

# Missouri S&T Computer Science Department

## Strategic Action Plan

### (2009-2014)

#### **Mission**

The mission of the Computer Science Department at Missouri University of Science and Technology is to help students learn problem solving skills and expertise to design and develop software, middleware, and computer systems for different application domains in order to meet the technical, managerial, and process challenges they will face when joining the future workforce.

#### **Strategic Objectives**

To fulfill this mission, the Computer Science Department strives for excellence in producing graduates who are well-rounded, grounded individuals with:

1. Strong problem solving skills grounded in a strong technical background in computer science,
2. A broad educational background that enables making interdisciplinary connections and provides a solid foundation for life-long learning,
3. The ability to communicate effectively using both written and oral communication,
4. The ability to listen and to effectively work together with others individually and in team environments, and
5. An awareness and understanding of the professional, societal, and ethical issues of the rapidly evolving computing industry and the judgment to apply this understanding,

so that they may become leaders and provide a contribution to the greater good, professionally and in their community, via mentoring, writing, speaking, or professional involvement.

#### **Vision**

Our vision is aligned with the vision of the University: To be recognized as one of the top 6 CS Departments of the technological research universities in the United States<sup>1</sup>.

#### **Strategic Planning**

We seek to improve our ranking and perception as a top CS department in the nation

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<sup>1</sup> After MIT, Carnegie Mellon, Georgia Tech, Cal Tech, and RPI.

## Tactical planning

The CS Department has recognized the following milestones to achieve its strategic goal:

- A. Curriculum
  - a. Improvement of the undergraduate program (revision of the curriculum, currency with the advances in technology, improving undergraduate research, improving ethics education).
  - b. Improvement of the graduate program (revision of the curriculum, currency with the advances in technology and research direction).
  - c. Expansion of distance education, certificate programs, and multidisciplinary degree programs.
  
- B. Students
  - a. Increase in the number of underrepresented students.
  - b. Proactive and aggressive recruitment of high quality graduate students.
  - c. Improvement in the quality and quantity of the PhD program (higher admission requirements, research contribution, publications).
  - d. Establishment of several endowed PhD fellowships.
  
- C. Research
  - a. Increase in research productivity (funded research, publications, and scholarly activities).
  - b. Hiring of highly qualified faculty members and Retention of faculty members (reduced teaching load, research infrastructure support).
  - c. Development of a new area of excellence in Pervasive Computing.
  
- D. General
  - a. Continued building and fostering of strong relationships with alumni and industry (improve communication with CS academy members and advisory board, improve student engagement in professional societies).
  - b. Improvement of the condition of classrooms, labs, and meeting rooms in the CS Building.
  
- E. Fund Raising Campaign for
  - a. New "Pervasive and Mobile Computing Lab."
  - b. "Distinguished Speaker Program"
  - c. Computer Science Distance Learning Technology Space
  - d. Endowed Chair in Pervasive Computing
  - e. New building for the Computer Science Department.

Many of the aforementioned activities are already in place: Undergraduate and graduate curriculums have undergone a major revision in spring 2008; new advising procedures were adopted in fall 2008; a diversity committee was established to increase the number of underrepresented students; Several new faculty members have been recruited; relative to fall 2007, the size of the Ph.D. program was doubled in fall 2008 and we are targeting to quadruple it by fall 2012; the construction of the “Pervasive and Mobile Computing Lab” is in progress.