MCEER RESEARCH TASK STATEMENT

<table>
<thead>
<tr>
<th>Education and Outreach</th>
<th>Budget:</th>
<th>Yr 8 Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Project Number: 8.5.2</td>
</tr>
</tbody>
</table>

**Task Title:** Enhancement of Earthquake Engineering Education at FAMU and K-12 Outreach

**Investigator/Makola M. Abdullah**

**Institution:** Florida A & M University

* indicates task leader

**Statement of Project Goals:** (Conceptually describe what the work is intended to accomplish, in 100 words or less. Do not provide detailed description here.)

The project will accomplish the following goals:

1. Development of undergraduate structural dynamics course modules.
2. Involve undergraduate students in MCEER related research.
3. Enhancing graduate courses in Earthquake and Wind Engineering using information from MCEER researchers.
4. Development and deployment of instructional materials to introduce middle school students to Engineering.

**Problem Description and Research Approach of Proposed Work for Year 8:** (Detailed description of research to be conducted and methodology to be used.)

Proposed work for Year 8:

1. Develop undergraduate structural dynamics course modules based on the graduate level course. Find an appropriate course in the curriculum to house the modules.
2. Develop a course on Earthquake Engineering directly from the Tasks as outlined in the MCEER annual report. The course will be formed such that the participants will become knowledgeable on the current state of research and practice from an MCEER perspective.
3. Identify a Middle School and organize periodic visits. Study the feasibility of a 4 week summer program for middle school students.

**Assessment of State-of-the-Art:** (Describe other relevant work being conducted within and outside of MCEER, and how this project is different.)

This project is state of the art in 2 ways:

1. A graduate course from the MCEER perspective is new and novel.
2. Most outreach to K-12 is directed at 9-12, our outreach will be directed at younger students. It is our plan to eventually work with K-3.

**Progress to date:** (If applicable, a short description of achievements in previous years. Clearly distinguish progress achieved in the past year, i.e., accomplishments from April 1, 2003, to March 31, 2004.)
**Role of Proposed Task in Support of Strategic Plan:** *(Describe how the effort will make a unique, useable contribution to the MCEER strategic plan.)*

This task is most usable contribution to the MCEER strategic plan as it provides the link between research and education. The outreach portion of this task will help increase the pipeline of available earthquake engineering professionals.

**Task Integration:** *(Describe how the work performed interfaces with other tasks and researchers funded by MCEER.)*

This task will have a strong integration with the research component of MCEER by design. The development of the course depends on cooperation and information from the researchers.

**Possible Technical Challenges:**

**Anticipated Outcomes and deliverables:** *(Also indicate those of particular benefit to IAB members and other end users.)*

Outcomes and deliverables include a syllabus, course description and educational materials for a graduate course, an undergraduate module and information relevant to middle school outreach.

**Potential end-users beyond academic community:** *(IAB members and others.)*

It is possible that the graduate course could be developed into a short course for earthquake engineering professionals.

**Educational outcomes and deliverables, and intended audience:**

Outcomes and deliverables include a syllabus, course description and educational materials for a graduate course, an undergraduate module and information relevant to middle school outreach.

**Project Schedule and Expected Milestones for the Project:** *(Milestones and estimated time of achievement; e.g. Fall, Spring, Summer.)*

It is anticipated that the undergraduate course module will be completed in the FALL and implemented in the SPRING. The graduate course will be completed in the SPRING. Outreach activities will begin in the SUMMER.

**Team Members:** *(If known, provide names of team members associated with project including project leader, other faculty and their departments, undergraduate students, graduate students, postdoctoral students, industrial participants.)*

**Possible Direction of Work in Subsequent Years:**