UNIVERSITY OF GHANA

COLLEGE OF BASIC AND APPLIED SCIENCES

SCHOOL OF ENGINEERING SCIENCES

PUBLIC LECTURE

The school of Engineering Sciences is pleased to announce its upcoming public lecture on the theme: **BUILDING CAPACITY FOR RESEARCH EXCELLENCE: THE CHALLENGE FOR UNIVERSITIES IN THE NEW MILLENNIUM** to be delivered by **Prof. Samuel Frimpong**, Robert H. Quenon Endowed Chair and Director, Heavy Mining Machinery Research Laboratory at the Missouri University of Science and Technology, Rolla, Missouri, USA. Find attached a brief profile of the speaker and an abstract for the presentation. The following are details about the lecture:

DATE: TUESDAY **25TH OCTOBER, 2016**

TIME: 2:00 – 3:00 PM GMT

VENUE: SCHOOL OF ENGINEERING SCIENCES SEMINAR ROOM

CHAIRMAN: PROF. BOATENG ONWONA-AGYEMAN, DEAN OF SCHOOL OF ENGINEERING SCIENCES

ALL ARE CORDIALLY INVITED.

Samuel Frimpong, PhD, PEng

Professor and Robert H. Quenon Endowed Chair
Director, Heavy Mining Machinery Research Laboratory
Missouri University of Science and Technology (Missouri S&T)

Frimpong is Professor and Robert H. Quenon Endowed Chair at Missouri S&T. He holds PhD (1992) from University of Alberta, MS (1988) from University of Zambia, and Post-Graduate Diploma (1986) and BS (1985) from Kwame Nkrumah University of Science and Technology of Ghana. His professional experience includes over 30 years in academia and several years of industry practice. Prior to current position, he was Professor and Associate Professor (Univ. of Alberta), Assistant Professor (Tech. Univ. of Nova Scotia), Postdoctoral Fellow (Univ. of Alberta), Research Associate (Univ. of Zimbabwe) and as Mining Engineer (Ashanti Goldfields, Ghana National Manganese Corp, State Gold Mining Corp and Agri-Petco of Ghana) and Engineering Apprentice at Tarkwa Goldfields. His research areas include machine dynamics, machine and whole-body vibrations, fatigue modeling, augmented visualization, formation excavation, intelligent mining systems, and mine safety, health and hazards engineering. He has and continues to lead research initiatives in these areas with over $34 million from funding agencies. His research results include over 30 PhD and MS graduates, 1 book, 3 book chapters, over 200 refereed journal and conference papers and over 200 presentations. Frimpong has been recognized with Missouri S&T Chancellor's Leadership Award, Robert H. Quenon Endowed Chair, Canadian Petroleum Institute's Distinguished Lecturer Award, Award of Distinction by World Mining Congress, University of Alberta/CIDA PhD Scholar, Life Patron of the University of Mines and Tech. Alumni Association, Grand Award by Northwest Mining Association and a UNESCO Research Fellowship. He is a member of the APLU Board on Natural Resources, Vice Chair of the Minerals and Energy Resources Division of NASULGC, and a member of the College of Reviewers for Canada Foundation for Innovation and Canada Research Chairs Program and ASCE-UNESCO Scientific Committee on Emerging Energy Technologies (ASCE-UNESCO SCEET). He served 5 years as a member of CDC-NIOSH Research Advisory Board, 4 years as co-chair of ASCE-UNESCO SCEET and 2 years on Japan's Global Warming Research Consortium. He is currently the Editor-In-Chief of the Journal of Powder Metallurgy and Mining and Editorial Board Member for the International Journal of Mining, Reclamation and Environment. He served 5 years as Associate Editor for ASCE Journal of Energy Engineering and the International Journal of Mining and Minerals Engineering. Dr. Frimpong has led major global academic efforts with universities and educated over 1,000 industry professionals in Australia, Botswana, Brazil, China, Dominican Republic, Ecuador, Ghana, Indonesia, Mongolia, Peru and Saudi Arabia. He is a Registered Professional Engineer and a member of the Canadian Institute of Mining, Metallurgy and Petroleum, American Society for Mining, Metallurgy and Exploration, American Society of Civil Engineers, and the Society for Modeling and Simulation International.

TOPIC**: Building Capacity for Research Excellence: The Challenge for Universities in the New Millennium**

ABSTRACT

The three pillars of any institutional mission comprise education, research and service. University research is required to advance knowledge, expand frontiers and create the basis for tomorrow's technologies. For many universities, this second-tier mission is illusive resulting in institutions that never reach their potential in executing the research mandate. For institutions to change this essential dynamic to become effective in fulfilling their mandate there must be a fundamental vision for research excellence backed by strategic initiatives, goals and action plans to reach this excellence. This presentation will focus on the strategies for meeting the challenges for building institutional capacity for research excellence. Universities must develop, promote and sustain graduate and research programs rooted in their core institutional strengths to prepare the next generation of researchers. They must expose and prepare undergraduate students for graduate and research programs. In addition, they must hire, develop and promote outstanding faculty with research capacity and capability. As part of the process, there is the need to create robust and comprehensive collaborative research opportunities using intra-departments, university-industry and university-university engagement involving faculty and other researchers. These researchers must be resourceful and innovative to create opportunities for multi-source funding for research programs. In addition, the presentation will outline strategies for partnering with industry and governments to invest in endowed chair positions, industry professorships and other research positions that focus on expanding research portfolios. Universities must develop and maintain institutional capacities for sustained research programs. Significant investments must be made to create research laboratories and centers within universities with opportunities to use industry and national laboratories. These environments must be backed by well-equipped and resourced libraries, computer hardware and software capabilities with technical expertise to sustain their computational capacities and capabilities. Institutions must also create administrative support systems to sustain their efforts. Universities must recognize and reward outstanding researchers for their achievements to sustain research excellence. Ultimately, the impact of any institutional research efforts will depend on knowledge and frontier advances and technological innovations and their impact on humans, industry, societies and national economies. The presentation will address these issues within the context of university research capacity expansion, renown and impact.