

Arts and science in one package

By GARY KIRKLAND

Sun staff writer

A poem written by University of Florida Professor Dinesh Shah is titled "Unity and Diversity" — the title also describes his career as a poet, teacher and award-winning scientist. Shah's scientific research has helped cut the waiting time at the copy machine, unlock oil reservoirs and developed artificial tears. But in that diversity is a thread of unity. To see it, Shah said, you need only look to the dancing rainbows on a soap bubble.

"Philosophers, engineers and scientists, everybody over the last few hundred years have been intrigued by soap bubbles," he said. "The same tension that makes a soap bubble round is found on any surface."

Whether it's the tension between the liquid on the surface of the eyeball and eyelid, surface tension on a drop of oil far below the earth, or the reaction between the toner and paper in the copy machine, it falls under Shah's study of "surface science."

The diversity in Shah's pursuits is also demonstrated in his job assignments at UF. He works in the anesthesiology and biophysics departments and heads the chemical engineering department.

"That's how I became jokingly known as a professor of ABC," he said with a laugh. "It's very symbolic of my approach to any science: I try to start from a very elementary foundation and then build upon it."

Because of his work, Shah was recently named Florida scientist of the year by the Museum of Science and Industry in Tampa. He will receive the award, along with a \$1,000 prize, on May 5 in Tampa. Shah

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learned of his award last Thursday when he received a phone call from the museum. "I was thrilled, I knew there would be stiff competition, he said. "It makes me feel really good."

Longtime co-worker professor Ray Fahien pointed to one of Shah's strengths. "He's an idea man and a doer," Fahien said. "That's a rare combination."

Dominick Benedetto, an eye surgeon in Bayonne, N.J., helped Shah with research on bacterial toxins in the 1970s. He said that while other researchers were looking at organisms with millions of cells, Shah's study of surface science made it possible to reduce the scope of study to a single molecule. He said Shah's hands-on approach to research separated him from other scientists.

"He enjoys the thrill of discovery so much he doesn't want to sit behind a desk looking at data," Benedetto said.

Benedetto said Shah's work habits haven't changed in the last 18 years. He still likes to work beside his students at the laboratory bench, which according to Benedetto, is comparable to an automobile engineer also working on the assembly line. He said that a visiting high school student gets the same personal attention from Shah as a doctoral fellow.

"He has the ability to make his science fun," Benedetto said. "And he has the ability to put the theory into application."

Growing up in a poor family in small town in India, Shah has enjoyed global success. But he doesn't consider himself a self-



JOHN MORAN/The Gainesville Sun

Dr. Dinesh Shah, who was named Florida scientist of the year last week, came to UF in 1970.

made man. "There is something about fate," he said. "Over the years I'm convinced you meet total strangers who play an important role in your life."

He can point to several personal examples.

When he left home to attend the University of Bombay, he didn't have enough money to pay his expenses. Luckily he knocked on the right door looking for a job.

"It was bold and desperate," he said of knocking on the door of Mandhuriben Desai. "My feeling was the worst they could do was say no."

He said he recognized Desai's name from her family's involvement in India's independence movement, but he'd never met her. He got a job tutoring without pay in the household. But, in exchange, Desai agreed to pay for all of Shah's college expenses.

It was the beginning of a series of fateful events.

Shah changed his studies to surface science at Columbia University in New York after getting interested in the field while working a summer job. He met his wife, who is from the same region in India, when he went to Michigan for a one-day visit with a former roommate.

Getting a job at UF took some luck and cooperation between departments. Shah applied to both the anesthesiology and chemical engineering departments. Anesthesiology department head Jerome Modell said he was impressed with Shah, even though his degree didn't appear to fit either department.

"He had research talents and research See **SHAH** on page 2D

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interests that spanned both departments," Modell said. "They had the (office) space and we had the money, so we hired him jointly."

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Coming to Gainesville required some getting used to, but Shah had made adjustments before.

From his small hometown he'd gone first to Bombay and then to New York City. It's a move he calls "the shock of my life." And he took some ribbing from his brother and brother-in-law when he came to the hot and sticky small town of Gainesville in the summer of 1970.

"They were saying it was a jungle," Shah recalled. "But for me this is an ideal campus with all 18 colleges located on the same campus."

Shah's office on the fourth floor of the chemical engineering building shows an interesting marriage between East and West — a diversity of cultures under one roof. On his desk a textbook he helped write sits beside an autobiography of Mahatma Gandhi.

A hand-written sign in thick, black Sanskrit letters hangs on one wall. Shah explains that the writing is a 5,000-year-old line of Hindu scripture: "You have a right to work, but you do not have the rights to the fruits of your work. Let not the desire of fruits always guide your work." The spiritual message hangs just around the corner from a large set of Alaskan deer horns given as a gift by a former student.

"I have soft feelings for both these countries," he said. "I'm trying to combine the best of both cultures."

The pictures behind his desk document a tenure that has spanned three university presidents while Shah's hair has turned from solid black to silver. The wall is also covered with plaques and awards, but he considers a small glass framed medallion sitting at the edge of his desk his most precious. It reads "1985 Teacher Scholar of the Year."

"This medallion really is the highest faculty honor this university can give," he said as he picked it up.

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Modell said Shah is in demand around the world for teaching and lectures for colleges and industry.

"He's truly an expert in his field — unquestionably," Modell said. "He's probably the most humble and grateful person I've ever met."

"He's business-like, but he does it with a smile," colleague Ray Fahien said.

Shah acknowledges he could earn more money working in private industry, but his heart is in teaching.

"What I like about academia is freedom, freedom to choose your own destination," he said.

He also happens to like his students.

"I don't have just two kids of my own, all my former students are my kids," he added.

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Shah became an American citizen in 1976. His time away from work with his wife Suvarna and daughter Bijal and son Prerak still has a flavor of India. He likes to invite visiting musicians from India to his home and frequently hosts 50 to 70 friends for concerts.

"That's my good time, to really listen to the music, full of good poetry and good imagination," he said.

Meals in the Shah home follow the vegetarian tradition of India. There are some "American" dishes like eggplant parmesan, cheese burritos and "good old pizza."

He also spends his time at home writing poetry and song lyrics in his native language, Gujarati. Shah said his poetry shows the mark of a scientist — looking at observations in nature, asking questions and looking for answers.

"Traditional poets with a liberal arts background wouldn't think in the same manner," he explained.

Shah's writing doesn't just remain on the pages of his private diary. His words came alive in 1986 when he returned to Bombay for a benefit concert that featured his poetry and song lyrics. The money raised went to the scholarship fund started by his benefactor, Mrs. Deasi.

"We have a saying in India that what one should remember is you are eating the apples which are planted by somebody else," he said. "So everyone must plant there own apple trees for others to enjoy."

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