Message from the General and Program Co-Chairs

The IEEE Conference on Business Informatics (CBI) constitutes the next step in the evolution of the IEEE Conference on e-Commerce and Enterprise Computing (CEC). The first event under this new banner takes place in Vienna, Austria, July 15 – 18, 2013. The change in the name and scope of the conference is congruent to the renaming of the IEEE Technical Committee on e-Commerce to the IEEE Technical Committee on Business Informatics and Systems (TCBIS).

According to Nygaard, informatics is the science that has as its domain information processes and related phenomena in artifacts, society and nature. In the spirit of this definition, we consider business informatics as a scientific discipline targeting information processes and related phenomena in a socio-economical context, including companies, organizations, administrations and society in general. The IEEE Conference on Business Informatics seeks for methodological approaches to describe, explain, predict, and design information and communication models, architectures, and systems for the business environment. A key characteristic of business informatics research is that it considers a real-world business context in developing new theories and concepts that enable new practical applications. Thereby, business informatics research does not only extend the body of knowledge of the information society, but at the same time provides a tangible impact to industry. Or put it in other words – business informatics is research that matters!

1. Business Process Engineering

Business Informatics deals with information processes in organizations, industries and society at large. This concept of “information in motion” links to business processes deeply. Processes are the expression of the behavior of organizations and this behavior leaves footprints in the form of artifacts of all sorts, including information. Thus, Business Informatics profoundly intersects with the social enterprise from a unique perspective, namely, the integration of information and people’s behavior.

2. Enterprise Modeling

Enterprise modeling is concerned with the modeling of different aspects of an enterprise (goals, capabilities, organizational structures, business processes, resources, information, people, constraints, etc.) and their interrelationships. Accordingly, enterprise modeling offers different perspectives of an enterprise suitable for strategic planning, organizational design and software engineering. It covers the notation and semantics of enterprise modeling languages, the processes involved in creating and managing models, tool support, as well as quality of modeling.

3. Enterprise Architecture

In contrast to partial architectures such as IT architecture or software architecture, enterprise architecture focuses on the overall enterprise. Enterprise architecture explicitly incorporates business-related concepts and artifacts in addition to traditional IS/IT artifacts. By embracing an enterprise-wide perspective enterprise architecture provides a means for organizations to coordinate their adaptations to increasingly fast changing market conditions which impact the entire enterprise, from business processes to IT support.
4. Enterprise Engineering
The enterprise engineering domain aims to apply an engineering based approach to the design of enterprises and their transformation. As such, this domain is concerned with the development of new, appropriate theories, models, methods and other artifacts for the analysis, design, implementation, and governance of enterprises by combining (relevant parts of) management and organization science, information systems science, and computer science.

5. Enterprise & Business Transformation
Modern day enterprises are in a constant state of flux. New technologies, new markets, globalization, mergers, acquisitions, cost reduction and operational performance improvements are among the “usual suspects” that require enterprises to transform themselves. These transformations involve both the development of new business models, as well as transformations of the enterprise as a whole.

6. Business (Model) & Service Innovation
We live in a service dominant economy. Being successful in business no longer depends on having the “best” product, but increasingly depends on delivering high quality services, through attractive customer-centric business models, at affordable costs. This forces enterprises to continuously develop/innovate their services and renew/innovate their business models. The world’s evolution toward services-based clusters also brings new trends that blur the traditional boundaries across conventional industries, thus generating new opportunities for economies of scale and scope. This has led to increasing interests by disparate industries around the globe in the “art and science” of the practices of service innovation. A new concept, called service-dominant logic, has recently been introduced in the business discipline to study service phenomena – one that has significant cross-disciplinary implications for the research and design of IT-enabled service innovations and the attendant service systems.

7. Empowering & Enabling Technologies
Enabling technologies in Business Informatics integrate management practices with Informatics and Information Technologies. Business Informatics tasks may be performed, supported or monitored by automated or semi-automated technologies. Running environments range from thin mobile clients to large-scale distributed platforms, and newer areas such as analytics services, big data. Accordingly, we seek papers for original and innovative empowering and enabling technologies in domains related to Business Informatics.

8. Social & Frontier Technologies
New technologies such as M2M and social networks present a new frontier for business. This presents a reverse paradigm from the traditional model of using IT support for existing business to building business for the new technology. BI needs a new perspective on how to identify business opportunity, business model, business support around some new technologies, e.g. data broker for smart meters, context-driven business, etc. for next generation cloud-based companies like Facebook, Twitter, etc.

9. Data-Driven Service and Market Engineering
Economic problems faced by today’s organizations as well as society as a whole demand interdisciplinary knowledge from economics, management and informatics. Thus, economic modeling of IT-based solutions for analytically and statistically formulated economic problems is subject to this track. In particular, we are interested in the intelligent reduction of problem-relevant features from vast datasets Including customer dynamics, market behavior, resource usage, etc.
Accordingly, we aim for research at the interface of economic theories, game theory, advanced analytics, prediction, and computational methods to solve managerial decisions and planning problems.

Business informatics research must also lead to a tangible impact to industry. In order to learn from real world industry needs, CBI 2013 offers a dedicated industry track that complements the academic program. The Industrial Track is structured to foster the exchange of know-how between industry and academia, thereby accelerating transfer of novel scientific solutions into industrial applications.

The program of CBI is complemented by three co-located workshops. The Workshop on Social Business Process Management (SBM 2013) builds upon the experience that business that the benefit of a business process model is greatest when it reflects the knowledge and creativity of all involved stakeholders. Accordingly, SBM investigates into approaches that consider business process management not as a task of an individual or selected group, but as a responsibility of the whole enterprise, and all involved business partners, and possibly external knowledge carriers. The Workshop on Web 3.0 and Smart Commerce (W3SC2013) targets advances in theory and applications of applying Web 3.0 towards Smart Commerce. It is about business transformation following the Web 3.0 paradigm, about new types of services and innovative business models due to the high impact of the Web 3.0 and Smart Commerce as a next step of globalization. In addition, we offer the Complex Business and Information Systems Engineering (BISE) research discipline workshop. This workshop is not based on pre-selected papers. The goal of this workshop is to identify potential joint research activities, questions and networks related to BISE research and identify potential and new higher education models for information intensive business informatics. The workshop would help participants to understand wider scientific (non-mathematical or -formal) philosophical foundations of BISE research and help to discover new research strategies and approaches.

We are also proud of having Jan Mendling as a distinguished tutorial presenter on the “Fundamentals of Business Process Management”. This tutorial covers the whole lifecycle of business process management. It is based on a Springer textbook on the fundamentals of business process management which is co-authored by the tutorial presenters. The tutorial addresses computer science lecturers, graduate students, as well as business professionals. In the area of business process management, CBI 2013 will also host a panel discussion towards living inter-organizational processes.

A key asset of CBI 2013 is the keynotes of our domain coordinators, vulgo track chairs. Since this is the first conference under the new title and scope, it is important to sharpen the future research directions in the domain of business informatics. It is envisioned that the tracks identified for this conference are more or less stable for the future (even if a few may merge or a few new ones may be identified in the long run). Accordingly, we talk about research domains to reflect the more stable nature, rather than speaking of conference specific tracks. In order to reach a common understanding of these domains in our community, we omit to included classical keynote presentations in favor of keynotes each introducing a domain by defining its scope, its existing body of knowledge, and most importantly its future research challenges. These special keynotes should guide the community in its way forward and provide directions for research to be presented in future CBI conferences.
In summary, the program of CBI 2013 consists of nine keynote presentations on the research domains, 15 academic paper sessions, three industry paper sessions, three workshops, a tutorial and a panel. We are looking forward to innovative research results and high quality contributions on a broad range of business informatics. This has been guaranteed by a very selective paper selection process. In total we received 103 submissions from 29 countries to the research tracks of the conference. Each submission received at least three review reports, whereby the reviews were based on five criteria: relevance to the subject of the conference track, originality, technical depth, potential impact on the community, and presentation. Out of the total amount of 103 submissions, the program committee selected 26 full papers in the research track. This results in an acceptance rate of 25% for full research papers. Furthermore, 16 short papers were accepted. In addition, these proceedings include 9 papers of the industry track, and 13 papers of the workshops.

A scientific conference always depends on the volunteer efforts of a large number of individuals. We are grateful that many dedicated persons were willing to join our team. Our special thanks go to our Track Chairs Ying Chen, Eng Chew, Ulrich Frank, Frank Harmsen, Takayuki Ito, Stéphane Marchand-Maillet, Jan Mendling, Wolfgang Molnar, Thomas Setzer, José Tribolet, and Christof Weinhardt who nominated a prestigious program committee with members from all over the globe. We are grateful to the members of this program committee and the additional reviewers, who devoted a considerable amount of their time on reviewing the submissions to IEEE CBI 2013.

We thank Christian Pichler for taking care of the workshops at IEEE CBI 2013. We appreciate all the efforts of the workshop chairs Andreas Oberweis, Frank Schönthal, and Gottfried Vossen for SBM 2013, Svetlana Maltseva and Mikhail Komarov for W3SC 2013, and Mika Helenius for BISE 2013 to create attractive workshop programs. We also express our gratitude to Jan Mendling for his tutorial on the various aspects of business process management.

It is by no means a matter of fact, that we are privileged to work together with highly motivated people to arrange the conference and to publish these proceedings. We specially thank Marion Brandsteidl who acted as local organization chair. Her commitment and enthusiasm are gratefully acknowledged. For the proceedings we have to thank our production manager Lisa O’Conner from IEEE who always responded to our numerous special requests. We appreciate all the tireless support by the publicity chair Christian Pichler for announcing our conference and by our Web chair Robert Engel for maintaining the Web site. A special thank goes to Karin Schellner for the design of the CBI 2013 logo. Finally, we thank Christine Haas and Ronald Bieber from the Austrian Computer Society for all the local arrangements and Christiane Tronigger for taking care of the registration.

We hope that you enjoy IEEE CBI 2013 in Vienna and that you find these proceedings a valuable source of information on business informatics.

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