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Bridging the Languages with Engineering: Editors' Introduction

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Guest Editors' Message

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We have put together this volume in honor of the great entrepreneur and community builder John Grandin. There is much to learn from this pioneer of international engineering education whose IEP program celebrates its 25th anniversary this year. The idea of developing a professional track for the languages for engineering students, all the way to introducing a five-year dual Bachelor degree program that combines an engineering discipline first with German, then with French, Spanish and more recently, with Chinese, represented a courageous move a quarter century ago. Though this hybrid degree program was regarded as blasphemy by doubters in both camps, it did save German at the University of Rhode Island, created a fast growing Chinese program, and catapulted major enrollments in IEP languages to unparalleled growths.

In stark contrast to the elimination of language programs all over the country, especially German and French majors, URI boasts approximately 135 majors in German, 165 in Spanish, 150 in French, and 55 in Chinese. More significantly, 50% of Spanish and 80% of German majors are engineering students. An additional 10% are enrolled in the German International Business Program (IBP) which was modeled on the IEP. It is easy to see that German would no longer exist at URI if it wasn't for the IEP! Instead, it has grown to become the second largest program in the country in terms of enrolling majors, and it ties for 6th place with the University of Minnesota in graduating German majorsⁱ, and this despite the fact that URI, in contrast to large language programs like Indiana, Ohio State or Minnesota, does not offer German on the master and Ph.D. level. The unique URI approach of engaging other disciplines in language learning and international immersion, first in engineering, then later also in business, textiles, and pharmacy, recognized very early on that about 95% of students who learn a foreign language don't do so because they want to be trained as language or literature professionalsⁱⁱ -- why then, should language departments only feature curricula geared to train undergrads for advanced degrees in Foreign Languages, Literatures and Cultures? Long before ACTFL's five 'C' standardsⁱⁱⁱ demanded contextualization and content based language learning; long before ABET added Learning outcome H, "the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context"^{iv} to its list of what an engineering education should accomplish, John Grandin had already introduced these

concepts at URI. He had positioned the university as a successful leader in implementing these goals two decades before they were institutionalized by the professional accreditation and standardization agencies.

Grandin's visionary, yet pragmatic and quite simple idea of bridging the languages with engineering has brought in substantial outside funding and numerous national and international awards. By fusing the humanities with the sciences, he provided a solution to the crisis in higher education we are facing today. In times when over 50% of college graduates who spend an ever increasing amount of tuition on their education, cannot find employment upon graduation, graduates of the International Engineering Program and of similar programs elsewhere, who are technically adept as well as linguistically and culturally savvy, find themselves optimally prepared for the global market place, and succeed with securing jobs at close to a 100% placement rate. They have learned to "go the extra mile", to juggle two curricula simultaneously, to take risks and step out of their comfort zone during their year abroad, to leverage the expanded offerings at our top technical partner schools, and to apply both technical skills and language proficiency in a real world context during their internships. Their personal growth experience is transformational, and many of our alums feel that they owe the success in their life and career paths to the impact the IEP experience has had on them.^v

The tributes and contributions to this volume in honor of John Grandin speak to the power of innovation and creative spirit. As guest editors and program directors of the IEP at URI and of the GEARE program at Purdue University, we know that reaping the fruit of John's ground-breaking work requires energetic leadership, careful assessment and flexibility, as well as moving forward into uncharted territories, be it in China, India, Latin America or the Arabic world. We can celebrate the IEP's wonderful success story this year, and yet we have to be mindful of the challenges a mature program faces: mindful that sustaining the program's steady and at times explosive growth spurts requires a team effort from all of its constituencies; mindful that excellent teaching and advising by program directors and faculty in engineering and the languages is a necessity; mindful that flexible and immediate responses to changes in the economic and security environment of the countries we are sending students to are called for. We need to be aware that expanded marketing and high school outreach as well as community building programs require additional resources, that continuous support by the university's administrative leadership is essential; that visionary leadership with respect to strategic development and fundraising by the directors is a must. Guided by the board of advisors and our partnering companies we will pay close attention to the next strategic growth areas in the world.

John Grandin left a legacy behind. The Annual Colloquium, which itself grew from a small group of pioneering colleagues convened 15 years ago to a large annual gathering of people inspired by John's vision, brings together colleagues who grew their

own successful programs, be it at Valparaiso University, the University of Connecticut, Georgia Tech, MIT, Purdue, Iowa State, the University of Cincinnati, the University of Kentucky, Northern Arizona University, Brigham Young University and beyond. It will help continue to disseminate the model of bridging engineering with the languages, and collaboratively move forward to the next level.

ⁱ According to statistics reported in *Monatshefte*, vol. 102, No. 4, Winter 2010.

ⁱⁱ MLA Ad Hoc Committee on Foreign Languages. "Foreign Languages and Higher Education: New Structures for a Changed World." New York: MLA, 2007, http://www.mla.org/pdf/forlang_news_pdf.pdf, accessed September 30, 2012.

ⁱⁱⁱ See ACTFL, [Standards for Foreign Language Learning: Preparing for the 21st Century](http://www.actfl.org/advocacy/discover-languages/advocacy/discover-languages/advocacy/discover-languages/resources-6?pageid=3652), <http://www.actfl.org/advocacy/discover-languages/advocacy/discover-languages/advocacy/discover-languages/resources-6?pageid=3652>, accessed on October 8, 2012

^{iv} See ABET, [ABET Engineering Criteria Program Educational Outcomes](http://www.foundationcoalition.org/home/keycomponents/assessment_eval/ec_outcomes_summaries.html), accessed on Oct. 8, 2012 http://www.foundationcoalition.org/home/keycomponents/assessment_eval/ec_outcomes_summaries.html

^v See: Grandin, John, *Going the Extra Mile: University of Rhode Island Engineers in the Global Workplace*, Rocklands Press Rhode Island, 2011