

Tom Love's resume identifies him as a Halliburton professor of engineering and George Lynn Cross research professor of aerospace, mechanical and nuclear engineering and contains research and teaching accomplishments which would be the envy of any academician. With such a distinguished record, he might be forgiven for resting on his professional laurels. Resting, however, is not what Love does best.

After 28 years of involvement in every aspect of University life, he now has assumed the sometimes gratifying, sometimes frustrating task of leading the Norman Campus Faculty Senate. Number one on the agenda for the new senate chair is to improve communications among his colleagues on the faculty and with the administration, regents and general public. He admits that there have been some problems in that area.

"We are all busy with our own little narrow area of research and special area of teaching, but communicating within our departments just isn't enough," he contends. "We get to thinking that our particular discipline is the reason we're here, when in reality, it's the entirety of the University.

"The faculty has many different ideas," he continues, "and I see the senate as sort of a focal point — a forum where we can discuss our ideas with each other and then make those recommendations and needs known to the administration and the public."

Love's own career at the University is an illustration of the diverse interests at work. Although his chief research interest is radiative heat transfer, or energy transport, he has always been busy in related projects, one of which drew him back into the classroom as student at the OU Health Sciences Center.

In the early 1970's, Love became involved in Dr. JoAnn Haberman's HSC project in thermography, the use of skin temperatures to diagnose disease. Taking a sabbatical leave from his classroom duties in Norman, Love accepted a National Institutes of Health fellowship at HSC and eventually helped write the proposal which gained for the Oklahoma City campus one of the 27 breast cancer screening



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centers in the nation.

"I took anatomy and physiology right along with the med students and some of the graduate students," he recalls. "I had never had any life sciences, and I took them for credit right along with everyone else. It was interesting to be a student competing with other students again. It's exciting to learn more about the human body, and heat transfer is a very critical part of the human physiology."

A totally different aspect of heat transfer currently has Love involved in research of radiative properties of insulations, which has application in both commercial production of insulations as well as in the space industry. "In glass fiber insulation," he explains, "the values are not fixed. No

one has been successful in measuring radiative properties using sophisticated analytical methods to predict the thermal radiation components, an important part of the radiation, particularly in fiberglass insulation."

One area of Love's study of heat transfer relates directly to alternative energy resources. He has researched a potential energy saving procedure which could be used by institutions such as the University to tap geothermal energy to heat and cool.

"It turns out that you can get energy from the earth any place you need it, but it's expensive," he claims. "It would take about a \$20 million initial investment, but then we'd be able to heat and cool the University for 20 or 30 years."

Love's plan would be to drill two 18,000-foot wells to locate a series of fractures through which the earth's geothermal water would circulate and return to the surface to be passed through a heat exchanger for heating purposes and an absorption unit for cooling.

The professor admits that it is not easy to convince everyone of the potential benefits of such a system, and with the high initial costs, the government would have to take the risks, an unlikely prospect right now with energy funding down. Pursuing such elusive goals is what spurs research on, however, and what keeps Love in the business.

"We are at the edge of knowledge," he says. "That's one of the purposes of the University."

Love's most recent professional honor came from the American Institute of Aeronautics, which cited him for his accomplishments in thermophysics, specifically his "fundamental contributions in radiative heat transfer with specific reference to his landmark studies in the analysis of absorbing, emitting and scattering media."

"It's quite an honor," Love admits. "Within the group of people that work in this area, it's one of the top honors. It's probably not really deserved, but it makes you feel good to know that your colleagues think enough of you to honor you."

—MARGARET FRENCH