technology (AISTS), where he sits on a number of the International Olympic Committees that govern Olympic class skiing, swimming, etc. – events where technology is both important and needs to be regulated in order to make events fair. Finally, he was the technical lead for the design of the composite hull for the Swiss entry that won the America’s Cup in 2003.

**Educational Leadership**

In addition to the traditional teaching and research activities of a senior professor, Prof. Manson has also developed a unique approach to teaching innovation and entrepreneurship. Sports are an area that both engage young people’s passions and that can embrace innovations. At EPFL, Prof. Manson has developed a course that is always oversubscribed, where students develop projects of their own interest to design a product using composite materials to address particular sports challenges. The projects do not just design an item, but they also must address how it will be manufactured and what are the business requirements to bring the product to market. This type of innovation and entrepreneurial education is unusual at most research institutions including Purdue. Prof. Manson said that learning better ways to engage the upcoming generation in innovation and entrepreneurship is one of his strongest passions and an area where he is already thinking how it might be developed at a large state school such as Purdue. This type of educational innovation could be a game changer at Purdue.

**Entrepreneurial Activities**

As an outgrowth of his composites research, several companies have been formed. He is currently engaged in a company that is working on how to transform composite manufacturing technologies in the automobile industry. This company is partnered with Hyundai. Thus, Prof. Manson has experience in how to move technology out of the university into commercial use.

**Personal Qualities**

The considerable academic, educational and entrepreneurial talents described above are more than sufficient for having Prof. Manson as a colleague at Purdue. However, Prof. Manson is personally engaging with a passion to nurture the next generation of students and younger faculty. He clearly stated several times that he is not looking to expand his resume (although that will surely continue as part of his active research program), but rather he is looking to have real impact in (i) helping develop the critical composite manufacturing technologies needed by the automobile industry, and (ii) developing new and more effective educational approaches for the emerging generation of students that think differently and have different priorities. He fully understands that these two very large goals can only be accomplished by partnerships both inside and outside of the university. His charming personality and collegial attitude with everyone he interacted with during his recent visit clearly indicate that he has all the skills required to lead in the academic environment. The Chemical Engineering faculty would be most pleased and honored to have Prof. Jan-Anders Manson join us as a colleague.