**V:** Emerging Frontiers of Science of Information Draft Strategic Plan

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| **Mission Statement** | | |
| Advance science and technology through a new quantitative understanding of the representation, communication and processing of information in biological, physical, social and engineered systems. | | |
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| **Education, Human Resources, and Diversity Goal Statement** | | |
| Integrate cutting-edge, multidisciplinary research and education efforts across the Center to advance the training and diversity of the work force. | | |
| **SMART Objectives** | | |
| Educate students, teachers and public in Science of Information as measured by:   * Number of courses and modules at each school by first year. * Number of students enrolled and also affected/impacted. * Number of REUs and REU students. | | |
| Increase diversity of students in SOI/STEM as measured by:   * Increase 10% annually number of females, minorities, first generation, and low-income students. * Two presentations per school per year of SOI applications at URM institutions. * X number of visits by national diversity leaders each year. * Increase number of fellowship and scholarship by x% each year. | | |
| Professional development in SOI/STEM as measured by:   * Size of mentoring programs. * Number of internships. * Number of liaisons with external organizations and URM institutions. * Number of cross-institutional visits. * Number of student/faculty mentoring pairs. | | |
| Make Science of Information a standalone discipline of study as measured by minors and concentrations in SOI by end of 3rd year. | | |
| **CSF: Build a critical mass of student interest in Science of Information.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Create a student-led posters and brochures committee for dissemination of materials to high school students through college fairs, undergraduates, and high school and middle school counselors. | TBD | TBD |
| Host student exchanges between sites. | TBD | TBD |
| Organize student gatherings at conferences to discuss research results and possible collaborative ideas. | TBD | TBD |
| Give students papers to review and critique. Engage students in the topic selection and idea generation stages. | TBD | TBD |
| **CSF: Institutional commitment for Center’s Education, Human Resources, and Diversity activities.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Form a committee of liaisons with representatives from each institution. | TBD | TBD |
| Obtain release time from departments to teach the courses. | TBD | TBD |
| **CSF: Effective liaisons with industry and external organizations.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Establish visibility with professional societies e.g. newsletters. | TBD | TBD |
| Arrange visits, internships, and liaisons with industry organizations. | TBD | TBD |
| **CSF: Course materials and teaching resources available for Science of Information.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Take inventory of existing Science of Information courses, texts, and materials within and outside Center institutions. | TBD | TBD |
| Create new course materials, text, instructor materials and modules. | July 2011 | Deepak Kumar and Mark Ward |
| Plan and coordinate Science of Information course offerings across Center institutions. | TBD | TBD |
| Create a repository of Science of Information course materials. | TBD | TBD |
| **CSF: Resources in place for educational programs diversity programs, and mentoring programs.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Apply for REU funding. | TBD | TBD |
| Partner with LSAMP, SROP, etc. and win new funding. | TBD | TBD |
| Coordinate talks at Center institutions by leaders in the field of diversity outreach and engagement. | TBD | TBD |
| Identify and write grants for education funding. | TBD | TBD |
| **CSF: Publicity and dissemination of Science of Information’s EHR programs.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Send emails and updates to IT society. | TBD | TBD |
| Advertise at URM serving institutions. | TBD | TBD |
| Put links to resources on the Center website. | TBD | TBD |
| Create posters and handouts. | TBD | TBD |
| **CSF: Targeted mentoring for all students, with a focus toward increasing diversity.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Create a mentorship program with representatives at each institution. | TBD | TBD |
| Send out brochures to School of Science or School of Engineering at each school. | TBD | TBD |
| Appoint publicity ambassador at each institution. | TBD | TBD |
| Include a future faculty development component to the mentoring program for graduate and post-doc students. | TBD | TBD |
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| **Knowledge Transfer Goal Statement** | | |
| Develop effective mechanisms for intellectual exchanges between the center and external stakeholders to support the sharing of knowledge and the application of new technology. | | |
| **SMART Objectives** | | |
| Establish an SOI conference held annually with attendance of 100 by 2nd year. | | |
| Increase the number of industrial affiliates by 5 by September 2011, by 20 by September 2013. | | |
| Increase the number of industrially funded projects by 5 by September 2013, and by 10 by September 2015. | | |
| Increase the number of full, online courses 2 by year 2 and 5 by year 5. | | |
| Achieve at least 7.0 rating for 80% of content on Science of Information hub. | | |
| Increase number of hits on Science of Information hub by 100% every year. | | |
| Increase number of external links to the Science of Information hub by 100% each year, staring September 1, 2010. | | |
| **CSF: Human power for development, quality control, and publicity for Science of Information hub.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Develop a compelling value proposition for industrial partners and mechanisms for publicizing this proposition. | By end of 2010 | Ananth Grama |
| Identify the person and resources needed to create and maintain the Center website. | TBD | TBD |
| **CSF: Institutional support and multi-institutional cooperation for course development.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Identify lead for the creation of course content. | TBD | TBD |
| Outline the resources and institutional support needed for the creation of course content. | TBD | TBD |
| **CSF: Run Science of Information conference for STC and outside participants.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Create a conference development team; including representatives of each research thrust area, which will identify the conference theme. | TBD | TBD |
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| **Leadership and Management Goal Statement** | | |
| Accomplish the Center’s mission through:   * inspirational leadership. * inclusive and transparent decision-making. * catalyzing new research opportunities. * facilitating collaborative efforts. | | |
| **SMART Objectives** | | |
| NSF funds 50% of participants in Center activities by May 2011. | | |
| Executive committee will hold formal activities at least four times per year to allow all Center participants to have a voice in the decision making of the Center. | | |
| 20% increase of students who independently post Center artifacts each semester on Science of Information website starting December 2010. | | |
| **CSF: The project must be interdisciplinary** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Executive committee conducts yearly evaluations of each investigator’s contribution to the STC. | TBD | TBD |
| **CSF: Conduct research that would not have happened without the STC.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Each participating investigator will visit one of the other institutions every year. | TBD | TBD |
| **CSF: Instill a sense of pride in membership in the Center.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| The Center Director will conduct a visit to each of the participating institutions. | TBD | TBD |
| Create cups, shirts, etc with Science of Information Center logo on them to foster Center identity. | TBD | TBD |
| **CSF: A harmonious leadership and management team.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Issue a brief statement itemizing the expectations for each participating investigator. | TBD | TBD |
| STC website the key resource for visibility of our accomplishments. | TBD | TBD |
| Timely press releases highlighting research accomplishments for the general public. | TBD | TBD |
| Create a reputation for excellence in research and innovation. | TBD | TBD |
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| **Integrative Research Goal Statement** | | |
| Create a shared intellectual space, integral to the Center’s activities, providing a collaborative research environment that crosses disciplinary and institutional boundaries. | | |
| **SMART Objectives** | | |
| Formulate 2-4 research problems for interdisciplinary team to coalesce around in 2 years. | | |
| Identify and post on website two grand challenge problems in two years on a web bulletin board. | | |
| Five investigator exchange visits per year for immersive activity (greater than or equal to 1 week). | | |
| Every investigator to give one or more talks each year in another institution. Target 15 talks per year and 10 by year 1. | | |
| Initiate five new collaborations by year two through joint supervision, student exchange, join publication, and presentations. | | |
| Application teams make available three datasets per year for development of theoretical methods. X outcome measured by number of models developed in five years. | | |
| Development of two pedagogical resources (e.g. books, survey, papers) at the interface of applications and theory in five years. | | |
| Development of 4-6 proposals for external funding within five years. | | |
| **CSF: Creation of a shared intellectual space for the development of the research priorities.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Start monthly videoconferences for all Center participants. | TBD | TBD |
| Develop two pedagogical resources. | TBD | TBD |
| Record and post all talks, seminars, and presentations to website. | TBD | TBD |
| Identify two grand challenge problems to post on website. | TBD | TBD |
| **CSF: Bridge the language barrier that divides different research disciplines.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Develop a thesaurus and/or other immersive applications for commonly used terms in the different disciplines. | TBD | TBD |
| Create a wiki space for expert question and answer interaction. | TBD | TBD |
| Develop two short courses per year in different areas. | TBD | TBD |
| **CSF: Extend beyond our comfort zone in order to take risks and experiment with new collaborations and possibilities.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Write Science or Scientific American article in two years or less on the Science of Information and the Center’s point of view. | TBD | TBD |
| Make a brochure/website of research interests and expertise of all Center participants in order to identify potential collaborations. | TBD | TBD |
| Make available three datasets per year fro the development of theoretical methods. | TBD | TBD |
| Pair up senior investigators with junior faculty to provide mentoring. | TBD | TBD |
| Initiate 5 new collaborations through joint supervision, student exchange, joint publications, and/or presentations. | TBD | TBD |
| Formulate 2-4 research problems for interdisciplinary teams to coalesce around. | Within 18 months. | Andrea Goldsmith and David Tse |
| **CSF: Secure additional funding for interdisciplinary activities in Science of Information.** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| Identify funding sources that will support administrative and other coordinating staff positions. | TBD | TBD |
| Invite directors of group/agencies of extramural funding for initiating new research. | TBD | TBD |
| Develop 4-6 joint proposals for external funding. | TBD | TBD |
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| **Ethics Goal Statement** | | |
| Implement a multidisciplinary and multi-institutional program to inform and guide all members of the Center on the ethical and responsible conduct of scientific research. | | |
| **SMART Objectives** | | |
| TBD | | |
| **CSF: To be developed** | | |
| **Action** | **Completion Date** | **Point of Contact** |
| TBD | TBD | TBD |