

Utilization of NRC Nuclear Regulatory Research Computer Codes in Research and Course Development

Executive Summary:

We propose to fund junior faculty members to engage in the following activities:

- To develop research programs utilizing computer codes (e.g., PRACS, TRACE, MACCS2, RADTRAD, VARSKIN, DandD) that the NRC Office of Nuclear Regulatory Research (NRC-NRR) uses to model and evaluate component and system responses.
- To develop research topics that are of identified importance to the nuclear power industry. This component of the program will encourage junior faculty members to interact with NRC-NRR to develop their research about.
- To incorporate computer codes that the NRC-NRR utilizes into academic graduate classes.

The University of Pittsburgh's Nuclear Engineering Program is a relatively new nuclear engineering program. Over the past five (5) years the University's Swanson School of Engineering (SSOE) has established a strong nuclear engineering educational program at the undergraduate and graduate level that has exceptional enrollment. The educational program provides graduate engineers to the large nuclear engineering community in the Pittsburgh area, and provides graduate nuclear engineering education to the working professionals from these companies.

The University SSOE, with the encouragement of the local nuclear community, USNRC Commissioner Magwood and DOE-NEUP Director Dr. John Gilligan, is working toward establishing a graduate Masters degree in Nuclear Engineering with a research-oriented track. The program is competing with long-term, established nuclear engineering programs for research funding. It's young faculty need to attain a foothold in the nuclear engineering research community so that it can compete for research funding to further develop its program. The financial resources requested under this NRC Faculty Development Award program will provide an incentive to attract the best and the brightest junior faculty that are interested in nuclear engineering to develop a research program in support of the nuclear power industry and our large local constituency.

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