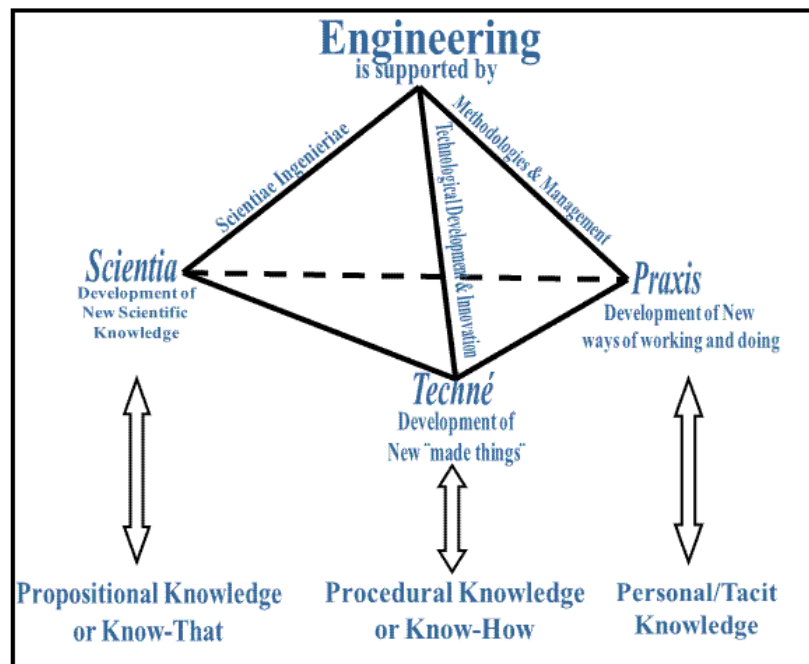


<http://www.iis2016.org/imeti/Website/default.asp?vc=20>



Engineering activities are based on the development of new Knowledge (scientia), new 'made things' (techné) and/or new ways of working and doing (praxis). Scientia, Techné and praxis are three important dimensions of a comprehensive conception of Engineering as a whole. Engineering, as Scientia, is mostly developed in academia; as techné is practiced in industry generating technological innovations; and as praxis is carried out in technical and non-technical organizations, supporting managerial activities and technical procedures, via methodical and methodological design and implementation. This is why Engineering provides one of the most solid academic and professional substrata for bridging among Universities, industries and governments.

Publications and conferences related to Engineering are usually oriented to one of its three dimensions. While this is an adequate thing to do when disciplinary focus is sought, it does not represent Engineering as a whole and it misses the very important synergic relationships among the three kinds of engineering activities mentioned above. This is why a group of scholars, professionals and consultants, in the field of engineering, considered the possibility of initiating a publishing process and organizing a conference where presentations will not be reduced to one of the Engineering's dimensions, but to foster the participation of academics, practitioners and managers in the three dimensions of Engineering, in the same conference, or in the same publication, so they can synergistically interact with each other. A consequence of this purpose is the organization of IMETI 2016, and the publication of multiple-author books series, where submissions will be accepted for the presentation of:

- **New knowledge** (Engineering as Scientia);
- **New products and services**, i.e. technological innovations (Engineering as techné);
- **New technical and managerial methods and methodologies** (Engineering as praxis);
- **New meta-engineering** (Engineering of Engineering activities) knowledge, innovations and methodologies.

More details regarding the notion of Engineering and reasoning supporting the definition given above can be found in the article "The Essence of Engineering and Meta-Engineering: A Work in Progress" (Callaos, 2012) which is available at [www.iis.org/Nagib-Callaos/Engineering-and-Meta-Engineering](http://www.iis.org/Nagib-Callaos/Engineering-and-Meta-Engineering)

## **Major Themes, Areas and Suggested Topics**

### **Engineering Concepts, Relations and Methodologies**

- Engineering Education
- Design Engineering and Engineering Design
- Engineering Management
- Philosophy and Engineering
- Philosophy and Technology
- Engineering and Ethics. Professional Ethics.
- Engineering and Sustainable Development.
- Engineering Sustainability
- Engineering and Society
- Engineering and Environment
- Engineering Education and Entrepreneurship
- Virtual Collaborative Engineering Environments and Organizations
- Globalization
- Industry, Problem and Project based Learning
- Government Policies
- Partnership and Collaboration
- Curriculum Development and Delivery
- Industry and Community Engagement

### **Technological Development and Innovation**

- Engineering Technology Transfer
- Role of Technological Innovation in Economic Development
- Technology Strategy
- Financing Innovation
- Managing Research & Development
- Commercialising Research
- Technological Collaboration
- Managing Customers and Operations
- Predicting Future Markets

### **Disciplinary Research and Development**

- Civil Engineering including Structural Engineering and Building Services
- Mechanical Engineering including Industrial Engineering, Operations Research, Aerospace, Marine and Agricultural Engineering, Mechatronics, Robotics
- Electrical Engineering including Power Generation and Transmission, and Power Systems, Technologies and Economics
- Chemical Engineering and Mining
- Materials Sciences and Engineering
- Energy Engineering, including, Petroleum and Nuclear Engineering, Energy Management Engineering, and Energy Conservation & Energy Efficiency
- Electronics Engineering, including Communications Systems Engineering and Control
- Computer Engineering, including Software Engineering, Requirements Engineering and Information Systems Engineering and Information Technologies
- Medical Engineering and Bio-Engineering
- Applied Sciences, including Applications of Mathematics, Physics, Chemistry, Bio-sciences
- Organizational and Management Engineering, including Method Engineering, Project Engineering, and Team Engineering
- Knowledge Engineering and Management
- Corporative and Business Engineering, including Service Eng., Entrepreneurial Eng., Financial Eng., Administrative Eng., Economic Eng., Global Eng., Business Processes Re-Engineering, Personnel Eng., Strategic Eng., and Soft Eng.
- Social Systems Engineering and Social Technologies and Design, including Social Technologies, Cognitive Engineering and Human-Systems Integration