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The George W. Woodruff School of Mechanical Engineering

Annual Distinguished Lecture

BIOGRAPHICAL SKETCH



Bernard Amadei is Professor of Civil Engineering at the University of Colorado at Boulder. He did his undergraduate work in Nancy, France, obtained his master's degree in Civil Engineering in 1979 from the University of Toronto, and his Ph.D. degree in Civil Engineering in 1982 from the University of California, Berkeley. His current interests cover the topics of sustainability and international development.

At the University of Colorado at Boulder, Professor Amadei directs a new program in Engineering for Developing Communities. Its overall mission is to educate globally responsible engineering students and professionals who can offer sustainable and appropriate solutions to the endemic problems faced by developing communities worldwide. He is also the Founding President of Engineers Without Borders - USA and the co-founder of Engineers Without Borders-International.

Professor Amadei is the recipient of several awards including the 2005 AAES Norm Augustine Award; the 2005 Hassib J. Sabbagh Award for Excellence in Engineering Construction (with EWB-USA); the 2006 Ralph Coats Roe Medal from the American Society of Mechanical Engineers; the 2007 Hoover Medal from AIChE, AIME, ASCE, ASME, and IEEE; and the co-recipient of the 2007 Heinz Foundation Award for the Environment. He was elected to the National Academy of Engineering in 2008.

Professor Amadei's work has been featured on National Public Radio, the Public Broadcasting System's *NewsHour*, and *Time Magazine* (U.S.). He is working on a new book titled: *Engineering With Soul*.

The Role of Engineers in Poverty Reduction: Challenges and Opportunities



Dr. Bernard Amadei

Founder, Engineers Without Borders-USA
Director, Engineering for Developing Communities Program, &
Professor, University of Colorado

Tuesday, September 9, 2008
11:00 a.m.

Ferst Center for the Arts

SYNOPSIS OF THE LECTURE

The Role of Engineers in Poverty Reduction: Challenges and Opportunities

In the next two decades, almost two billion additional people are expected to populate the Earth, 95 percent of them in developing or underdeveloped countries. This growth will create unprecedented demands for energy, food, land, water, transportation, materials, waste disposal, earth moving, health care, environmental cleanup, telecommunications, and infrastructure. The role of engineers will be critical in fulfilling those demands at various scales, ranging from remote small communities to large urban areas, mostly in the developing world. As we enter the first half of the 21st century, the engineering profession must embrace a new mission statement—to contribute to the building of a more sustainable, stable, and equitable world. In particular, we need to train a new generation of engineers who could better meet the challenges of the developing world and address the needs of the most destitute people on our planet. Today, an estimated 20 percent of the world's population lacks clean water, 40 percent lacks adequate sanitation, and 20 percent lacks adequate housing.

This lecture will present the challenges and opportunities associated with practicing engineering in the developing world and the education of engineers through organizations such as Engineers Without Borders. The lecture will also discuss the importance of integrating engineering with nonengineering disciplines when addressing the needs of developing communities.

PROGRAM

Introduction	Dr. William J. Wepfer Eugene C. Gwaltney, Jr. Chair of the Woodruff School
Distinguished Lecture	Dr. Bernard Amadei Founder, Engineers Without Borders - USA
Question-and- Answer Session	Dr. Amadei and Dr. Wepfer
Presentation of the Woodruff Medallion	Dr. Wepfer
Reception	Ferst Center Galleries

THE WOODRUFF LECTURE

The George W. Woodruff School of Mechanical Engineering Annual Distinguished Lecture was established in 1990 to honor an engineer who has made an outstanding contribution to society and to provide a forum for that person to address the Georgia Tech community. The lecture is made possible by an endowment established for the Woodruff School of Mechanical Engineering by the late George W. Woodruff (class of 1917). Thus, the occasion is also an opportunity to remember and honor Mr. Woodruff's own contribution as a distinguished alumnus and as a benevolent and generous citizen of Atlanta and the State of Georgia.