

THE M. NAFI TOKSÖZ FELLOWSHIP FUND

HONORING THE FOUNDER OF THE EARTH RESOURCES LABORATORY

The oil crisis of the 1970's brought home to Professor M. Nafi Toksöz the importance of growing global energy demand and the energy security of the United States. "I felt that MIT should and could play an important role," Professor Toksöz said. This led the geophysicist to launch the Earth Resources Laboratory (ERL) in 1982. "It was important to have a focused center," he said.

The lab develops techniques for subsurface imaging and characterization, and applies these to resource development, including oil and gas, water, geothermal energy and waste repositories. Since its founding, it has become MIT's center for subsurface science and is now an important contributor to the MIT Energy Initiative.

To honor Professor Toksöz, the Department of Earth, Atmospheric and Planetary Sciences (EAPS) has established the M. Nafi Toksöz Fellowship Fund. The graduate fellowship will continue Professor Toksöz's legacy of nurturing young researchers. Over the years, Professor Toksöz and ERL have had a far-reaching influence on applied geophysics, and Professor Toksöz's former students include a "who's who" of leaders in the field in both industry and academia.

MENTOR AND ROLE MODEL

"Professor Toksöz's wide-ranging interests set him apart from other leading academics in the field of applied geophysics," said Arthur Cheng Sc.D. '78 (XII), Chief Scientific Advisor at Halliburton. "And that is reflected in the kinds of careers his students have ended up with," he said. "He trained them to not just have depth but also breadth, so when

they got into industry they were able to handle a large range of problems."

Professor Toksöz encouraged students to pursue interesting problems in seismology and helped them secure funding for their research, according to Cheng and Jie Zhang Ph.D. '97 (XII), Professor of Geophysics and Director of the Geophysical Research Institute at the University of Science and Technology of China (USTC), and Founder and Chairman of GeoTomo. "He also helped me and other students find opportunities to work with industry and government agencies during our student careers," said Zhang.

Professor Toksöz was born in the seismically active country of Turkey. He earned his undergraduate degree in geophysics at the Colorado School of Mines in 1958, and received his doctorate under the tutelage of renowned geophysicist Frank Press at Caltech in 1963. Professor Toksöz's early research interests included earthquake seismology, plate tectonics and the structures of planetary bodies. He worked on the Apollo program, guiding the deployment of the seismic sensor network on the Moon.

Professor Toksöz developed models of wave propagation in heterogeneous media, helped define the field of borehole acoustic logging, and advanced vertical seismic profiling (VSP) and cross-well seismology. Professor Toksöz was awarded the Seismological Society of America's Harry Fielding Reid Medal in 2006 and the Society of Exploration Geophysicists' Maurice Ewing Medal in 2010. Professor Toksöz retired from MIT in 2009 as the Robert R. Shrock Professor of Geophysics after 44 years on the faculty.

Zhang aims to replicate the broad-minded research and heartfelt mentorship Professor Toksöz brought to ERL at USTC's Geophysical



Professor M. Nafi Toksöz in the library of the Earth Resources Laboratory shortly after its founding in 1982.

Research Institute. "Today, as a professor and the head of a geophysics program in China, I realize how difficult it is to create such an environment," said Zhang. USTC is establishing a professorship to honor Professor Toksöz. Given the large number of successful students Professor Toksöz has had over the years, ERL alumni feel that a graduate student fellowship named after him is appropriate, said Cheng. "It reminds all of us that students are the main 'product' of MIT," he said. The goal is to raise \$1 million in endowment, which will support at least one student for an entire year forever. "In addition to honoring Nafi, an endowed fellowship will help ensure that EAPS remains a world leader in geophysics," adds Zhang.

Professor Toksöz' influence was also felt at MIT's Baker House, where he was housemaster, with his late wife Helena, from 1969-1980. During their 11 years there, they adopted hundreds of undergraduates, helping them adjust and thrive at MIT.



Professor Toksöz with his wife, Charlotte Johnson, and former graduate student, Yang Zhang, Ph.D. '10 XII.

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MIT's Department of Earth, Atmospheric and Planetary Sciences (EAPS) is pleased to announce the establishment of an endowed fund in honor of Professor M. Nafi Toksöz. Professor Toksöz has made major contributions to the science of geophysics throughout his more than 40 years as a professor at MIT. He is also the founder and former director of the Earth Resources Laboratory which, under his leadership, has become one of the preeminent applied geophysics labs in the world. Even greater than his scientific achievements is Professor Toksöz' work as an advisor to hundreds of undergraduate students, graduate students and research associates. In addition to his scientific guidance, Professor Toksöz has always taken a keen interest in nurturing the careers of his students and being a constant and supportive mentor throughout their lives.

IMPORTANCE OF GRADUATE FELLOWSHIPS

Graduate students play a vital role in EAPS by conducting advance research, teaching and mentoring undergraduates and helping to attract

world-class faculty. Fellowships allow us to bring the best young scholars to MIT, regardless of whether their skills and interests match those of a pre-existing government or corporate grant. Fellowships are especially important as a recruiting tool for first-year students, giving them breathing room to explore research interests and complete course requirements.

We invite you to join us in celebrating the achievements of Professor Toksöz by contributing to the M. Nafi Toksöz Fellowship Fund. Gifts in any amount are greatly appreciated. To give online, visit giving.mit.edu and enter the M. Nafi Toksöz Fellowship fund number 3311750 in the "search designations" box.

MORE INFORMATION

For more information on this fellowship or other giving opportunities in the Department of Earth, Atmospheric and Planetary Sciences please contact:

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Jie Zhang Ph.D. '97 (XII), Professor Toksöz, and David Johnston '73 (XII), Ph.D. '79 (XII) at the October 19, 2010 Earth Resources Laboratory reception during the Society for Exploration Geophysics Annual Meeting in Denver. The M. Nafi Toksöz Fellowship Fund was announced at this annual gathering to an enthusiastic crowd and as a complete surprise to Professor Toksöz.