

IMPLEMENTATION of the VISION of the CISE department

CORE

A departmental unit named CISE is an important component of visibility. CISE is an important brand crucial for national and international recognition. Industry, in particular, wants to see a coherent CISE unit to engage with.

GROWTH

- (a) We welcome the addition of faculty to our CISE department who share the strong core identity of CISE.
- (b) We will consider and carefully evaluate any plans to make CISE a core of a College of Computing.
- (c) We object to administrative structures that dilute the CISE identity.

DUPLICATION

Due to the unique CISE approach, duplication of research effort or teaching content with other engineering disciplines is rare. Even where the subject matter appears to be similar, its treatment is typically complementary, purposefully separated from the idiosyncrasies of the actual hardware level implementation. This complementarity enriches e.g. students' experiences. In those cases where other departments want to participate in the CISE momentum and promise, by hiring faculty with a CISE research agenda and teaching preference, we advocate early consultation with us, who specialize in CISE and provide the core. We advocate shared governance mechanisms in situations where the administration is unable or unwilling to intervene in order to avoid duplication.

EXCELLENCE

The key to international recognition, research leadership and funding is an environment that supports the individual researcher or small groups to do extra-ordinary research, alone or in collaboration.

GOVERNANCE

Individual researchers are the source of innovation, and are able to quickly judge quality and redirect research towards promising avenues. This independence has been a major contributor to the strength of US research and is crucial in the rapidly changing landscape of interdisciplinary work.

Where larger groups join to meet grand challenges, a flat and problem-oriented structure of working groups or centers with shared governance appear to be appropriate structures to (a) quickly communicate truly promising directions and allow researchers to join up around them and (b) allow for temporary visionary and understanding leadership on particular topics. This suggests nimble administrative and fiscal structures.

RESOURCES

Faculty and students are a key part of the infrastructure of CISE as the cost of hardware continues to drop. They require careful investment. Spending on people in the form of computing support and teaching assistants or specialized lecturers can make as much sense to provide the proper climate and resources as large physical infrastructure centers do for lab-based disciplines.

We note that the resource emphasis of CISE -- high on TAs, low on equipment and space -- conforms well to our core research challenges as well as the ebb and flow of student populations.