**GREAT IDEA**  
Graduate Research and Education for Appropriate Technology: Inspiring Direct Engagement and Agency  
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### Summary

Despite a long volunteer tradition of engineers and scientists developing **appropriate technology (AT)** to serve humanitarian causes, relatively few appear to orient their primary academic and professional activities to such work (Papadopoulos & Hable, 2009). GREAT IDEA will build off of prior efforts in humanitarian engineering (HE) to explore attitudes related to AT among engineering graduate students and faculty, and to inspire and/or train them to pursue research and careers in AT. Projects will focus on the Caribbean region.

### Research Component

GREAT IDEA will develop and disseminate a **survey** to investigate attitudes of engineering graduate students and faculty regarding perceptions of the **purpose** and **social context** of engineering. The survey will build off of prior research (Leydens et al., 2009) and will probe ideas and issues such as:

- Definitions & characteristics of engineering & technology
- Perceptions of who is positively or negatively impacted by engineering and technology
- Perceptions of AT, including barriers and opportunities to applying engineering research toward AT & HE

The survey will consist of a general part, completed anonymously, and voluntary follow-on interviews. It will be disseminated online and will target universities in the US, Puerto Rico, and Spain.

### Educational Component

GREAT IDEA will educate and train graduate students through new courses, seminars, and direct support for graduate research. New courses proposed are:

- **INTD 5091 Appropriate Technology.** Overview, history and case studies in AT. Participatory Action Research component.
- **INTD 5092 RCR in the Context of AT for Community and Social Development.** General principles of RCR. Student-developed case studies to survey and assess community development projects.

Approximately 3-4 graduate students will be supported for thesis work in AT-related projects. General seminars will be delivered during graduate student orientation. Courses and seminars will count toward federal compliance for RCR.

### Selected References

- Papadopoulos, C. and A.T. Hable. “Engineering as an Enterprise of War and Peace”, in Engineering in Context, S.H. Christensen, B. Delahousse, and M. Meganack (Eds.), Academica, Copenhagen, 2009

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### Some Views & Challenges

- Pursuing broad, interdisciplinary research without sacrificing technical depth
- Advising students on taking a leadership role in directing their own research
- Helping students to discern career ambitions and assess benefits and risks of research in AT

### Please Give your Input

Please examine a copy of the draft survey. We would very much like your feedback and suggestions.

**PLEASE TAKE ONE**

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