CCNY/COLUMBIA PARTNERSHIP RECEIVES NSF GRANT FOR Ph.D. FELLOWSHIP PROGRAM

City College is the lead institution in a partnership with Columbia University that has received a National Science Foundation Integrated Graduate Education and Research Traineeship (IGERT) grant to establish an interdisciplinary Ph.D. program in soft materials.

Albert Einstein Professor of Science and Engineering Morton M. Denn, who is a member of CCNY’s Chemical Engineering and Physics Departments and Director of the College’s Benjamin Levich Institute for Physico-Chemical Hydrodynamics, will head the partnership.

Under the five-year award, CCNY and Columbia University will share a $2.9 million grant that will offer doctoral research fellowships for the study of Multiscale Phenomenon in Soft Materials. IGERT Ph.D. students will register in an engineering or science department at the two neighboring institutions in Upper Manhattan, whose faculty are among the leaders in teaching and research in the field. The grant includes $100,000 for each institution for infrastructural laboratory equipment.

Soft materials are organic media in the form of complex fluids or soft solids that organize on supramolecular length scales via weak interactions. They are ubiquitous in nature and in manufactured products; typical examples include food and consumer products, thin polymeric films for sensors, organic blends for electronic displays and high-performance materials, and natural and artificial tissue.

The CCNY faculty participating in the interdisciplinary program are associated with the Levich Institute. Dr. Denn’s team comprises: Dr. Alexander Couzis (Chemical Engineering); Dr. James J. Feng (Mechanical Engineering); Dr. Joel Koplik (Physics); Dr. Hernan Makse (Physics); Dr. Charles Maldarelli (Chemical Engineering); Dr. David S. Rumschitzki (Chemical Engineering), and Dr. Mark Shattuck (Physics).
According to Dr. Denn, the Ph.D. program will be built around joint seminars, collaborative thesis research, and a novel core of joint course offerings, including two laboratory courses.

Students will also complete a three-month summer internship in an industrial laboratory. Participating companies include Air Products, ATOFINA, Cabot Corporation, Dupont, ExxonMobil, Glaxo, and S.C. Johnson.

In addition, senior graduate students will serve once as a teaching assistant for a soft materials course.

“Our vision is a Ph.D. program in soft materials that will bring together students and faculty from the engineering and natural sciences,” Dr. Denn said.

“It will reinforce the core of the traditional discipline with an interdisciplinary coursework and research experience that encompasses the scope of today’s problems in soft materials, and provides the intellectual foundation for addressing future problems,” he added.

The IGERT fellowships will offer annual stipends of $21,500 (the current NSF rate), plus tuition and health insurance.

Dr. Denn, who will co-head the fellowship program, is a distinguished chemical engineer whose numerous honors include membership in the National Academy of Engineering and the American Academy of Arts and Sciences.

He has also been awarded a Guggenheim Fellowship; a Fulbright Lectureship; the Bingham Medal of the Society of Rheology; the Chemical Engineering Lectureship Award of the American Society for Engineering Education; and the Professional Progress, William H. Walker, Warren K. Lewis, and Institute Lectureship Awards of the American Institute of Chemical Engineers (AIChE).

A graduate of Princeton University (1961) and the University of Minnesota (1964), he has been a visiting professor at the Technion - Israel Institute of Technology, the California Institute of Technology, the University of Melbourne, and the Hebrew University of Jerusalem.

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Prior to coming to City College, he was Chairman of the Chemical Engineering Department at the University of California, Berkeley, and the Head of Materials Chemistry at the Lawrence Berkeley National laboratory.

Dr. Denn is the author of five textbooks and over 200 book chapters and research papers. He was the Editor of the *AIChE Journal* from 1985 to 1991, and he has been the Editor of the *Journal of Rheology* since 1995.

City College is the engineering and science flagship of The City University of New York.

The CCNY Chemical Engineering Department was rated 19th nationally in the last National Research Council survey of graduate programs, while its soft materials faculty has brought in over $1 million dollars in major equipment grants in the past few years.

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