

Title: Engineering Sustainability for Sustainable Development: With a Focus on Energy

Abstract:

Sustainability is crucial for humanity, and engineering sustainability is an important contributor to overall sustainability and sustainable development. This is due to the pervasiveness of engineering and its importance in economic development and living standards, and the environmental impacts of engineering. But engineering sustainability is complex and challenging. Many factors that need to be considered and appropriately addressed in moving towards engineering sustainability are examined in this presentation, including appropriate selection of resources, use of sustainable processes, enhancement of the efficiency, environmental stewardship and others. A special focus is placed on energy, given its pervasiveness and importance.

Biography:

Marc A. Rosen is a Professor at Ontario Tech University (formally University of Ontario Institute of Technology) in Oshawa, Canada, where he served as founding Dean of the Faculty of Engineering and Applied Science. Dr. Rosen was President of the Engineering Institute of Canada. A registered Professional Engineer in Ontario, he serves as Editor-in-Chief of several journals and was a Director of Oshawa Power and Utilities Corporation. With over 60 research grants and contracts and 900 publications, Dr. Rosen is active in sustainability, sustainable energy, environmental impact, and energy technology (including hydrogen energy, renewable energy and efficiency). Much of his research has been carried out for industry, and he has written numerous books. Dr. Rosen has worked for such organizations as Imatra Power Company in Finland, Argonne National Laboratory near Chicago, and the Institute for Hydrogen Systems near Toronto. Dr. Rosen has received numerous awards and honors, and is a fellow of several societies and organizations, including the Royal Society of Canada.