

Statistical Advances Benefit Students, Faculty

Statisticians summarize, analyze, and interpret data to help researchers understand information and make effective decisions. Dr. Andy Chang, associate professor, Department of Mathematics and Statistics, points out that statistics are important to all aspects of human life; they are needed in almost all research that involves data collection.

Statistics Curriculum

Statistics faculty in the Department of Mathematics and Statistics have formed a Statistics Committee to strengthen the statistics program and to bring statistics to the forefront at YSU. The committee is composed of Dr. Chang, chair of the committee; Dr. John Holcomb, assistant professor; Dr. Nathan Ritchey, professor; and Dr. Gary Stanek, associate professor.

Holcomb says that the committee has proposed many graduate and undergraduate statistics courses, including courses in theory, research design, and applications. The committee has also developed a statistics option in the master's program and a minor in statistics.

Within the past three years, the number of students interested in statistics has increased greatly. Many YSU students have presented their statistical research at professional conferences.

The committee is also involved in a consortium at Northeastern Ohio Universities College of



(Clockwise from left) Dr. John Holcomb, Dr. Andy Chang, Dr. Nathan Ritchey, and Dr. Gary Stanek, members of the Statistics Committee, have created a statistics option for the Master's degree and a statistics minor.

Foundation for a computer classroom. This classroom has enabled faculty to improve statistics courses and to create more research opportunities for students.

Statistical Research

Researchers in "almost every department at YSU" use statistics, according to Stanek. Statistics faculty help faculty and students design and analyze this component of their research.

For instance, Holcomb worked with student Dara Badger to analyze data on sentence placement in English prose. In collaboration with Dr. Joan Boyd, associate professor, Department of Health Professions; Dr. Ralph Rothenberg,

tion and Theater, to analyze radio station transactions. Chang, with students Joyce Cannone and Mike Thomas, has also worked with Dr. Qi Jiang, assistant professor, Department of Sociology and Anthropology, to analyze social statistics.

As part of a breast-cancer research team at St. Elizabeth's Health Center, Ritchey uses statistics to "mathematically grow tumors." By simulating patients in different stages of breast cancer and then analyzing the data, Ritchey hopes to help physicians and researchers develop preventive measures against breast cancer. His research has been published in medical journals.

Building Bridges

Chang explains that before performing data analysis, one must make sure the data are properly collected. Good statistical studies require careful planning and design, cooperation, information sharing, and continuous learning.

Through collaborative projects, the statistics committee learns what students, faculty, and industry need and develops courses accordingly.

Statistics faculty members plan to establish a Center for Statistics at YSU. The center will assist students and faculty in statistical education and research. Holcomb notes, "We want to have a vibrant statistics program at YSU to serve the larger community."

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—Dr. John Holcomb

Medicine. Members discuss all aspects of statistics, including the statistics curriculum for the medical-school program.

Computing is a crucial element for statistical education and research. Through faculty members' efforts, the Department of Mathematics and Statistics received a grant from the National Science

South Side Hospital; and Dr. James Demidovich, Health Care Providers, Holcomb is directing a group of students working on a study known as the Osteoporosis Research Initiative project.

Chang, along with student Joe Bartholomew, worked with Dr. Linwood Hagin, assistant professor, Department of Communica-