



# 025

## Responding to the Challenges of Engineering Attractiveness

**K. Schrey - Niemenmaa**

Senior Lecturer  
Helsinki Metropolia University of Applied Sciences  
Helsinki, Finland  
katriina.schrey@metropolia.fi

---

**M. E. Jones<sup>1</sup>**

Distinguished Research Fellow  
Imperial College London  
London SW72AZ, UK  
m.jones@imperial.ac.uk

---

**Conference Topic:** Attractiveness of Engineering Education

**Keywords:** Attractiveness, pre-university, enthusiasm

**A**s part of our 2011 paper [1] we had categorized the challenges associated with engineering attractiveness into several broad, but distinct, areas of concern: (a) pre-university experiences, (b) transitioning to university level studies, (c) maintaining enthusiasm, (d) graduating and starting a working life, and finally (e) following a lifetime career. While all of these are important, educators are not necessarily the best professionals to address every one of these. However there are key aspects that are central to the concerns of educators and that they can and should be addressing if they are to make an impact in overcoming the issues that affect the profession. In this paper we concentrate of the challenges posed by (a), (b) and (c) and examine some of the issues and possible pitfalls that these present and how the academic community might respond to them. A few examples are given here. During a pre-university time pupils may have only a vague idea of engineering, it's various branches, what they might expect to be doing as professional engineers and what skills they might need to be effective. Their teachers maybe no wiser, as they themselves might have little experience, other than in schools. An ex-

<sup>1</sup> M. E. Jones, e-mail: m.jones@imperial.ac.uk



tensive Finnish study into competences sought by universities, and also those perceived by students leaving school, has highlighted some important areas for development [2]. By various means, teachers at schools and academics and their students can be very effective in establishing enthusiasm and enhancing application levels. Drop-out from courses is an area of concern, and much can be done to inhibit this, through changes in approaches to students, to teaching styles and recognition of the type of graduate that is hoped to be produced. In this paper the facets of these specific issues will be considered, together with possible ways by which they might be addressed in an effective way. ■

## REFERENCES

- [1] Schrey-Niemenmaa, K S & Jones M E (2011), Attractiveness in Engineering Education: Is all as it seems? Proc. SEFI Annual Conference, Lisbon.
- [2] Hautamäki J & al (2012) Lukion tuottamat jatkokoulutusvalmiudet korkeakoulutuksen näkökulmasta, ISBN 978-951-39-4667-8, [http://www.edev.fi/portal/julkaisu\\_59](http://www.edev.fi/portal/julkaisu_59).