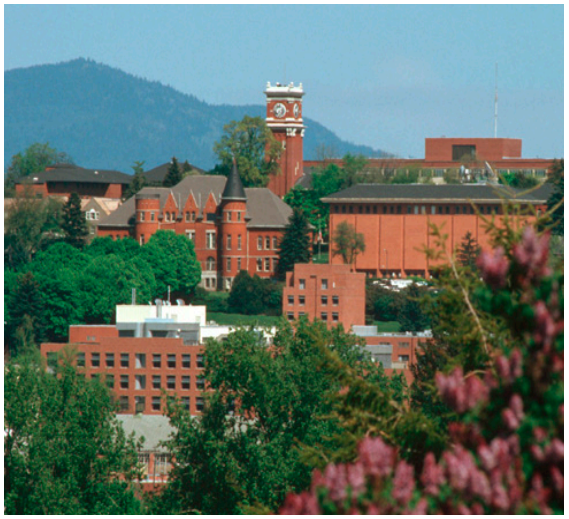

Behrooz Shirazi

School of EECS

Original date: October 2011

Revised: July 2013

STRATEGIC PLAN: SCHOOL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

SCHOOL OF EECS VISION

"To rank in the top 50 programs nationally* by providing an experience-enhanced education and conducting groundbreaking interdisciplinary research in engineering and computing“

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* By the year 2020 based on national rankings by US News and World Report or by the National Research Council

SCHOOL OF EECS EDUCATION MISSION

- Educate graduates for professional leadership, civic influence, and lifelong learning
- Provide an education based on a theoretical, experimental, and ethical foundation and enhanced by opportunities for participation in research, internships, international studies, interdisciplinary programs, or programs in entrepreneurship

SCHOOL OF EECS RESEARCH MISSION

- Conduct research and develop technology to address present and future societal problems
- Advance the state-of-the-art in areas incorporating technical disciplines from electrical engineering and computer science
- Collaborate with researchers from other disciplines to address societal grand challenge problems

SCHOOL OF EECS OUTREACH MISSION

- Serve the community and the profession by participating in activities designed to improve and preserve the body of knowledge in engineering and computing
- Participate in service that advances engineering and computing education
- Transfer research results to communities, the nation, and the world to increase economic equity, quality of life, and ecological sustainability

STRATEGIC PLAN

① Focus on and establish top-tier national rankings in the high priority research areas of Power Engineering and Microelectronics in EE and Data Science and Machine Learning in CS

② Establish strategic partnerships with industry and national labs to promote internships, job opportunities, and collaborative research

③ Promote experience-enhanced undergraduate education

④ Focus on expanding our graduate programs by recruiting high-quality PhD students

IMPLEMENTATION STRATEGIES

EECS DISCIPLINE FOCI

- *Prioritized* focus areas in faculty recruiting and investment of resources:
  - ECE:
    - Electric power/energy,
    - Microelectronics and computer engineering,
    - Systems and controls
  - CS:
    - Data Science,
    - Machine Learning,
    - Distributed and networked systems,
    - Bioinformatics

RESEARCH PRODUCTIVITY

- Focus on recruiting “star-quality” junior faculty and world-renowned senior faculty (NAE caliber)
- Improve research infrastructure– esp. networking and computing and storage capacity
- More interdisciplinary collaboration with other units and faculty across the campus
  - Already very active – more encouraged
- Support establishing and expanding interdisciplinary research centers
  - ESIC (Power) and SERC (Machine Learning)
- More partnerships with PNNL
- More partnerships with industry (also see next slide)
- Expand PhD programs and increase quality of PhD students
- More Postdocs
- Link faculty teaching load to research productivity

IMPROVING INDUSTRY RELATIONS

- Industry-supported Senior design projects already very successful – keep it up
- More industry support for new courses (mixed success)
- More industry sponsored research projects
- Power industry support (excellent) – keep it up
- Equipment donations (very good to excellent) – keep it up
- WTC-WTIA – engage more
- Joint grant proposals with industry
- IP – have made some great progress
- Faculty-industry engagement
  - Reciprocated guest lectures, etc.

STUDENT POPULATION

- Increase enrollment
- Student population size matters
  - Also, serve the State and its residents
- More active engagement in recruitment efforts
- Given the emphasis on graduate education, it behooves us to focus on increasing our graduate student population (esp. PhD population)
  - Graduate studies coordinator has done a great job of recruiting PhD and MS theses students
  - Focus on professional degree, distance offerings

STUDENT QUALITY AND EXPERIENCES

- Improve instructional labs (esp. in the CS area)
- Provide national merit scholars
- Make experience-enhanced education a requirement for all students
- Engage the faculty in mentoring of students
- Support more student clubs and extracurricular activities
- Encourage students to participate in regional and national competition
- More engagement in recruiting efforts (student competitions, science fairs, visits to campus, relationships with community colleges, recruiting grants)