

Q&A

Farzan Nadim

Co-director of the Institute for Brain and Neuroscience Research at NJIT

As an NJIT faculty member for 20 years, how has the university evolved in general with respect to research?

The short answer is that our evolution has been very positive. I was the first tenure-track member of the Department of Biological Sciences, which is federated with Rutgers-Newark. NJIT's biomedical engineering program, today a department, was also at a formative stage. Each department now has a dozen or more tenure-track faculty and very substantial funding for research.

NJIT has made the same investment in every area of science and technology, and just as importantly, in areas that include the humanities, design, computing and management. Our diverse strengths make us very attractive to industry as a source of assistance with numerous commercial challenges. The continuing evolution in research, which is closely linked to our educational commitments, is very exciting.

In what way does the new Institute for Brain and Neuroscience Research, the IBNR, represent a major stage of this evolution?

The IBNR is a major advance because it is NJIT's first inter-college institute, focused on both research and education in basic and applied science. The IBNR brings together faculty and students from all disciplines to promote interdisciplinary research in neuroscience and traumatic brain injury. This is our primary goal in the promotion of the basic science and engineering involved and, we hope, in therapeutic progress too.

How does the IBNR's research mission complement NJIT's undergraduate and graduate educational mission?

In a general sense, it reflects NJIT's strategic commitment to education as well as research in the life sciences. One part of our IBNR vision is a truly interdisciplinary Ph.D. program, a program to educate students in areas that include neuroscience and neural engineering, also computational and mathematical neuroscience. I really don't see anything like this elsewhere in the country. I believe the IBNR will lead in preparing the innovators who will build the therapeutic and engineering solutions needed to help people with injuries and disease.

NJIT also encourages all undergraduates to take advantage of opportunities for research as part of their experience at our university. Like many faculty in biology and biomedical engineering, I have already worked with undergraduates on various research projects. The IBNR will expand the opportunities for interdisciplinary learning that, increasingly, is essential for academic and career success. For example, biomedical engineering students will be able to interact with biology faculty and math faculty. Similarly, biology students will interact with biomedical engineering and chemistry faculty. Our goal is the richest possible educational experience for all students interested in brain and neural science.

To what extent is the IBNR engaging with other institutions to achieve its goals?

Close cooperation with similar institutions, especially in New Jersey, is very important. Even before the IBNR was established, we worked with the Brain Health Institute at Rutgers, the Neuroscience Institute at Princeton, and the Kessler Neuropsychology and Neuroscience Laboratory. Our Princeton colleagues, for example, were interested in NJIT's computational and engineering strengths, and Rutgers colleagues were interested in scientific and educational collaboration, areas of shared concern that continue to be very significant. With the establishment of the IBNR, we will now have the organization and even more comprehensive resources to collaborate as an equal partner in raising the profile of NJIT and New Jersey in neuroscience.

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