Students honored in VAST Challenge

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UIC computer science associate professor G. Elisabetta (Liz) Marai loves to inspire and educate next-generation computer scientists. For several years, she has selected the best and brightest undergraduates from her fall and spring courses and, pending financial support, offers them summer research experiences and extracurricular activities to accelerate their knowledge of visualization and visual analytics technologies and techniques.

Earlier this year, Marai reached out to computer science faculty affiliated with the Electronic Visualization Laboratory (EVL) to ask if they would join her in hiring undergrads on grants, with funding provided by the NSF Research Experiences for Undergraduates (REU) program or private donors. While the students would be paid to work on a variety of projects, Marai provided them with extracurricular work — participating in the 12th Visual Analytics Science and Technology (VAST) Challenge, hosted annually by the international IEEE Visualization conference.

This year’s VAST Challenge received 56 submissions from individuals and teams in industry, government and academia. Two of the EVL students received Honorable Mention awards.

Students are presenting their work at the VIS conference, which began Sunday and continues through Oct. 6 in Phoenix.

The challenge focused on a fictitious mid-size city with a small industrial area located near a wildlife preserve, where it was discovered that the population of a specific local bird was decreasing. Each of the VAST problems provided different datasets. For each problem, the goal was to design and develop specific visual analytics tools to help the local ornithologist determine what was happening to the birds.

The sophomores and juniors worked together in teams and were mentored by Marai’s Ph.D. and master’s students, as well as other EVL faculty, staff and students.

Winning projects:
Honorable Mention for Clarity in Visual Communication
“Mining Factory Pollution Data through a Spatial-Nonspatial Flow Approach”
UIC participants: Undergraduates Joshua Castor, Joseph Borowicz and Andrew Burks; graduate students Manu Thomas and Timothy Luciani; and faculty mentor Liz Marai.

Honorable Mention for Good Interactive Image Explorer for Temporal Analysis
“Web-Based Interactive Image Explorer for Temporal Analysis of Satellite Images”
UIC participants: Undergraduates Vijayal Mahida, Bartosz Kupiec and Andrew Burks; graduate student Timothy Luciani; and faculty mentor Liz Marai.

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