

Foreword by Jarka Glassey

Books like *Empathic Entrepreneurial Engineering* by David Fernandez Rivas do not come around often, but this combination of professional skills is particularly timely as we face some of the greatest societal challenges in human history. Whilst the technical competence of engineers of the future cannot be underestimated, and their understanding of fundamental principles of engineering will be essential in developing safe solutions, they will surely help us ensure healthy and fulfilling lives for people without killing our planet in the process. However, they are by no means going to be sufficient.

Innovation and entrepreneurship as well as empathy will be needed to make sure the proposed solutions make the necessary radical steps in the way we manufacture products and provide services for those who need them. Ethical and responsible engineering is rapidly gaining prominence worldwide as we recognize that digitalization of industries and the rapid rate of scientific discoveries potentially raising ethical questions about their use as well as the much-needed transitioning to a low-carbon circular economy will demand much more from our engineers than just technical excellence and competence.

However, engineering educators would often tell you that teaching these “durable” skills, as David refers to them, in the engineering context is very difficult. David shows in his book you are about to read that it is not only critical, but it can also be fun and exciting, and it can bring many more, diverse future engineers to the profession. This book should prove an invaluable resource for engineering educators, students, and engineering practitioners alike. But his use of case studies, interviews with entrepreneurs, and examples of exciting developments in engineering should be very approachable for future budding engineers that never saw engineering as a career option.

The clear explanations of new pedagogical concepts and paradigms David proposes are also a valuable underpinning to new engineering pedagogy that will help us improve the delivery and the assessment of engineering education in the future.

I have had the pleasure of working with David on engineering education for years now and his passion and enthusiasm for doing the right thing and doing it well not just in his research, but also in educating future generations of engineers always impressed me. I am sure that once you read this book, you will agree with me that David’s passion and clarity of explanation make this new paradigm of Knowledge, Persuasiveness, and Empathy (KPE) such an obvious approach that you will wonder why it has not been introduced before. Are you wondering what KPE paradigm I am referring to? Well, read on and enjoy!

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