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Challenges Facing Engineering Education and Research in International Collaboration and Learning Experience

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Abstract

With the development of globalization, engineering education and research collaboration have also become globalized both in terms of content and experience. This has profound implications toward academic achievements and learning experiences in engineering education and research collaboration. As a result, it has become necessary that international cooperation to advance engineering education and research be taken to a more prominent level because engineering education and research in the 21st century have interconnected relevance, intertwined significance and international importance. Challenges facing engineering education and research may vary in different countries due to the very nature and needs of the regions, and yet assessment and continuous improvements of programs should be at the forefront of such challenges. Nevertheless, we will be better by working together with proactive collaboration. Such collaboration facilitates synergy across geographical and cultural boundaries that stimulates critical thinking and spurs innovation. A case study of an international education and research collaboration will be discussed. Such collaboration is mutually beneficial and reciprocal, based on complementary expertise in different technical areas of the same field. Different approaches we each take can lead to moments of reflection and encourage meaningful discussions that have intriguing impacts on the individuals immersed in environments filled with the unique diversity that international collaboration can create. This cross-cultural learning experience also brought about the realization of a mutual cultural exchange among international colleagues with resultant diversification of research approaches. The proactive international research collaboration facilitates such synergy that would not have been otherwise formulated. In addition, the academic achievements and lessons learned during the course of this international research collaboration will be presented.