



Dr. SERGIO KAPUSTA

Retired Chief Scientist

Royal Dutch Shell Group

Rice University

Date: Friday, October 6, 2017

Time: 1 - 1:50 pm

Location: D3 W122

Energy Economics: a Primer for Engineering Students

Abstract: Energy economics is always in the news. Whether we have too little or too much oil, whether the price of gasoline goes up or goes down, whether it is climate change or an OPEC meeting or the latest announcement from Tesla, energy attracts a lot of attention. But what do you know about Energy? And more importantly for your Engineering career and beyond, how will your work affect the future of Energy? How do materials affect energy prices, and how energy prices affect the cost and availability of materials?

In this seminar, we will look at some of the fundamental topics of energy economics, and its connections to materials, climate, water and other topics of interest to Engineering students and practitioners. We will explore concepts of availability, affordability, and acceptability, which together form the basis of sustainability. One questions that we need to address is, how and when will the US and the world's energy systems evolve?

In this Seminar, we will also see how past decisions affect future outcomes, and how individual decisions affect collective behaviors. One issue to ponder as you think about these issues: are all green energies clean? And are all clean energies sustainable?

Biography: Dr. Sergio Kapusta (Rice PhD 1979, MBA 2006) retired as Chief Scientist of the Royal Dutch Shell Group in 2015. During his 32 years with Shell, Dr. Kapusta worked in all sectors of the oil business, from research and engineering to operations and maintenance. He is a world--known expert in materials and corrosion, and in the application of nanotechnology to the oil field. He is the author or co--author of more than 50 papers related to materials, corrosion, asset integrity, and risk analysis. He re--joined the Rice Faculty in 2016 as Adjunct Professor in the MSNE and Physics departments. He also lectures on Management of Innovation and Technology course for MBAs at the Jones Graduate School of Business.