

October 11, 2001

Dear Teachers,

On behalf of the Computer Science and Engineering Department at the University of Nebraska, Lincoln, NE, we are pleased to announce the Fourth Annual GEM Team Writing Contest, sponsored by a seed grant from the National Center for Women and Information Technology (NCWIT) and the Union Pacific.

The project, GEM, which stands for **Girl Empowerment and Mentoring for Computing**, aims to inspire middle and high school girls towards computing in post-secondary education by (1) empowering them with skills and interest for CS and IT, and (2) mentoring them to improve their self-efficacy and motivation for a career in CS and IT.

Accordingly, the goal of the contest is to encourage female middle and high school students to learn about information technology (IT) and computing via three important activities: (1) working with a “Big Sister” at UNL who will mentor the participants, (2) working in a team with female students from other schools, and (3) investigating the use of IT and computing in real-world applications. This contest will allow young female students to learn from their mentors about life as a student at UNL and as a CS student, learn how to work as a team with teammates from other parts of the state of Nebraska, and learn how to investigate a technical topic and write cohesively and engagingly about their findings. Essays will be judged on a variety of criteria and winning teams will be awarded with prizes and scholarships. Our goal supports the mission of NCWIT, the major sponsor of this program, to ensure that women are fully represented in the influential world of information technology and computing. *Please see the side bar for why this issue is important.*

Further, as our world is rapidly becoming digital and computing is increasingly pervasive and ubiquitous, it is essential for all students, regardless of majors, to have an appreciation for computational thinking—just as we require all students to have mathematical thinking—and an ability for logical problem solving in topics ranging from sciences to music, from writing to art.

Why Women in IT?

- **Innovation and competitiveness.** Innovation thrives with a diversity of ideas and input. As IT becomes a commodity in an increasingly global society, what will distinguish U.S. performance? Women can, and must, play an important role in IT innovation if the U.S. is to remain competitive.
- **Jobs.** U.S. Department of Labor projections forecast that our economy will add 1 million professional IT jobs by 2014. In the aftermath of the dot-com bust, however, the perception of a job shortage has caused a sharp decline in enrollment at computer science programs. With the female labor force growing at a faster rate than the male, we must capitalize on women's value in our IT workforce.
- **Social impact.** From airbags to voicemail to medical advances, we've seen the negative consequences of products and services designed without women's participation. As technology becomes exponentially more pervasive in our lives, we need to ensure that it is created by as broad and diverse a population as the one it serves.

Therefore, participating in a contest like the GEM Team Writing Contest can open up new opportunities and expose your daughter to exciting ideas in the IT and computing world, and take a first and key step towards a successful post-secondary education and professional career down the road.

We will also make available the winning essays in the form of online learning objects, published through our website that you will be able to use in your classrooms. For example, if a team chooses to write about the use of data mining in the field of genomics, then you will be able to use the winning content in your biology class; if a team chooses to write about visualization in hydrology, then you will be able to use it for your geography or geosciences classes; and so forth. We also will be able, when feasible, send our mentors out to visit your school to give a presentation and conduct a mini-lecture with your students (female and male) about IT and computing and their use in specific applications.

In conclusion, we would like to strongly and passionately urge you to encourage your female students to participate in the contest and to talk to their parents about the contest.

Please visit our project website at <http://cse.unl.edu/gem> for more information and please feel free to contact us if you have any questions.

Sincerely,

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