

EXECUTIVE SUMMARY

A MESSAGE FROM NJIT PRESIDENT ROBERT A. ALTENKIRCH

*"Somewhere, something incredible
is waiting to be known." – Carl Sagan*

The discovery of new knowledge is an experience shared by faculty and students on all levels at NJIT. As presented in this issue, it is also a quest that can span the investigation of carbon nanostructures created in the laboratory and research into the protection of vital natural resources.

The recipient of the NJIT Overseers Excellence in Research Prize and Medal

for 2011, Professor Haim Grebel, works in the world of the incredibly small, in the realm of structures measured against the dimensions of a few atoms. But the significance of the research that he has pursued for decades is very large, offering the promise of advances in computing, communications and medicine – as well as breakthroughs yet to be gleaned from further fundamental discoveries.

On a scale that is much different, Zeyuan Qiu, associate professor of environmental science and

policy, works with a palette of data gathered from the watersheds of New Jersey and other states. His aim is to help formulate policies for resource management that both protect the natural environment and accommodate essential uses, whether for agriculture, suburban residential growth, or urban economic development.

Equally important for Haim Grebel, Zeyuan Qiu and all their faculty colleagues is communicating the excitement of research and discovery to students. Hands-on engagement in original research has long been a hallmark of graduate study. But today, through various programs, NJIT undergraduates are being challenged to expand the boundaries of knowledge in many fields.

"An Edge on Success," for example, highlights the innovative summer undergraduate research program introduced by Ian Gatley, provost and senior vice president for academic affairs. To participate, students must design a research project and prepare a proposal that cogently outlines what the project could yield by way of findings and why the results envisioned would be important.

This ten-week experience is an in-depth grounding in the realities of scientific research, including the need to justify funding. And like the other research opportunities available to NJIT undergraduates, it also seeks to inspire, to give students a genuine sense of the exhilaration that is always part of the search for what astronomer and educator Carl Sagan called "something incredible."



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