

conductor Manufacturing in Singapore and Applied Materials in the U.S.

Some companies may require the Singapore students to return to work for a specified period of time (two years) in return for sponsoring student participation in the projects. In practice, however, many of the companies do not require commitments, and the employment of graduates by the companies is mutually agreed upon.

Through financial incentives, staff members are encouraged to participate by visiting the companies in order to discuss and formulate the projects and to provide feedback on the project work. During these visits, staff members establish contacts that eventually may provide research connections. Companies may require participating students and staff members to sign a deed of confidentiality.

### CHALLENGES AND FUTURE PLANS

The MSc program is now in its fourth year and has been positively received by students, sponsoring companies, and both institutions. Survey data and informal feedback from participating companies indicate that the program is of benefit to all stakeholders. Students from both countries learn a great deal about living and working in different cultures and applying skills learned in the classroom to real plant problems. The corporate partners appreciate contact with, and the projects carried out by, a group of highly motivated and unusually adventurous students. Each institution, however, also recognizes the amount of effort required to coordinate the academic activities and the planning and management of projects with industrial sponsors. A staff member has been appointed by each department to serve as a coordinator for the program and to liaise with the students, university administrators, and industrial sponsors.

The coordinators also assist students in the procurement of travel documents and housing arrangements. While the

students are in Singapore or at UIUC, they are eligible for student housing. During the internship in various parts of the U.S., however, they have to make their own housing arrangements, although some companies provide assistance in this respect. The "buddy system," whereby participating students from the host university play an active role in helping visiting students settle in, alleviates some of the difficulties.

Both institutions are now in the final stages of working toward awarding a joint MSc degree for graduates of this program. The success of the program sets the stage for further collaboration in chemical engineering between the two institutions. In January of 2001, the departments jointly organized an NUS-UIUC Joint Symposium on Globalization of Chemical Engineering Research where intensive discussions were conducted in an effort to design a joint PhD program. There is already collaborative research going on between chemical engineering faculty members at NUS and UIUC. A joint PhD program will, however, formalize and further enhance this collaboration, providing visibility for the quality research that can be done with the skills, resources, and ideas of NUS and UIUC faculty members in a combined effort of this type.

This program is being implemented with a shared commitment to excellence in education and with research based on collaborative efforts—where the interests, capabilities, and resources of each institution combine to offer unique and advantageous opportunities. □

### ChE books received

*Turbulence Structure Vortex Dynamics*, edited by J.C.R. Hunt and J.C. Vassilicos; Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211; 306 pages, \$80 (2001)

*Foundations of Spectroscopy*, by Simon Duckett and Bruce Gilbert; Oxford University Press, 198 Madison Avenue, New York, NY 10016-4314; 90 pages, \$12.95 (2000)

*An Introduction to Magnetohydrodynamics*, by P.A. Davidson; Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211; 431 pages (2001)

*Organotin Chemistry*, by Alwyn G. Davies; VCH Publishers, Inc., 337 7th Avenue, New York, NY 10001; 327 pages (1997)

*Stereochemistry of Coordination Compounds*, by Alexander von Zelewsky; John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012; 254 pages (1996)

*Hydrocarbon Resins*, by R. Mildeberg, M. Zander, G. Collin; John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012; 179 pages \$140 (1997)

*An Introduction to Turbulent Flow*, by Jean Mathieu and Julian Scott; Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211; 374 pages, \$90.00 (hardback), \$39.95 (paperback); (2000)

*Computational Analysis of Biochemical Systems*, by Eberhard O. Voit; Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211; 531 pages, \$130 (hardback), \$49.95 (paperback) (2000)

**TABLE 5**

**List of Participating Companies in NUS-UIUC MSc Program**

<u>Company</u>	<u>Years Participated</u>
Chartered Semiconductor Man.	2000-01, 2001-02
DuPont	1999-00, 2000-01
Applied Materials	2001-02
Mobil/ExxonMobil	1999-00, 2000-01, 2001-02
Glaxo-SmithKline	2001-02
Kraft	1998-99
TECH Semiconductor	1998-99
Shell	1998-99, 2001-02
Schering-Plough	1999-00, 2000-01, 2001-02
Honeywell	2001-02