

Rao: “The sun is rising in the East for me”

Longtime ECE Associate Head takes on a new challenge

By Jamie Hutchinson

After 19 years as ECE Associate Head for Instructional and Graduate Affairs, N. Narayana Rao, the Edward C. Jordan Professor of Electrical and Computer Engineering, has hung up his administrator’s hat and begun transitioning to a new mode of service to both U of I and his homeland of India. Last summer, he visited India’s Amrita University to teach a five-week introductory electromagnetics course that was a “first” in Indian higher education. This fall, Amrita named Rao its first “Distinguished Amrita Professor,” an honorary title that will allow him to continue serving both Amrita and Illinois.

Rao’s summer course was the inaugural offering under the Indo-U.S. Inter-University Collaborative Initiative, an agreement signed in December 2005 by the Indian government, Amrita University, and 15 U.S. universities. Under the agreement, U.S. science and engineering faculty teach courses to Indian students using Amrita’s e-learning setup and the Indian government’s “EDUSAT” satellite network. Hundreds of students attended Rao’s broadcast lectures at 22 centers across India. It was the first time students taking a satellite-based course in India could participate interactively with their teacher. A student hundreds of miles away from Amrita could send a signal to ask a question, then stand up and be seen and heard asking the question in real time on monitors at other facilities in the network.

Entitled “Electromagnetics for Electrical and Computer Engineering,” the course was offered in memory of longtime ECE department head Edward C. Jordan, who wrote the electromagnetics textbook that Rao used as



Amrita students and staff with Professor Rao (circled) and (to his right) his daughter Vanaja Sudhakar and wife Sarojini.

a college student in the 1950s at the Madras Institute of Technology, and who hired Rao to the ECE faculty in 1965.

ECE Professor Jose Schutt-Aine offered the second course in the Indo-U.S. collaboration. His course on solid-state devices and circuits began a week later than Rao’s course.

Another highlight of Rao’s course was the new “Indian Edition” of his highly regarded textbook, *Elements of Engineering Electromagnetics*, printed by Pearson Education India especially for the event. The Indian Edition includes a special message from India’s President Dr. A. P. J. Abdul Kalam; a new preface by Rao; forewords by UIUC Chancellor Herman, Provost Katehi, and ECE Professor Nick Holonyak Jr.; and an introductory chapter called “Why Study Electromagnetics?” offering 18 very thoughtful responses to that question, most of them provided by ECE faculty members.

“I fell in love with the place, the ambience of it,” said Rao of Amrita, which is located in Ettimadai, near the city of Coimbatore in the southern state of Tamil Nadu. His wife

and daughter, who accompanied him on the trip, felt the same way.

The plan for next summer is to teach two courses, the basic EM course and another on lines, fields, and waves. Rao hopes to make changes that will encourage students to take greater advantage of the interactivity of EDUSAT. “The culture is different, and students are hesitant to ask questions. I want to change that attitude because it’s the best way you can learn.”

Rao does not know whether his Amrita lectures will lead to a permanent relocation to India. For now, he’s content to serve as a kind of ambassador. “I always carry this place with me,” he said of Illinois. “I’m just taking it to a greater level, on the other side of the world, where the sun is rising in the East for me.”

He does know that he is not retiring. “I never got tired, so how can I retire?” he joked, adding “This is only the beginning.”