

## ABOUT THE CONTRIBUTORS

**Anabela C. Alves** is Assistant Professor at the Department of Production and Systems/School of Engineering/University of Minho. She holds a PhD in Production and Systems Engineering, being affiliated to Centre ALGORITMI. Her main research interests are in the areas of Production Systems Design and Operation; Lean Production (Lean Education, Lean Healthcare, Lean Services, Lean & TRIZ, Lean-Green and Lean & Ergonomics); Production Planning and Control, Project Management and Engineering Education, with particular interest in active learning methodologies, e.g. Project-Based Learning (PBL). She is author/co-author of more than 100 publications in conferences publications or communications, 2 books, 2 edited books and 4 editions of conference proceedings, 14 book chapters and 18 international journal articles. She is member of the Scientific and Organizing Committee of the International Symposium on Project Approaches in Engineering Education (PAEE). She is member of the following societies and networks: SOCOLNET – Society of Collaborative Networks; I\*PROMS Network of Excellence; Portuguese Society of Engineering Education (SPEE); Portuguese Institute of Industrial Engineering (IPEI); American Society of Mechanical Engineers (ASME); Lean Education Academic Network (LEAN) and Institute of Industrial Engineers. Her publications could be consulted at: ORCID: <http://orcid.org/0000-0002-2926-4187>; Scholar academic: [http://scholar.google.com/citations?user=G\\_RjmTAAAAAJ&hl=pt-BR](http://scholar.google.com/citations?user=G_RjmTAAAAAJ&hl=pt-BR)

**Nestor Arana-Arexolaleiba** is PhD Coordinator of the Intelligent Automation Research Group. He has been an active member of PBL implementation in the engineering school of Mondragon University since 2002. He has been facilitating colleagues to apply student-centred learning methodologies both at institutional and classroom level. He has been also acting as a consultant in more than eight different educational institutions (Secondary, Vocational Training and University) at local and international level (Mexico, Kenya and Colombia). He has conducted research in the following areas; robotics and image processing as well as in PBL implementation. He has supervised 6 Doctoral Thesis and he has published 50 papers and 2 patents.

**Lamjed Bettaieb** studied Computer engineering in the National School of Computer Science in Tunis (ENSI). He obtained his degree in 1991. He has been teaching Computer networks and software engineering in the same school for 5 years (1991–1995). He obtained many certifications in Microsoft and Cisco products. He also has Master’s degree of Business Administration from IAE-Dauphine (France, 2006). He has been the Director of academic affairs of ESPRIT (School of engineering) since 2003. He is the co-founder of the Faculty Development Department at ESPRIT and the leader of the active pedagogy reform (2011–2017). Lamjed has published

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papers regarding project and problem based learning in many Engineering Education conferences. He is contributing to the planning and animation of the activities of the ESPRIT UNESCO Chair “Project Based Learning” and he is running workshops on active pedagogy and PBL for many African educational institutions.

**José Dinis-Carvalho** holds a degree in Production Engineering, an MSc in Computer Integrated Manufacturing and a PhD in Production and Systems Engineering. He is an Associate Professor at the Department of Production and Systems/School of Engineering/University of Minho leading the ISM (Industrial and Systems Management) research group in the ALGORITM research center. His main research interests are: lean manufacturing; waste identification; continuous improving methodologies; visual representation of production systems; lean application in intangible processes; and engineering education. His group developed a Project Based Learning Approach for real context and organizes an annual conference on related subjects called PAEE (Project Approaches in Engineering Education). His research group also developed the Waste Identification Diagram Methodology to identify and evaluate wastes in production units.

**Sandra Fernandes** is Assistant Professor of the Department of Psychology and Education, at the Portucalense University, in Porto, Portugal. She holds a PhD in Education Sciences (2011), specialisation in Curriculum Development, from the University of Minho, Portugal, with the thesis entitled “Project-based Learning in Higher Education: A case study in Engineering Education”. She was a visiting scholar at the School of Education, University of Nottingham, UK, working with the Emeritus Professor Christopher Day, while developing her Postdoctoral research project. She is currently the Coordinator of the Master’s degree in Educational Management and Administration, at the Portucalense University, where she develops her teaching and research activities since 2015/2016. She is member of several research projects, funded by national and international agencies, as well as author of more than 100 publications. She is a founding member of the Project Approaches in Engineering Education (PAEE) Association and is also the current vice-president of this Association. Her research interests focus on Active Learning Methodologies, Higher Education, Learning Assessment, Project-based Learning (PBL), Curriculum Development, Educational Management and Administration, Engineering Education, among other areas.

**Karen Goh**, Deputy Director, Office of Academic Services, Republic Polytechnic, Singapore. Karen has spent the last 19 years in education as a trained teacher, specialising in teacher development, and gifted and adult education. Her current work focuses on strategic academic policy and quality assurance in a polytechnic context. Her research interests are in problem-based learning, teacher professionalism, and teacher attributes, and she has spoken on and published in these areas.

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**Aida Guerra** is Assistant Professor within the field of Project Organized, Problem Based Learning (PBL) and Engineering Education for Sustainable Development at the Department of Planning and the Aalborg Centre for Problem Based Learning in Engineering Education, under the auspices of UNESCO, Aalborg University, Denmark. Dr Guerra holds a bachelor in Biology and Geology Education, a Masters by research degree in Geology for Teachers and a PhD in PBL and Sustainable Development in Science and Engineering Education. Her current research focus on PBL, curriculum change, engineering education and engineering education for sustainable development. She has published several articles and conferences papers and has been given several international presentations and workshops within these fields.

**Bart Johnson**, PhD, Provost of Itasca Community College (Minnesota, USA). Prior to his administrative role, Dr. Johnson was a faculty member and program director of the engineering program. Main research areas are project-based learning, learning communities, professional identity development, and professional competencies development. Outside of engineering, Johnson is professionally active with biomass energy initiatives and FIRST Robotics. Prior to Itasca Community College, Johnson worked as an engineer for John Deere's construction and forestry division and was a research fellow for the Whirlpool Corporation.

**Anette Kolmos** is Professor in Engineering Education and PBL, Director for the UNESCO category 2 Centre: Aalborg Centre for Problem Based Learning in Engineering Science and Sustainability. Chair holder for UNESCO in Problem Based Learning in Engineering Education, Aalborg University, Denmark. Guest professor at KTH Royal Institute of Technology and Guest Professor at UTM University Technology Malaysia 2011–2013. President of SEFI 2009–2011 (European Society for Engineering Education). Founding Chair of the SEFI-working group on Engineering Education Research. Was awarded the IFEEES Global Award for Excellence in Engineering Education, 2013. During the last 20 years, Dr. Kolmos has researched the following areas, primarily within Engineering Education: gender and technology, project based and problem based curriculum (PBL), change from traditional to project organized and problem based curriculum, development of transferable skills in PBL and project work, and methods for staff development. She is Associate Editor for the European Journal of Engineering Education and was Associated Editor for Journal of Engineering Education (ASEE). Involved in supervision of 13 PhD projects and published around 230 publications. Member of several organizations and committees within EER, national government bodies, and committees in the EU.

**Rui M. Lima** is Associate Professor of the Production and Systems Department, School of Engineering, University of Minho, Portugal. His main research interests are

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related to Industrial Engineering and Management fields: Project Management, Lean Production, Production Planning and Control, University-Business Cooperation, Engineering Education and Project-Based Learning. Rui was one of the chairs of the “International Conference in Industrial Engineering and Operations Management” (ICIEOM 2012), and is one of the chairs of the “International Symposium on Project Approaches in Engineering Education” (PAEE) since 2009. He is the current president of the Project Approaches in Engineering Education – PAEE association, and the current chair of the steering committee of the Active Learning in Engineering Education – ALE network. Rui has more than 120 publications in scientific journals, conferences, or book chapters, and acted as invited editor of 4 special issues in indexed journals.

**Diana Mesquita** is research assistant of the Research Centre on Child Studies (CIEC), Institute of Education, University of Minho, Portugal and she is also collaborating with the Department of Production and Systems/School of Engineering at the same university since 2007. She received her PhD in 2015 in Educational Science at Institute of Education and her research interests include Higher Education, Engineering Education, Curriculum Development, Teachers’ Professional Development and Training, Teaching and Learning Innovation, Active Learning, Universities and Business Cooperation (UBC). Currently, she is coordinating a three years project in Federal University of Itajubá, campus de Itabira, Brazil, called pipBIRA (Pedagogical Innovation Program at Itabira), aiming at supporting engineering teachers to develop pedagogical competences. Diana has more than 50 publications, including journal articles, book chapters and communications.

**Khairiyah Mohd-Yusof** is a Professor and the Director of Universiti Teknologi Malaysia Centre for Engineering Education (CEE), which promotes scholarly and evidence-based practices in engineering education. She is the President for the Society of Engineering Education Malaysia (SEEM), Vice President for the International Federation of Engineering Education Societies (IFEES) and board member for the International Research in Engineering Education Network (REEN). A practitioner and researcher of student centered learning approaches especially Problem Based Learning in engineering and STEM education, she has been a keynote/plenary/invited speaker and conducted workshops at institutions of higher learning, colleges and schools throughout Malaysia and in several countries in Asia, Australia, Europe and North America. Her work in engineering education won her several awards, including the 2015 Frank Morton Institution of Chemical Engineers (IChemE) Global Award for Chemical Engineering Education Excellence, the Best of the Best Award at the 2014 Innovative Practices in Higher Education Exposition, the 2013 IChemE Malaysia Award for Education and Training, and the Best Paper Award at the 2011 IEEE Global Engineering Education Conference in Amman, Jordan.

**Francisco Moreira** (PhD) is a Lecturer at the Department of Production and Systems Engineering of the University of Minho, Portugal. He is affiliated with the ALGORITMI R&D center, and his main research interests are: Lean Production, Lean-Green, Quantum Agile Manufacturing, Industrial Ecology, Cleaner Production, Remanufacturing, Active Learning in Engineering Education and Problem-Based Learning. He is author of 50+ peer-reviewed publications, including papers in international conferences, journals and book chapters.

**Rui M. Sousa** is Assistant Professor at the Department of Production and Systems/School of Engineering/University of Minho. He holds a degree in Electrical Engineering, an MSc in Systems and Automation and a PhD in Production and Systems Engineering. His main research interests are: lean manufacturing; formal approaches for production systems analysis/design and engineering education. He supervised more than 35 IME master thesis developed in the industry, mainly in the Lean Manufacturing area. He is author/coauthor of more than 60 publications in international journals and conferences.

**Ron Ulseth** is the founder of Iron Range Engineering [PBL] program in Minnesota, where he serves as the Director of Academics and Research. His other appointment is as a tenured instructor in the Itasca Community College engineering program. He has been in the classroom, teaching more than 20 credits of engineering fundamentals per year for more than 27 years. Dr. Ulseth is a social entrepreneur who has been at the leading edge of engineering educational change. He has implemented 2 successful change movements and is leading a third. He has earned multiple awards for innovation and entrepreneurialism. Dr. Ulseth's degrees are in civil engineering, mechanical engineering, and engineering education. A retired Commander as an Engineering Officer in the US Navy reserve, he is also licensed as a professional engineer in the state of Minnesota.

**Jianguo Wang**, Director, School of Engineering at the Republic Polytechnic, Singapore. He graduated with a Ph.D (Mechanical Engineering) from Tsinghua University, Beijing, China. He joined the Republic Polytechnic in 2002 to develop the Problem Based Learning (PBL) programme for engineering. He has conducted research in automation and control, logistics engineering, rapid prototyping and 3D printing and published more than 30 papers on conferences and peer-reviewed journals. His current interests focus on pedagogies for engineering education, especially on Problem Based Learning and Project Based Learning. He has published a few papers on PBL for engineering, presented the same topic on conferences, seminars, and invited talks.

**Choon Seng Yap**, Assistant Program Chair, Diploma in Aviation Management, School of Engineering, Republic Polytechnic, Singapore. Choon Seng holds a

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Master degree in Education, and has been immersed in the problem-based learning pedagogy for the past 14 years. His research interests are currently in alternative student-centred pedagogies and has published in related topics at various seminars.

**Miren Itziar Zubizarreta** is a PhD in psychopedagogical intervention. She works at Faculty of Engineering Mondragon Unibertsitatea, Spain. She develops her teaching activity in the area of industrial organization. She coordinated this area during 2009–2011. Presently, she teaches on engineering degrees and at the same time focuses her research in the field of educational innovation, more precisely in the development of entrepreneurship, professional performance and social transformation values. She is part of the “innovation and entrepreneurship” research team and has been a member of the educational innovation team of Mondragon Unibertsitatea since 2000.