

international conference  
quality and service sciences

# 17<sup>th</sup> QMOD–ICQSS

## PROCEEDINGS

### Part 1: INTRODUCTION

3<sup>rd</sup>– 5<sup>th</sup> September, 2014

Prague, Czech Republic

Editors:

Su Mi Dahlgaard-Park

Jens J. Dahlgaard



Linköping University



LUND  
UNIVERSITY

Edition based on ready to-print materials submitted by Authors.

Quality Management and Organisational Development  
Conference (17 ; 2014 ; Prague)  
Proceedings / 17th QMOD-ICOSS, Quality Management  
and Organizational  
Development Conference International Conference Quality  
and Service Sciences  
3th – 5th September 2014, Prague, Czech Republic

**ISBN 978-91-7623-086-2**

Edited by  
Su Mi Dahlgaard-Park, Dr. Prof. Lund University  
Jens J. Dahlgaard, Dr. Prof. Linköping University

Publisher: Lund University Library Press



**LUND**  
UNIVERSITY

## Welcome Address from the Founders of QMOD



### **Su Mi Dahlgaard-Park & Jens J. Dahlgaard, Dr. Professors** QMOD Founders and Conference Chairs

It is our great pleasure to welcome you to the 17<sup>th</sup> QMOD-ICQSS conference, the conference which has become one of the largest scientific conferences in the world within the research fields of Quality and Service Sciences. During the last 17 years the QMOD conferences have been organized in China (1997), Slovenia (1999, 2013), Denmark (2000), Sweden (2001, 2007, 2008), Korea (2002), France (2003), Mexico (2004), Italy (2005, 2009), UK (2006), Germany (2010), Spain (2011) and Poland (2012).

The yearly QMOD conference has proven to be a true forum where academics, as well as practitioners from all around the world, exchange their knowledge and experiences and thereby build a 'QMOD Community'. Through this forum, we have discussed and shared our latest research, praxis and experiences in order to be able to draw a more accurate picture of organizational and business realities and thereby to improve our diagnostic capabilities of current problems and improvement opportunities. For the 2014 QMOD Conference we have decided to have the following overall theme:

***Entering the Experience Economy – from product quality to experience quality.***

The global society has entered into what might be called the “service economy” or “experience economy”. Services play a significant role, and service infrastructure (in terms of transportation, education, health care, elder care, governmental services, etc.) is the backbone of the service economy. Services now constitute the largest share of the gross domestic product in most countries and provide the major source of employment in both developed and developing countries. Services permeate all aspects of peoples' lives and are becoming more and more important, inseparable from most aspects of economic activity.



“Quality management” (and related managerial issues) has been a dominating managerial practice since the Second World War. With quality management initially tied to and associated with manufacturing industries, one might assume that the importance and relevance of quality management might decrease with the emergence of the service economy. Quite the contrary, the emergence of the service economy only served to strengthen the importance of quality issues. Quality issues no longer are associated only with manufacturing industries but are increasingly applied in all service sectors, as well. Today, we are engaged and concerned not only about product or service quality but the framework of quality have increasingly expanded to quality of experiences, quality of life, and quality of the environment.

Under the overall conference theme around 150 accepted papers from more than 30 countries will be presented during the two and half days' conference program. Those papers cover the multiple aspects of quality – the quality spectrum 'from product quality to experience quality'.

Regardless who you are – a new or an 'old' colleague of the QMOD community – we believe and hope that you will experience a lot of tangible and intangible aspects of quality which can inspire you in your professional career and broaden your life horizon as well.

## Conference Founders and Chairs

Prof. Su Mi Dahlggaard-Park, Founder and Chair, Lund University, Sweden

Prof. Jens J. Dahlggaard, Founder and Chair, Linköping University, Sweden

## Local Organizing Committee

Ing. Alan Vápeníček, CSc. – DTO CZ, Czech Republic (Local Chair)

Ing. Pavel Hercík, Ph.D. – DTO CZ, Czech Republic

Ing. Zdenka Hofbruckerová, Ph.D. – DTO CZ, Czech Republic

Jana Ivan – DTO CZ, Czech Republic



## National Partner

Quality Council of the Czech Republic

JUDr. Ing. Robert Szurman – Chairman

Prof. Růžena Petříková – Vicechairman



## Cooperating Universities

University of Economics, Prague

The Institute of Hospitality Management in Prague

VŠB - Technical University of Ostrava

## Other Partners

Hyundai Motor Manufacturing Czech

Business School Ostrava

## Local Organizer

DTO CZ, Czech Republic

## Scientific Committee

Prof. Su Mi Dahlggaard-Park, Lund University, Sweden (Chair)

Prof. Jens. J. Dahlggaard, Linköping University, Sweden

All session chairs (see program)

## Cooperating Journals:

### Total Quality Management and Business Excellence

(Chief Editor: Prof. Jens J. Dahlgaard)

### International Journal of Quality and Service Sciences

(Chief Editor: Prof. Su Mi Dahlgaard-Park)



## Local Cooperating Journals:

Prosperita

Kvalita



## Plenary Speakers' and Chairs' Profiles



**Christian Grönroos, Professor, Finland**, is professor of service and relationship marketing at Hanken School of Economics in Finland. He has published extensively on service management and relationship marketing issues. He is, for example, one of the first scholars publishing on productivity management in service organizations. He is also one of the earliest proponents of the service management concept and one of the founders of the approach to service research

which internationally has been labelled the Nordic school of thought. In 2011 he was selected the 11<sup>th</sup> Legend in Marketing by the Sheth Foundation in the US, the first one from outside North America."



**Wan Seon Shin, Professor, Korea**, is professor in the Department of Systems Management Engineering at Sungkyunkwan University, Korea. He is also President of the Korean Society for Quality Management. His teaching and research interests include quality management, service strategy, and strategic decision making. His research has been supported by diverse organizations such as the Korean Agency for Technology and Standards (KATS), The Defense Agency

for Technology and Quality (DTaQ), Korea Telecom (KT), Korea Electrical Power Company (KEPCO), Korea Research Foundation (KRF), Samsung, POSCO, Hana Financial Group, and Kolon Industries.



**Jon Sundbo, Professor, Denmark**, is professor in business administration and innovation at Roskilde University, Denmark. Sundbo has throughout his career been doing research in innovation and entrepreneurship, experience economy, tourism and services and has published articles and books (including "The Theory of Innovation" and "Handbook on the Experience Economy") about these topics. He has particularly studied innovation and entrepreneurship

in services and the experience economy. Sundbo is leader of the innovation research group Innovation in Service and Experience and director of Centre of Service Studies and Centre of Experience Research at Roskilde University.



**Jaroslav Nenadál, Professor, Czech Republic**, he was born in 1946. He is interested in area of quality management more than 30 years. He works as a professor at Department of Quality Management of VŠB – Technical University of Ostrava. His scientific works are oriented especially to effective and efficient implementation of advanced quality management principles, methods and tools. He is member

of Czech Society for Quality Prague, Scientific Board of Faculty of Safety Engineering at VŠB – Technical University Ostrava and Certification body for personal certification ACM DTO CZ Ostrava. He is a representative of VŠB-TUO at European Foundation for Quality Management (EFQM) Brussels. He is author or co- author of 26 books, 108 articles at journals and more than 150 articles at conference proceedings.



**Jens J. Dahlgaard, Professor, Sweden**, is professor at the Division of Quality Technology and Management, Linköping University, Chief-editor of the Total Quality Management and Business Excellence and distinguished visiting professor at Yuan Ze University, Taiwan. Before he joined Linköping University he was a chair professor in Quality Management at Aarhus University, Denmark. He has published

15 books and over 200 research articles. He received many awards among others the European Quality Award for supervising the best master thesis on Total Quality Management in 1994, 1996 and 1997, the Chinese Friendship Award in 1998 and the Lancaster Award by American Society for Quality (2005). Professor Dahlgaard is an Academician and previous Vice President of the IAQ (International Academy of Quality). He has lectured in all continents and is active as adviser to many organizations and government bodies in many countries.



**Su Mi Dahlgaard-Park, Professor, Lund University, Sweden**, is professor at Institute of Service Management, Lunds University and distinguished visiting professor at Yuan Ze University, Taiwan. She has published more than 150 research papers and books. She has received Literati Award for Outstanding Paper in 2007, elected as academician of IAQ (International Academy for Quality). Currently she is devoted

as general editor for Encyclopedia of Quality and the Service Economy which is planned to be published in 2015 by Sage publication. She is also serving as chief-editor of the International Journal of Quality and Service Sciences and as associate editor for the Asian Journal on Quality as well as for TOM and Business Excellence. She also serves on the editorial boards of ten renowned research journals. She has lectured in many universities as invited professor and she is often invited as plenary speaker. She serves as adviser in many organizations and is active in conducting executive seminars worldwide.



## Partners of the 17<sup>th</sup> QMOD-ICQSS



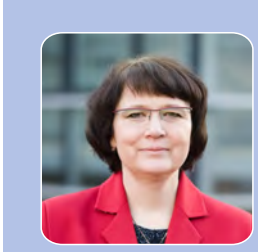
Vysoká škola podnikání



---

The conference is organized with the support of Quality Council of the Czech Republic.

## University of Economics, Prague (VŠE)

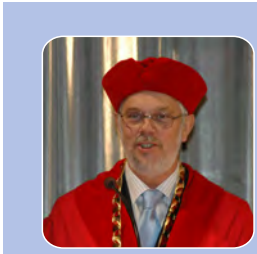


**Prof. Ing. Hana Machková, CSc.**  
Rector

The University of Economics, Prague (Vysoká škola ekonomická v Praze – VŠE) is the leading university in the fields of management, economics and political science in the Czech Republic with almost 20 000 students and 700 pedagogical faculty members. VŠE places a high priority on the development of international relations, and nowadays it has more than 200 partners from Europe, North and South America, Australia, and Asia. The University of Economics, Prague is a member of many international organizations (EFMD, EUA, EIASM, Consortium of International Double Degrees, etc.) and prestigious networks, namely the PIM and CEMS international alliances. The EU Commission awarded VŠE the ECTS and DS labels for the 2009–2016 period.



## The Institute of Hospitality Management in Prague (VŠH)



**Doc. Ing. Václav Vinš, CSc.**  
Rector

The Institute of Hospitality Management in Prague (IHM) was one of the first three private universities accredited in 1999 under the new laws regarding tertiary education. As the first specialized university focusing on the fields of hotels, gastronomy, and the travel and tourism industry, it opened its doors for instruction for the 1999/2000 academic year. Superbly equipped and with a quality pedagogical staff, it now belongs among the oldest and biggest private universities.

The Institute of Hospitality Management currently offers 4 bachelor's and 4 master's programs accredited by the Czech Ministry of Education. For those interested in careers in attractive fields of the service industry, our goal is to offer highly professional preparation in order to facilitate:

- work in middle to upper management in hotel chains and other establishments in the travel and tourism industry;
- doing business in the field of hotels, gastronomy, and travel and tourism;
- securing a management position in numerous other fields.

The development of the school and the growth of possibilities and quality of instruction closely parallel the growth in the number of students, which in the 2013/2014 academic year was more than 1,800. The total number of graduates has passed 5,000, which is concrete proof of increasing interest and the success of these graduates in the ever-demanding job market.

IHM's research and development specialization arises from the school's specific focus on the fields of hospitality, gastronomy, spa industry, tourism, tourism management and marketing communication. Particular attention is paid to cooperation with external experts in the field, and thus IHM has a tool to influence the development of business activities, increasing the quality of service and overall level of education.

IHM publishes its own peer reviewed journal, Czech Hospitality and Tourism Papers Hospitality, Spa, Tourism (ISSN 1801-1535). The Czech Hospitality and Tourism Papers journal puts out articles and analyses by Czech and foreign authors writing about the hotel industry, spa, gastronomy and tourism. Since 2010 the CHTP Journal has been integrated into the EBSCO database of EBSCO Publishing, with its headquarters in Ipswich, Massachusetts, USA.

IHM was awarded the new Erasmus University Charter for the period 2014 – 2020. IHM currently holds contracts with 16 university institutions in 11 member states which annually exchange both students and teachers within the framework of the ERASMUS program.

## VŠB – Technical University of Ostrava



**Prof. Ing. Ivo Vondrák, CSc.**  
Rector

VŠB – Technical University of Ostrava was founded in 1849, and has evolved into a modern institution of higher learning offering university education in technical and economic branches of study based on modern methods with state of the art facilities. Approximately 20.000 students study in seven faculties, as well as in all-University programmes and research centres which include nanotechnology and mechatronics.

- Faculty of Economics
- Faculty of Civil Engineering
- Faculty of Mechanical Engineering
- Faculty of Electrical Engineering and Computer Science
- Faculty of Mining and Geology
- Faculty of Safety Engineering
- Faculty of Metallurgy and Materials Engineering

VŠB-TUO confers academic degrees in bachelor, master and doctoral study programmes, in accordance with the Bologna Declaration and European Credit Transfer Systems, which facilitates mobility of students and teachers, as well as international study recognition.

Research and Development are integral to the activities at VŠB-TUO. Our focus on applied research and close cooperation with industry informs the teaching activities at the University, ensuring relevance in a dynamic international scientific environment.



## Karolinum (part of Charles University in Prague)

Ovocný trh 3  
Prague 1-Old Town

Karolinum is a National Cultural Monument and the main seat of Charles University. The building has belonged to the university since 1383. One of its most important rooms, where most ceremonies and social events take place, is the Great Hall on the first floor. Its front wall is adorned by a tapestry designed by V. Sychra, which incorporates motifs of the oldest seal of Charles University and excerpts from Charles IV's founding charter of 1348 as well as the symbols of the 4 original university faculties.

Another important architectural feature of the Hall is the Gothic oriel, along with the original university chapel. Also notable are the Small Hall, the Patriotic Hall decorated by portraits of important figures from the university history, the Imperial Hall with portraits of the emperors Maria Theresa, Joseph II and Leopold II by Barbara Kraft-Steiner from 1799 or the cloister with the original Gothic ceiling, now serving as an exhibition space.



Gala Dinner will be held at Karolinum, Ovocný trh 3, Prague-Old Town.  
We have prepared for you guided tours – more information at reception desk.  
***Patronage of gala dinner is held by the Hyundai Motor Manufacturing Czech.***

Tram – Staroměstská or Náměstí republiky • Bus – Staroměstská • Metro A – Staroměstská



DTO CZ is a training and consulting company, organizing courses and conferences.

We realize in-house courses and out-company educational and consulting projects according to client requirements. We specialize on lean manufacturing and process optimization, cost reduction and human resource management. We have a long tradition in organizing conferences for the management of manufacturing enterprises and services, social and health sector as well as specialized technical professions.

## Key Activities:

- Training and education
- Requalification
- Consulting
- Project preparations
- Project management
- Process engineering
- Certification of personnel
- Sales of standards



## Areas of trainings and education:

- Quality Management System
- Environmental Management System
- OHSAS
- Technical Professions
- Legislation
- Accounting and Taxes
- Body Care
- Social and Health Care
- Personnel Certification
- Sales of Standards and Professional Literature

DTO CZ co-operates with about 300 external experts from universities, state authorities, industry and services  
DTO CZ provides over 270 specialized activities for over 6,000 in-company and almost out-company customers per year  
DTO CZ manages about 20 consultation projects in management per year.  
DTO CZ issues specialized expert publications.

**We would like to be a permanent guide through your career and to make your progress faster with our help so that you do not have to rely only on yourselves.**

**DTO CZ, s.r.o.**  
Mariánské nám. 480/5, 709 28 Ostrava - Mariánské Hory  
Tel.: 595620111, E-mail: [dtocz@dtocz.cz](mailto:dtocz@dtocz.cz)  
[www.dtocz.cz](http://www.dtocz.cz)



WE RANK SECOND  
IN TERMS OF INDUSTRY  
FUNDED RESEARCH  
AMONG CZECH UNIVERSITIES

## VŠB - TECHNICAL UNIVERSITY OF OSTRAVA

- We provide education in today's most sought-after fields including nanotechnology, mechatronics, IT...
- Dynamic business incubator providing substantial support for start-ups
- Partner universities, research institutions and exchange opportunities on 6 continents
- Campus holds the National Supercomputing Centre and other certified laboratories and research institutes
- Strong results of intellectual property protection of R&D output





## Ostrava Business School plc - Presentation of institution for 17th QMOD Conference

Dear ladies and gentlemen,

Let me introduce the Ostrava Business School which shares the values, such as entrepreneurship, individual approach, friendliness, seriousness, and quality, skills in creativity, efficiency and modesty. In our school we believe that creativity and inventiveness are the best manifestation of life itself, and that creative thinking is a prerequisite for original ideas. In our school we honour Bata's principles and support the students in their professional or entrepreneurial beginnings. Next year will mark the 15th anniversary of Ostrava Business School plc.

### Basic information

Ostrava Business School plc based in Ostrava in the Czech Republic, ranks among the largest private business schools out of Prague. During its operation it has become a significant and recognised educational institution and has gained respect as in other universities, and the general public. Ostrava Business School educates in accredited study fields of Entrepreneurship, Entrepreneurship and management in trade and Informatics and the internet in business, within the study programme of Economics and management. Our school has over 7000 graduates. Its concept of education for entrepreneurship is still the only such business school-oriented in the Czech Republic.

### School mission

Our goal is a successful graduate, that is:

- **an enterprising and skill-oriented person with success in the labour market or in the business**
- **a responsible and consciously assertive employee of the lower and middle management**
- **taking the social responsibility in business**
- **ready to invest in education in the form of tuition fees and expects its return.**

### Higher education accreditation

The Ministry of Education, Youth and Sports of the Czech Republic has granted the Ostrava Business School plc the State competency as educational authority to act in these fields:

**Bachelor Degree study** – 3 years study programme

- Entrepreneurship
- Entrepreneurship and management in trade
- Informatics and the internet in business

**Master Degree study** - 2 years study programme

- Entrepreneurship





## Erasmus Charter for Higher Education

The international cooperation in the Erasmus Charter for Higher Education 2014-2020 still increases its popularity. Ostrava Business School has received the permission to implement the international mobility of Erasmus+ for the period 2014-2020.

## Diploma Supplement Label

Ostrava Business School as the first of the private universities in the Czech Republic defended the international certificate awarded by the European Commission - the Diploma Supplement Label. This supplement to the diploma acknowledges the comparability of quality of educational process at the school with the European standards. The Supplement to the diploma is in accordance with the standard model established by the European Commission, the Council of Europe and UNESCO.

## Five-level education concept

Ostrava Business School has made a significant step in its development, and along with other educational institutions (kindergarten, basic school, secondary school and professional higher school) has created the first purely educational holding company in the Czech Republic. That is a unique concept of continuous five-level education.

## Gallery



Ostrava, 20.8.2014.

### **Radan Jünger**

Chairman of the Board of Directors  
Director for Strategy and Development  
Ostrava Business School plc  
E-mail: radan.junger@vsp.cz

### **Associate professor Jiří Cienčila**

Rector  
Ostrava Business School plc  
E-mail: jiri.cienčila@vsp.cz