GUEST EDITORIAL PREFACE

Special Issue on the
IETEC-BRCEBE

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This special issue of the International Journal of Quality Assurance in Engineering and Technology Education (IJQAETE) presents a composite of papers that was selected after a rigorous review of the conference papers presented and published at the IETEC-BRCEBE; that is 3rd International Engineering and Technology Education Conference jointly with 7th Balkan Region Conference on Engineering and Business Education (BRCEBE); which was held in Sibiu, Romania (November 2015). This issue brings together four papers from a number of international contributors. The papers presented in this edition illustrate the richness of the field of engineering and technology education. As well it shows the vibrancy of engineering and technology education research.

This edition starts off with a paper from Nikos J. Mourtos who examines a two-step process in standardizing engineering education and facilitating the mobility of engineering graduate around the world. The papers discuss the fundamentals of an effective engineering programs, that being Process skills which typically involve problem-solving, lifelong learning, critical thinking, communication and collaboration, etc. The paper elaborates a course design process that facilities these skills development. The author compares the process outlined in the paper to that of a design of an engineering product with essential steps being specifications, knowing what the end product is, assessment and the activities that will result in the end product.

The second paper by Nguyen et.al, goes into the development of sustainable processes through knowledge management. In this article, the authors present and discuss sustainable aspects of a knowledge management model for DMAIC (Define-Measure-Analyze-Improve-Control) process. The authors argue that preserving and renewing knowledge is an integral part of this process. The authors go on to argue that the effective management and exploitation of the knowledge resources contributes to innovation of products towards sustainable development of the DMAIC process.

The third paper in this edition by Fortelius and his colleagues looks at Project/Problem Based Learning in the field of Materials, Food and Chemical Engineering, specifically at the
department of Biotechnology and Chemical Engineering, Helsinki Metropolia University of Applied Sciences, Finland. The paper outlines the experiences of department in their first year of the programme. The authors report positive changes in the way the material were taught and perceived by staff and students. Positive changes were seen in team skills, independent study capacity and teachers being more of a facilitator than a traditional instructor. A further outcome with the introduction of problem bases learning was that student drop outs after the first year decreased to 15% compared to 25 - 35% in the past.

The final paper in this edition looks at the internationalization of technology education in National Research Tomsk Polytechnic University. Lisa Soon and her colleagues conducted a case study about the Masters of Information Technology (MIT) education that was developed and delivered by a foreign researcher-teacher. The study observed how the MIT program worked, how the students learnt from the specially provided course by a foreign researcher-teacher, the challenges and difficulties in the delivery of course learning, and how they were overcome. The results outlined in the paper indicated that students were highly satisfied with this program. The research provided an insight into how TPU formulates their approach to provide education excellence through higher education internationalization in MIT program. Some of the outcomes from this programme included better learning experiences by learning different practical skills and developing greater proficiency in language skills especially English language.

We sincerely hope that the papers included in this edition will provide an inspiration to encourage more researchers to research in the engineering and technology domain so as to enhance the quality of the engineering and technology education.

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Guest Editors
IJQAETE

Claudiu Vasile Kifor is currently vice-rector of scientific research and doctoral studies at “Lucian Blaga” University of Sibiu, Romania. He has PhD (2000) in industrial engineering and MSc (1994) in mechanical engineering from “Lucian Blaga” University of Sibiu. His research interest is in quality management, process modelling and management, and Six Sigma improvement. Professor Kifor has published over 70 scientific research papers and 11 Books. As PhD advisor and scientific secretary of the quality research centre at “Lucian Blaga” University of Sibiu, he has coordinated research projects with industry and research institutes. Professor Kifor is associate editor at International Journal of Quality Assurance in Engineering and Technology Education, Australia and also member in the steering committee of the conference Knowledge Science, Engineering and Management. He was invited to deliver courses and short lectures by Aalborg University, Ling Tung University, Riga Teacher Training and Educational Management Academy, IUT Rennes.

Sid Nair is Professor of Higher Education Development at the University of Western Australia. His current role looks at building institutional capacity in the quality of teaching and learning. Prior to this he was Acting Director and Quality Advisor at the Centre for Higher Education Quality, Monash University. In this role he restructured the University evaluation framework. His work was noted in the first round of the AUQA audits and is part of the good practice database. His research work lies in the areas of quality in higher education, classroom and school environments, and the implementation of improvements from stakeholder feedback. He is an international consultant in quality and evaluations in higher education.