### 2008 Summer School on Services Computing (SERVICES UNIVERSITY)

<table>
<thead>
<tr>
<th>Time</th>
<th>July 6, 2008 (Sunday)</th>
<th>July 7, 2008 (Monday)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-10:00</td>
<td>Registration, Site Tour, and Social Networking</td>
<td></td>
</tr>
<tr>
<td>10:00 - 12:00</td>
<td>Summer School on Services Computing</td>
<td>Summer School on Services Computing</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>Lunch (not included)</td>
<td></td>
</tr>
<tr>
<td>13:00-15:00</td>
<td>Summer School on Services Computing</td>
<td>Summer School on Services Computing</td>
</tr>
<tr>
<td>15:00-15:30</td>
<td>PM Break</td>
<td></td>
</tr>
<tr>
<td>15:30-17:30</td>
<td>Summer School on Services Computing</td>
<td>Summer School on Services Computing</td>
</tr>
<tr>
<td>5:30:00 PM</td>
<td>1. No planned conference activities for conference participants (Enjoy Your Stay at Hawaii) 2. Editorial Board Meeting for IEEE Transactions on Services Computing (Invitation Only, Monday)</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-8:00</td>
<td>Registration and Conference Site Tour</td>
<td>Room 1</td>
</tr>
<tr>
<td>8:00-9:30</td>
<td>SCC/SERVICES Tutorial 1</td>
<td>Room 2</td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>MNPSC 2008</td>
<td>Room 3</td>
</tr>
<tr>
<td>10:00-11:30</td>
<td>SOPOSE 2008</td>
<td>Room 4</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Lunch (not included)</td>
<td>Room 5</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>SCC/SERVICES Tutorial 1</td>
<td>Room 6</td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>PM Break (Room)</td>
<td>Room 7</td>
</tr>
<tr>
<td>14:15-15:45</td>
<td>SCC/SERVICES Tutorial 3</td>
<td>Room 1</td>
</tr>
<tr>
<td>15:45-16:30</td>
<td>PM Break with Refreshments (Room)</td>
<td>Room 2</td>
</tr>
<tr>
<td>16:30-18:00</td>
<td>SCC/SERVICES Tutorial 3</td>
<td>Room 3</td>
</tr>
<tr>
<td>18:30-21:00</td>
<td>No planned conference activities for conference participants</td>
<td>Room 4</td>
</tr>
<tr>
<td></td>
<td>2. Editorial Board Meeting for IEEE Transactions on Services Computing (Invitation Only)</td>
<td>Room 5</td>
</tr>
</tbody>
</table>

*Room 1: SCC/SERVICES Tutorial 1*  
*MNPSC 2008*  
*SOPOSE 2008*  
*SWF 2008*  
*WebX 2008*  
*ESM 2008*  
*SCC/SERVICES Tutorial 2*  
*Lunch (not included)*  
*Room 3: MNPSC 2008*  
*SOPOSE 2008*  
*SWF 2008*  
*WebX 2008*  
*ESM 2008*  
*SCC/SERVICES Tutorial 2*  
*Room 4: PM Break (Room)*  
*Room 5: PM Break with Refreshments (Room)*  
*Room 6: SCC/SERVICES Tutorial 3*  
*MNPSC 2008*  
*SOPOSE 2008*  
*SWF 2008*  
*Ph.D. Symposium*  
*WSCA 2008*  
*SCC/SERVICES Tutorial 4*  
*Room 7: SCC/SERVICES Tutorial 4*  
*MNPSC 2008*  
*WS-Testing 2008*  
*Emerging Services Technology*  
*Ph.D. Symposium*  
*WSCA 2008*  
*SCC/SERVICES Tutorial 4*
### 2008 IEEE Congress on Services (SERVICES 2008)

#### 2008 IEEE International Conference on Services Computing (SCC 2008)

**July 9, 2008 (Wednesday)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-8:00</td>
<td>Breakfast</td>
</tr>
<tr>
<td>8:00-9:30</td>
<td>SCC/SERVICES 2008 Keynote (Keynote Room)</td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>AM Break (Room)</td>
</tr>
<tr>
<td>10:00-17:00</td>
<td>Job Fair (<a href="http://www.jobsintheservices.com">http://www.jobsintheservices.com</a>); Innovation Showcase (Demo and Display); IEEE Body of Knowledge on Services Computing Initiative</td>
</tr>
<tr>
<td>10:00-17:00</td>
<td>Internet Access Services (Room)</td>
</tr>
<tr>
<td>10:00-11:30</td>
<td>SCC/SERVICES Tutorial 5</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Lunch (not included)</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>SCC/SERVICES Tutorial 5</td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>PM Break (Room)</td>
</tr>
<tr>
<td>14:15-15:45</td>
<td>SCC/SERVICES Tutorial 6</td>
</tr>
<tr>
<td>15:45-16:30</td>
<td>PM Break with Freshments (Room)</td>
</tr>
<tr>
<td>16:30-18:00</td>
<td>SCC/SERVICES Tutorial 6</td>
</tr>
<tr>
<td>19:00-22:00</td>
<td>Congress Banquet (Time: 7:00-11:00; Keynote Room) and SERVICES UNIVERSITY Update</td>
</tr>
</tbody>
</table>

**Room Scheduling**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>10:00 - 11:30</td>
<td>SCC/SERVICES Tutorial 5</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Lunch (not included)</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>SCC/SERVICES Tutorial 5</td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>PM Break (Room)</td>
</tr>
<tr>
<td>14:15-15:45</td>
<td>SCC/SERVICES Tutorial 6</td>
</tr>
<tr>
<td>15:45-16:30</td>
<td>PM Break with Freshments (Room)</td>
</tr>
<tr>
<td>16:30-18:00</td>
<td>SCC/SERVICES Tutorial 6</td>
</tr>
<tr>
<td>19:00-22:00</td>
<td>Congress Banquet (Time: 7:00-11:00; Keynote Room) and SERVICES UNIVERSITY Update</td>
</tr>
</tbody>
</table>
### 2008 IEEE Congress on Services (SERVICES 2008)
2008 IEEE International Conference on Services Computing (SCC 2008)

**July 10, 2008 (Thursday)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-8:00</td>
<td>Breakfast</td>
</tr>
<tr>
<td>8:00-9:30</td>
<td>SCC/SERVICES 2008 Keynote or Keynote Panel (Keynote Room)</td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>AM Break (Room)</td>
</tr>
<tr>
<td>10:00-17:00</td>
<td>Job Fair (<a href="http://www.jobsintheservices.com">http://www.jobsintheservices.com</a>); Innovation Showcase (Demo and Display); IEEE Body of Knowledge on Services Computing Initiative; Internet Access Services (Room)</td>
</tr>
<tr>
<td>10:00-17:00</td>
<td>Internet Access Services (Room)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Room</th>
<th>Room 1</th>
<th>Room 2</th>
<th>Room 3</th>
<th>Room 4</th>
<th>Room 5</th>
<th>Room 6</th>
<th>Room 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 - 11:30</td>
<td>SCC/SERVICES Tutorial 5</td>
<td>Services Computing Contest</td>
<td>Research Session 9</td>
<td>Research Session 10</td>
<td>Industry Session 9</td>
<td>Industry Session 10</td>
<td>SOA Industry Summit</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Lunch (not included)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12:30-14:00</td>
<td>SCC/SERVICES Tutorial 5</td>
<td>Services Computing Contest</td>
<td>Research Session 11</td>
<td>Research Session 12</td>
<td>Industry Session 11</td>
<td>Industry Session 12</td>
<td>SOA Industry Summit</td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>PM Break (Room)</td>
<td></td>
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</tr>
<tr>
<td>15:45-16:30</td>
<td>PM Break with Freshments (Room)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>16:30-18:00</td>
<td>SCC/SERVICES Tutorial 6</td>
<td>Services Computing Contest</td>
<td>Research Session 15</td>
<td>Research Session 16</td>
<td>Industry Session 15</td>
<td>Industry Session 16</td>
<td>SOA Industry Summit</td>
</tr>
<tr>
<td>18:30-23:00</td>
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## 2008 IEEE Congress on Services (SERVICES 2008)
### 2008 IEEE International Conference on Services Computing (SCC 2008)

**July 11, 2008 (Friday)**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>7:30-8:00</td>
<td>Breakfast</td>
</tr>
<tr>
<td>8:00-9:30</td>
<td><strong>SCC/SERVICES 2008 Keynote (Keynote Room)</strong></td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>AM Break (Room )</td>
</tr>
<tr>
<td>10:00-17:00</td>
<td>Job Fair (<a href="http://www.jobsintheservices.com">http://www.jobsintheservices.com</a>); Innovation Showcase (Demo and Display); IEEE Body of Knowledge on Services Computing Initiative Internet Access Services (Room)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Room</th>
<th>Room 1</th>
<th>Room 2</th>
<th>Room 3</th>
<th>Room 4</th>
<th>Room 5</th>
<th>Room 6</th>
<th>Room 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 - 11:30</td>
<td>WIP Session 5</td>
<td>WIP Session 6</td>
<td>Research Session 17</td>
<td>Research Session 18</td>
<td>Industry Session 17</td>
<td>Industry Session 18</td>
<td>SOA Standards</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Lunch (not included)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>WIP Session 7</td>
<td>Education Methodology Summit</td>
<td>Panel 3</td>
<td>Panel 4</td>
<td>SOA Industry Summit</td>
<td>SOA Industry Summit</td>
<td>SOA Standards</td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>PM Break (Room)</td>
<td></td>
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<tr>
<td>14:15-15:45</td>
<td></td>
<td></td>
<td>SOA Industry Summit</td>
<td></td>
<td>SOA Industry Summit</td>
<td>SOA Standards</td>
<td></td>
</tr>
<tr>
<td>15:45-16:00</td>
<td>PM Coffee Break (Room)</td>
<td></td>
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</tr>
<tr>
<td>16:00-17:00</td>
<td>1. Status Report of the 2008 IEEE Services Computing Contest 2. Closing Remarks (Keynote Room)</td>
<td></td>
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</tr>
<tr>
<td>17:00</td>
<td>Have A Great Trip Back Home!</td>
<td></td>
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</tr>
</tbody>
</table>
Development of Adaptive Service-based Software

Stephen S. Yau  
Professor of Computer Science and Engineering  
Director, Information Assurance Center  
Arizona State University

Abstract:

Adopting service-oriented architecture in large-scale distributed applications, such as e-business, healthcare, transportation, scientific computing, and homeland security, requires adaptive service-based software (ASBS), which has the capability of monitoring the changing system status, analyzing and controlling tradeoffs among multiple QoS features, and adapting its service configuration to satisfy multiple QoS requirements simultaneously. Development of ASBS with multiple QoS monitoring and adaptation capabilities in dynamic environments expeditiously and cost-effectively requires major improvements on software technology.

We will first discuss the challenges for the development of ASBS with satisfactory QoS in dynamic environments and related ongoing research, such as autonomic computing and situation awareness. Then, an overview of our research on the development of ASBS will be presented. Major research issues and possible approaches to dealing with them, such as declarative specification of situation awareness and security requirements, automated agent synthesis for situation-aware workflows, and establishing performance models for ASBS to support the development of QoS monitoring and adaptation capabilities, will be discussed.

About the Speaker:

Stephen S, Yau is currently a professor of computer science and engineering and the director of Information Assurance Center at Arizona State University (ASU), Tempe. He served as the chair of the Department of Computer Science and Engineering at ASU in 1994-2001. Previously, he was on the faculties of Northwestern University, Evanston, Illinois, and University of Florida, Gainesville.

He served as the president of the Computer Society of the Institute of Electrical and Electronics Engineers (IEEE) and on the IEEE Board of Directors and the Board of Directors of Computing Research Association. He also served as the editor-in-chief of IEEE COMPUTER magazine, and organized many national and international major conferences, including the World Computer Congress sponsored by International Federation for Information Processing (IFIP) in 1989. He founded and organized the Annual International Computer Software and Applications Conference (COMPSAC) sponsored by the IEEE Computer Society, in 1977.
SERVICES & SCC 2008 KEYNOTES

Business Cloud: Bringing The Power of SOA and Cloud Computing

Moderator: Liang-Jie Zhang (IBM T.J. Watson Research Center, USA)

Panelists (alphabetical order):
• Carl K Chang (Iowa State University, USA)
• Ephraim Feig (Motorola, USA)

Panel Theme:

This panel aims to bring the power of Service-Oriented Architecture (SOA) and Cloud Computing together to deliver business and practical value to the emerging software applications, hardware, and business process provisioning services over the Internet. The leading companies in the industry are moving applications and data to the Internet. Typically, there are three following resources that can be provisioned and consumed over the Internet.

- Computing resource sharing that includes computing power, storage, and machine provisioning
- Software application sharing that handles software as a service and mashup of value-added applications
- Business process sharing that supports business process outsourcing, composition, and provisioning

There are great opportunities for us to explore a converging software and services architecture for enterprise users and consumer users. The challenges also co-exist in terms of developing a unified application development environment for Cloud Computing as well as creating a scalable, reusable, and configurable provisioning platform for Cloud Computing.

The key focus of this panel is to discuss and debate

- What’s Cloud Computing? Can we leverage Grid Computing to enable it?
- How to leverage SOA to build a scalable Cloud Computing infrastructure?
- How to build killer applications in Cloud Computing environment?
- Lessons learnt on how to bring the power of SOA and Cloud Computing together
- What is the right strategy and execution practice to create Services Computing Curriculum to get more skilled people ready for Business Cloud?

About the Speaker:

Moderator

Liang-Jie Zhang (LJ) is a Research Staff Member and Program Manager of Application Architectures and Realization at IBM T.J. Watson Research Center. Dr. Zhang is the founding chair of IBM Research's Services Computing Professional Interest Community and has been leading an IBM Service-Oriented Architecture (SOA) tooling and architecture research projects since 2001. He has
been co-leading IBM's SOA Solution Stack (aka SOA Reference Architecture: Solution View) project since 2004. His new book Services Computing has been published by Springer. He has received 2 IBM Outstanding Technical Achievement Awards, 9 IBM Creative Contribution Awards, an Outstanding Achievement Award by the World Academy of Sciences, and an Innovation Leadership Award from Chinese Institute of Electronics. Dr. Zhang has 36 granted patents and 20 pending patent applications. As the lead inventor, he holds federated Web services discovery and dynamic services composition patents. He is the chair of IEEE Computer Society Technical Committee on Services Computing. He has been appointed as the founding Editor-in-Chief of IEEE Transactions on Services Computing.

Panelists

Carl K. Chang was 2004 IEEE Computer Society President. Upon completing his presidency for the Computer Society, he was appointed to be the 2005 Chair of the IEEE Meetings and Services Committee reporting to the IEEE Board of Directors. Previously he served as the Editor-in-Chief for IEEE Software (1991-94). Chang is Professor and Chair of the Department of Computer Science at Iowa State University. He received a PhD in computer science from Northwestern University.

Ephraim Feig is a Senior Director at Motorola. Prior to his joining Motorola, he was Chief Technology Officer and Chief Marketing Officer of Kintera, Inc. from 2000 until 2006 and a researcher and R&D manager at IBM from 1980 until 2000. He was elected IEEE Fellow for contributions to signal processing, holds 27 US patents, and has published more than 100 technical articles. Dr. Feig has served as an adjunct professor at several universities, including Columbia University, The City College of New York and New York Polytechnic Institute. He is a founding member of the IEEE Computer Society Technical Committee on Services Computing and this year's Program Chair of IEEE SCC. He serves on advisory boards at CUNY, UCSD and USD, and is on the board of directors of the San Diego Symphony Orchestra.
Cloud Computing

Mahmoud Naghshineh
Director Service Delivery
IBM Research
IEEE Fellow

About the Speaker:

Cloud computing is viewed as a game-changing paradigm for enterprise and internet environments and has created palatable excitement among industry and academic leaders. It offers great opportunities for innovative web-delivered services beyond the traditional computing and internet models and is at the intersection of major new trends such as large scale mega datacenters, new programming models, social and collaborative networking, and innovative IT service delivery paradigms. In this talk, we will describe key cloud computing trends and innovation opportunities that it promises to create in traditional IT environments and the potential it offers to fuel the explosive growth in social networking, mobile internet, and open collaboration platforms.
Panel Sessions

Web Services for Group Decision and Negotiation Support

Tung Bui
Tutorial Session 1
From Mathematical Model to Systematic SOA Solution Design Tool

Nianjun Zhou
IBM T.J. Watson Research Center

Liang-Jie Zhang
IBM T.J. Watson Research Center

Abstract:
Service-Oriented Architecture (SOA) is an architectural style for solution architects to create and manage new value added solutions by leveraging various solution artifacts such as business processes, services, packaged applications, and manageable attributes throughout their lifecycle. In this tutorial, we present our initial findings of mathematical modeling of a selected SOA solution architecture. It includes the steps required from a mathematical model to a real implementation of SOA solution tool using XML annotation, XML transformation, UML models and artifact generation with context-aware enabling utilities. We will start from the introduction of SOA concept, solution architecture, and practices in the field. Then we will present a mathematical abstraction of description of an SOA solution model using graph theory and define concepts to capture the relationships, constrains and notations of an SOA solution’s building blocks. In addition, XML is introduced and leveraged to convert this mathematical abstraction into materialized description of an SOA solution model which is independent from the product-specific tooling environment. As an example, we will introduce an SOA modeling tool using UML and context-aware software plug-in on top of IBM’s Rational Software Architect (RSA) to illustrate the seamless connection between the mathematical model and a reusable software system.

About the speakers

Dr. Nianjun Zhou has been working in IBM since 1997. Now, he is the research staff member of IBM Watson research lab in the area of services computing. Before joining research, he led the efforts of grid computing including server grid and client grid in IBM CIO. Before joining IBM, he has been a research scientist of New York State Department of Environmental Conservation. Dr. Zhou received his Ph.D from Rensselaer Polytechnic Institute (RPI) in Electrical Engineering focus on Ad Hoc/Sensor network routing overhead for variable topology network. His interesting is using computer methodologies and technologies to innovate new ideas, develop new infrastructure and applications which enhance the computing resources utilities, efficiency of knowledge and information management.

Dr. Liang-Jie Zhang is a Research Staff Member (RSM) in Services Technologies Department at IBM T.J. Watson Research Center. He is the worldwide lead of an IBM’s SOA solution design and modeling tool. He has been co-leading the IBM-wide SOA Solution Stack project since 2004. Dr. Zhang is one of the leading research pioneers of Service-Oriented Architecture (SOA) and Web Services. Dr. Zhang was the lead inventor and architect of Business Explorer for Web Services (BE4WS), WSIL Explorer, and Web Services Outsourcing Manager (WSOM), all released by IBM alphaWorks. In 2001, he led a worldwide team to create the first comprehensive Web services-based Managed E-Hub to enable services provisioning and business on-boarding for supporting business process on demand. He is the founding Editor in Chief of IEEE Transactions on Services Computing.
Abstract:

This tutorial will explore critical issues concerning identity management for the emerging service oriented society. Identity management must be incorporated as an integral part of service infrastructures to make identity available to services across organizations in a secure and privacy protected manner. Identity data is crucial for successfully providing personalized experiences for legitimate users of services. It is important that the users have strong control over their identity data to foster a socially responsible service industry. The goal of this tutorial is to give participants a detailed understanding of the prospects for, and issues arising from, identity management in the emerging service oriented industry. In this tutorial, we will first introduce basic notions concerning identity, identity lifecycle and federated digital identity management. We will then give an overview of identity management for services and illustrate best practices and lessons learned in real settings using case studies. We will discuss fundamental methods of identity management (e.g., authentication and authorization techniques), examine enabling technology (e.g., technical standards) and initiatives (Liberty Alliance, Shibboleth, CardSpace), explore the key challenges and research trends (e.g., security and performance).

About the speakers

Elisa Bertino is Professor at Purdue University and Research Director of CERIAS. Her current research interests include digital identity management, computer security, privacy, service oriented architectures, healthcare applications. She has given invited talks and tutorials at several conferences, including the IEEE ICWS 2006 where she presented a tutorial on “Security in SOA and Web Services”. She is a Fellow Member of IEEE and ACM.

Kenji Takahashi is a Senior Research Engineer, Supervisor at NTT Information Sharing Platform Laboratories in Tokyo, Japan. He is working on identity management technologies for next generation networks. His research interests are in the interdisciplinary areas of security, identity, and usability. He is also very active in technical standardization, such as Liberty Alliance. Dr. Takahashi has given many talks and tutorials at international conferences, including the following ones related to the proposed topic: - “Application Service Providers: System Development Using Application Services over the Net” at IEEE/ACM ICSE 2000. - “Identity Management” at ACM CCS 2004.
Abstract:

Services and processes are closely intertwined and some refer to languages like BPEL as "programming in the large" thus illustrating the role of processes in service computing. The tutorial focuses on the process-aspects of services. BPEL is the de-facto standard for process support in a SOA context. However, processes can be interpreted in a broader way and many things can be learned from experiences in the BPM and workflow area. This tutorial will first provide an overview of the different approaches and languages. Contemporary systems and languages will be linked to foundational concepts and techniques. After this overview the tutorial will focus on the analysis of services. On the one hand it will be shown that process models can be analyzed in various ways (from performance analysis to verification). On the other hand, one can analyze the actual behavior of services through monitoring and process mining. The tutorial will report on many practical experiences with process analysis. It will be demonstrated that spectacular can be achieved using technology that is available today. For example, it is possible to verify large collections of models and detect errors. Moreover, by using event logs or tapping of messages processes can be constructed automatically and used for performance analysis, social network analysis, etc. Moreover, the same data and tools can be used to check conformance, e.g., is a service behaving as it should? At TU/e there is a lot of experience in the area of BPM, WFM, SOA, and process analysis. TU/e has probably the largest research group on BPM in the world with more than 50 researchers working on topics mentioned above.

About the speaker

Prof. dr.ir. Wil van der Aalst is a full professor of Information Systems at the Technische Universiteit Eindhoven (TU/e) having a position in both the Department of Mathematics and Computer Science and the Department of Technology Management. Currently he is also an adjunct professor at Queensland University of Technology (QUT) working within the BPM group there. His research interests include workflow management, process mining, Petri nets, business process management, process modeling, and process analysis. Wil van der Aalst has published more than one hundred journal papers, fifteen books (as author or editor), and more than two hundred conference/workshop publications. Many of his papers are highly cited (his H-number is 49 according to Google Scholar) and his ideas have influenced researchers, software developers, and standardization committees working on process support. He has been a co-chair of many conferences including the Business Process Management conference, the International Conference on Cooperative Information Systems, the International conference on the Application and Theory of Petri Nets, and the IEEE International Conference on Services Computing. He is also editor/member of the editorial board of several journals, including the Business Process Management Journal, the International Journal of Business Process Integration and Management, the International Journal on Enterprise Modelling and Information Systems Architectures, Computers in Industry, IEEE Transactions on Services Computing, Lecture Notes in Business Information Processing, and Transactions on Petri Nets and Other Models of Concurrency. For more information about his work visit: www.workflowpatterns.com, www.workflowcourse.com, www.processmining.org, www.yawlsystem.com, www.wvdaalst.com.
Abstract:

Software as a Service (SaaS) is an emerging software design, implementation and delivery model. The main property of SaaS is that the software requesters do not own the software itself but rather use it through an Application Programming Interface (API) accessible over the Web. The software providers own the software and SaaS is generally priced on a per-user basis, sometimes with a minimum number of users. As security has become an essential component for all software, several security solutions for XML data have been proposed. In addition to security issues, survivability requires SaaS in a service overlay network to be able to fulfill their missions in a timely manner, even in the presence of attacks, threats, or failures due to unreliable communication channels. Because of the severe consequences of failure, software requesters are focusing on SaaS survivability as a key risk management strategy for businesses.

Technically this tutorial will review the topics of XML and a portfolio of related standards in response to the growing need for a platform independent language for supporting SaaS design, implementation and delivery. This tutorial aims to present and discuss various security issues of SaaS. This tutorial will cover the fundamental concepts of security strategy and risk management from the managerial perspectives of SaaS. This tutorial will discuss security risks and related security issues in SaaS. Strategy and policy topics on how to find the right balance between security and usability will be addressed as well as the management of maintaining a secure SaaS infrastructure. This tutorial will also address the common practices and related tools/procedures for addressing those security risks such as static analysis and assessment tool. A research prototype of security assessment tool by Milescan will also be presented and demonstrated in the tutorial.

About the speakers

Dr. Patrick Hung is an Assistant Professor at the Faculty of Business and Information Technology in UOIT and an Adjunct Assistant Professor at the Department of Electrical and Computer Engineering in University of Waterloo. He is an executive committee member of the IEEE Computer Society's Technical Steering Committee for Services Computing, a steering member of EDOC "Enterprise Computing," and an associate editor/editorial board member/guest editor in several international journals such as the IEEE Transactions on Services Computing, International Journal of Web Services Research (JWSR) and International journal of Business Process and Integration Management (IJBPIM).

Dr. Wendy Hui holds a Ph.D. in Information Systems from the Hong Kong University of Science and Technology (HKUST). She is currently an Assistant Professor at Zayed University, Abu Dhabi, U.A.E. Her research interests include Economics of Information Systems, Information Security, and Technology-Assisted Learning. Her work has been accepted at Journal of Management Information Systems (JMIS), Decision Support Systems (DSS), IEEE Transactions on Systems, Man and Cybernetics, Part A (IEEE SMCA), and Communication of the AIS (CAIS).
Abstract:

In this tutorial, we present a business process and information modeling approach based on our research results and engagement experiences over the past five years. A business process model describes actions taken by business (human or system) actors to achieve a strategic or operational goal. Traditionally, most of the work in this area, like workflow modeling, is activity-centric and focuses on prescribing activities and their sequences, for example, by stating "first we do A, then B, then C, and while doing C we also do D." This approach has a number of drawbacks, particularly when the goal is to consolidate business processes across organizations, generate IT solutions that are in close alignment with business goals, and achieve desirable features like scalability, flexibility and modularity as business processes become complex and large. In response to these challenges, we developed a new modeling paradigm that models process activities in the context of information entities. Although a business process may involve a large number of information entities, very often we observe that only a small number of them (for example, the claim in an insurance claim process) are key drivers of the flow of activities in the process. The business process itself is the path of these “business entities” through their lifecycles, from their initial states to their final states. Therefore, a complex process can be viewed as the intersecting life cycles of such entities. In this tutorial, we will first introduce the concept of business entities and a method for discovering business entities from existing activity-centric process models. Second, we will describe the modeling of business entity lifecycles as formal state machines and representing business processes as interacting state machines. A formal technique for verifying such process models will be also introduced. Third, we will demonstrate that SOA-based IT solutions can be automatically generated from such business entity models. Moreover, as this new paradigm has been successfully tested through customer engagements, in this tutorial, we will select a couple of case studies to show how it was applied to solve real customer problems. Finally, we will compare this new approach with traditional process modeling approaches and show the advantages of this approach in achieving process scalability, flexibility and modularity.

About the speakers

Dr. Frederick Wu leads a team of researchers in the area of model-driven enterprise solutions at IBM Thomas J. Watson Research Center. He has worked in the area of electronic commerce and business integration for the past nine years. He holds S.B., S.M., and Ph.D. degrees from the Massachusetts Institute of Technology.

Dr. Santhosh Kumaran leads a team of researchers in the area of model-driven business integration at IBM Thomas J. Watson Research Center. His research interest is in using formal models to explicitly define the structure and behavior of an enterprise and employing these models to integrate, monitor, analyze, and improve its performance.

Dr. Rong Liu is a researcher at IBM Thomas J. Watson Research Center. Her research interest includes entity centric business modeling, process modeling and verification, workflow systems, Petri net technologies and supply chain management.

Tutorial Session 6

Enterprise Service Architectures

Aditya K. Ghose
Decision Systems Laboratory, School of

George Koliadis
Decision Systems Laboratory, School of
Abstract:

An executive service architecture helps provide a high-level blueprint of the complexity underlying an enterprise, which can be used by senior management, as well as technical, IT and operational personnel in key decision and change processes. With the growing popularity of the SOA paradigm, and the increasing emphasis on the application of business process management principles, it is becoming increasingly important for organizations to understand their service architectures by answering questions such as what services the enterprise supports, which enterprise actors/units offer these services, which services support cross-enterprise value chains, which processes rely on these services, which processes implement these services, which of these are critical to realizing enterprise goals, which services are redundant etc. This tutorial presents the current state-of-the-art in enterprise service architectures and explores a set of novel approaches to the problem. The tutorial will begin by exploring a competence theory for enterprise service architectures, by discussing the key questions that such enterprise service architectures must help answer. An initial competence theory will be presented based on the existing literature. Attendees will be encouraged to identify and discuss gaps, if any, in the competency theory presented. A wide repertoire of frameworks that can serve as the basis for enterprise service architectures will then be reviewed. These include Porter's Value Chain model (subsequently implemented in VCOR and extended to the Value Network model), Kaplan and Norton's Strategy Maps, the Business Motivation Model (BMM), the ARIS House of Business Engineering (HOBIE) architecture, the Business Process Architecture Framework (BPAF) and Role-Activity Diagrams. More research-oriented frameworks such as i*, e3 Value, the Semantic Object Model (SOM) and the Toronto Virtual Enterprise Ontology (TOVE) will also be examined in detail. Each of these (and others) will be evaluated against the competence theory discussed above. Gaps in functionality will be highlighted, and will form the basis for motivating a new set of frameworks for enterprise service architectures that support a variety of techniques for relating service and process portfolios to enterprise models.

About the speakers

Aditya Ghose is a Professor in the School of Computer Science and Software Engineering at the University of Wollongong, and Director of that university’s Decision Systems Lab. His research has been published in the top venues in service-oriented computing (SCC and ICSOC), software modelling (ER), software evolution (IWSSD, IWPSE) and AI (AAAI, AAMAS and ECAI). He has an invited speaker at the Schloss Dagstuhl Seminar Series in Germany and the Ban International Research Station in Canada. He has also been a keynote speaker at several conferences, and program/general chair of several others. He is a senior technical advisor to several companies both in Australia and Canada.

George Koliadis holds a BSc Honours from the University of Wollongong, and is currently in his PhD candidature at this institution. He has previously worked on large-scale software engineering projects for the Australian Taxation Office, and as a researcher for a collaborative research centre in Sydney, Australia. His research and applied interests include Business Process Management, Conceptual Modeling, and Requirements Engineering.
Research Session 1 – Access Control
Verification of Access Control Requirements in Web Services Choreography
   Federica Paci, Mourad Ouzzani, and Massimo Mecella
Pattern-based Policy Configuration for SOA Applications
   Fumiko Satoh, Nirmal K. Mukhi, Yuichi Nakamura, and Shinichi Hirose
Monitoring Dependencies for SLAs: The MoDe4SLA Approach
   Lianne Bodenstaff, Andreas Wombacher, Manfred Reichert, and Michael C. Jaeger

Research Session 2 – Access Control
Towards Effective Project Management across Multiple Projects with Distributed Performing Centers
   Rohit M. Lotlikar, Ramana Polavarapu, Sadhika Sharma, and Biplav Srivastava
Optimizing Change Request Scheduling in IT Service Management
   Leila Zia, Yixin Diao, Daniela Rosu, Chris Ward, and Kamal Bhattacharya
Predictive Admission Control Algorithm for Advanced Reservation in Equipment Grid
   Jie Yin, Yuexuan Wang, Meizhi Hu, and Cheng Wu

Research Session 3 – Access Control
End-to-End Versioning Support for Web Services
   Philipp Leitner, Anton Michlmayr, Florian Rosenberg, and Schahram Dustdar
Representing and Accessing Design Knowledge for Service Integration
   Karthikeyan Umapathy and Sandeep Purao
Incomplete Preference-driven Web Service Selection
   Hongbing Wang, Junjie Xu, and Peicheng Li

Research Session 4 - Business
Zazen: A Mediating SOA Between Ajax Applications and Enterprise Data
   Avraham Leff and James Rayfield
To Establish Enterprise Service Model from Enterprise Business Model
   P. Jamshidi, M. Shartifi, and S. Mansour
SCOOP: Automated Social Recommendation in Enterprise Process Management
   Huiming Qu, Jimeng Sun, and Hani Jamjoom

Research Session 5 – Case Study
Auction Based Models for Ticket Allocation Problem in IT Service Delivery Industry
   Prasad M Deshpande, Dinesh Garg, and N Rama Suri
Experimental Robustness Evaluation of JMS Middleware
   Marco Vieira, Henrique Madeira, and Nuno Laranjeiro
Locating Components Realizing Services in Existing Systems
   Renuka Sindhgatta and Karthikeyan Ponnalagu

Research Session 6 – Case Study
On The Specification of Payment Requirements For Collaborative Services
   Bart Orriens and Jian Yang
A Graph Theory Based Impact and Completion Analysis Framework and Applications for Modeling SOA Solution Components
Nianjun Zhou and Liang-Jie Zhang

Rapid Deployment of SOA Solutions via Automated Image Replication and Reconfiguration
Manish Sethi, Kalapriya Kannan, Narendran Sachindran, and Manish Gupta

Research Session 7 - Security
Security Specification at Process Level
Stephanie Chollet and Philippe Lalanda
Adaptive Secure Access to Remote Services
Hanping Lufei, Weisong Shi, and Vipin Chaudhary
A Secure Information Flow Architecture for Web Services
Lenin Singaravelu, Jinpeng Wei, and Calton Pu

Research Session 8 – Semantic Web
Morpheus: Semantics-based Incremental Change Propagation in SOA-based Solutions
Ramya Ravichandar, Nanjangud C. Narendra, Karthikeyan Ponnalagu, and Dipayan Gangopadhyay
Web Services Matching By Ontology Instance Categorization
Qianhui Althea Liang and Herman Lam
An Automatic Semantic Segment Detection Service for HTML Documents
Stephen J. H. Yang, Jia Zhang, and Stella T.C. Tsai

Research Session 9 - Service Discovery
Chord4S: A P2P-based Decentralised Service Discovery Approach
Qiang He, Jun Yan, Yun Yang, Ryszard Kowalczyk, and Hai Jun
Predicting Service Mashup Candidates Using Enhanced Syntactical Message Management
M. Brian Blake and Michael F. Nowlan
Proactive Runtime Service Discovery
Andrea Zisman, James Dooley, and George Spanoudakis

Research Session 10 - SOA
Instance Isolation Analysis for Service-Oriented Architectures
Gero Decker and Mathias Weske
Variation-Oriented Engineering (VOE): Enhancing Reusability of SOA-based Solutions
N.C. Narendra, K. Ponnalagu, B. Srivastava and G.S. Banavar
Promoting Reuse via Extraction of Domain Concepts and Service Abstractions from Design Diagrams
Kalapriya Kannan and Biplav Srivastava

Research Session 11 - Workflow
Study of Service Processing Agent for Context-Aware Service Coordination
Yoji Yamato, Hiroyuki Ohnishi, and Hiroshi Sunaga
PASS: An Approach to Personalized Automated Service Composition
Yang Li, JinPeng Huai, HaiLong Sun, Ting Deng, and Huipeng Guo
Run Time Protocol Binding: Flexible Service Integration By Means Of Flexible Service Interactions
J. Fabra, P. A lvarez, J.A. Banares, and J. Ezpeleta

Research Session 12 - Workflow
A QSQL-based Efficient Planning Algorithm for Fully-automated Service Composition in Dynamic Service Environments
Kaijun Ren, Xiao Liu, Jinjun Chen, Nong Xiao, Junqiang Song, and Weimin Zhang
A User-Steering Exploratory Service Composition Approach
Shuying Yan, Yanbo Han, Jing Wang, Chen Liu, and Guiling Wang
Leveraging Service Composition Relationship to Improve CPU Demand Estimation in SOA Environments
Chun Zhang, Rong N. Chang, Chang-Shing Perng, Edward So, Chunqiang Tang, and Tao Tao
Research Session 13 - Workflow
Dynamic Support for BPEL Process Instance Adaptation
Ru Fang, Zhi Le Zou, Corina Stratan, Liana Fong, David Marston, Linh Lam, and David Frank
Service-Oriented Architecture for VIEW: a Visual Scientific Workflow Management System
Cui Lin, Shiyouqiang Lai, Artem Chebotko, Xubo Fei, Jing Hua, and Farshad Fotouhi
A Reflective Framework to Improve the Adaptability of BPEL-based Web Service Composition
Yanlong Zhai, Hongyi Su, and Shouyi Zhan

Research Session 14 - Workflow
Formalising Message Exchange Patterns using BPEL light
Tammo van Lessen, Jörg Nitzsche, and Frank Leymann
Composing Web Services through Automatic Reformulation of Service Specifications
Jyotishman Pathak, Samik Basu, and Vasant Honavar
A Middleware Architecture for Enhancing Web Services Infrastructure for Distributed Coordination of Workflows
Janaka Balasooriya, Sushil Prasad, and Shamkant Navathe

Research Session 15 - Workflow
A Risk Reduction Framework for Dynamic Workflows
Prabhdeep Singh, Fatih Gelgi, Hasan Davulcu, Stephen S. Yau, and Supratik Mukhopadhyay
A Folksonomy-Based Model of Web Services for Discovery and Automatic Composition
Eric Bouillet, Mark Feblowitz, Hanhua Feng, Zhen Liu, Anand Ranganathan, and Anton Riabov
An incremental graph-based approach to Automatic Service Composition
Mazen Malek Shiaa, Jan Ove Fladmark, and Benoit Thiell

Research Session 16 - Fault Tolerant / Workflow
Byzantine Fault Tolerant Coordination for Web Services Business Activities
Wenbing Zhao and Honglei Zhang
Towards a SLA-based Approach to Handle Service Disruptions
Lionel Touseau, Didier Donsez, and Walter Rudametkin
Making BPEL Flexible: Adapting in the Context of Coordination Constraints Using WS-BPEL
Yunzhou Wu and Prashant Doshi

Research Session 17 - Business
Dharmashankar Subramanian, and Lianjun An
A 3-level e-Business Registry Meta Model
Christian Huemer, Philipp Liegl, Rainer Schuster, and Marco Zapletal

Research Session 18 - Indexing
Scaling Location-based Services with Location Index
Bhuvan Bamba, Sangeetha Seshadri, and Ling Liu
Service Functionality Indexing and Matching for Service-Based Systems
Stephen Yau and Junwei Liu

Application and Industry Track

Application and Industry Paper Session 1 - Access Control
A Structured Service-Centric Approach for the Integration of Command and Control Components
Dwight R. Wilcox and Marion G. Ceruti
A Customer-Centric Privacy Protection Framework for Mobile Service-Oriented Architectures
Winnie Cheng, Jun Li, Keith Moore, and Alan H. Karp
Rule-based XML Mediation for Data Validation and Privacy Anonymization
Masayoshi Teraguchi, Issei Yoshida, and Naohiko Uramoto

Application and Industry Paper Session 2 - Access Control
A Policy Distribution Service for Proactive Fraud Management over Financial Data Streams
Michael Edge, Pedro Sampaio, Oliver Philpot, and Mohammed Choudhary
A Two Stage Heuristic Algorithm for Solving the Server Consolidation Problem with Item-Item and Bin-Item Incompatibility Constraints
Rohit Gupta, Sumit Kumar Bose, Srikanth Sundararajan, Manogna Chebiyam, and Anirban Chakrabarti
Policy-Based Automation to Improve Solution Engineering in IT Services
Ronnie Sarkar, Murthy Devarakonda, and Axel Tanner

Application and Industry Paper Session 3 - Business
A Fault Tolerance Approach for Enterprise Applications
Vina Ermagan, Ingolf Krueger, and Massimiliano Menarini
External Business Environment Analysis with RSS/Web
Shigeaki Matsumoto, Takatoshi Kitano, and Shigeru Hosono
Business Transformation Workbench: A Practitioner’s Tool for Business Transformation
Juhnyoung Lee, Rama Akkinju, Chun Hua Tian, Shun Jiang, Sivaprasanthan Danturthy, Ponn Sundhararajan,
Carl Nordman, Rakesh Mohan, Hitansh Singala, and Wei Ding

Application and Industry Paper Session 4 - Business
Built-to-Order Service Engineering for Enterprise IT Discovery
Nikolai Joukov, Murthy V Devarakonda, Kostas Magoutis, and Norbert Vogl
A Framework for Service Interoperability using Enterprise Architecture Models
Johan Ullberg, Robert Lagerström, and Pontus Johnson
A Context Model for B2B Collaborations
Puay Siew Tan, A.E.S. Goh, and S.S.G. Lee

Application and Industry Paper Session 5 – Case Study
Three Factors to Sustainable Service System Excellence: A Case Study of Service Systems
Ying Chen, Ana Lelescu, and Jim Spohrer
Constructing Service Oriented Dynamic Virtual Enterprises in Chinese Apparel Industry
Gang Li and Ying Liang
Study of Execution Centric Payment Issues in E-contracts
K. Vidyasankar, P. Radha Krishna, and Kamalakar Karlapalem

Application and Industry Paper Session 6 – Case Study
Till Janner, Christoph Schroth, and Beat Schmid
Differentiating Commoditized Services in a Services Marketplace
Harshavardhan Jegadeesan and Sundar Balasubramaniam
A Graphical Approach to Providing Infrastructure Recommendations for IT
Ashwin Lall, Anca Sailer, and Mark Brodie

Application and Industry Paper Session 7 – Case Study
Mining Top Issues from Contact Center Logs for Self Help Portals
Dinesh Garg, Nanda Kambhatla, Maja Vukovic, and Gopal Pingali
A Software as a Service with Multi-tenancy Support for an Electronic Contract Application
Thomas Kwok, Thao Nguyen, and Linh Lam
wrbench: An On-Line Tool for Robustness Benchmarking
Nuno Laranjeiro, Salvador Canelas, and Marco Vieira

Application and Industry Paper Session 8 – Case Study
A Framework for Model-Based Continuous Improvement of Global IT Service Delivery Operations
Abhijit Bose, Aliza Heching, and Sambit Sahu

WIPdroid – A Two-way Web Services and Real-time Communication Enabled Mobile Computing Platform for Distributed Services Computing
Wu Chou and Li Li

Virtual Learning Services over 3D Internet: Patterns and Case Studies
Hong Cai, Bo Sun, Patty Farh, and Meng Ye

Application and Industry Paper Session 9 - SOA
Surrogate: A Simulation Apparatus for Continuous Integration Testing in Service Oriented Architecture
He Hui Liu, Zhong Jie Li, Jun Zhu, and He Yuan Huang
Soo Ling Lim, Fuyuki Ishikawa, Eric Platon, and Karl Cox
Development Tool for Service-oriented Applications in Smart Homes
Jianqi Yu, Philippe Lalande, and Stéphanie Chollet

Application and Industry Paper Session 10 - Web Services
A Scenario-View Based Approach to Analyze External Behavior of Web Services for Supporting Mediated Service Interactions
Zhangbing Zhou, Sami Bhiri, Lei Shu, Laurentiu Vasiliu, Manfred Hauswirth, and Kaizhu Huang
Data Model Design of Strategic Analysis Services for Specific Customer Oriented Industries
Xinxin Bai, Minghua Zhu, Longjun Cai, Wenjun Yin, Jin Dong, and Hairong Lv
Simplifying Service Deployment with Virtual Appliances
Changhua Sun, Le He, Qingbo Wang, and Ruth Willenborg

Application and Industry Paper Session 11 - Web Services
Implementing Multi-Vendor Home Network System with Vendor-Neutral Services and Dynamic Service Binding
Masahide Nakamura, Yusuke Fukuoka, Hiroshi Igaki, and Ken-ichi Matsumoto
A Conflict Neighbouring Negotiation Algorithm for Resource Services in Dynamic Collaborations
Surya Nepal and John Zie
Declarative Web Service Entities with Virtual Endpoints
Martin Grund, Jens Krueger, and Dr. Alexander Zeier

Application and Industry Paper Session 12 - Web Services
National Population Information System Based on Web Service
Hengjian Tong and Zhenfeng Shao
Modeling Service Quality for Dynamic QoS Publishing
Qixing Du, Chi-Hung Chi, Shuo Chen, and Jianming Deng
Partitioning the WS Execution Environment for Hosting Mobile Web Services
Muhammad Asif, Shikharesh Majumdar, and Raluca Dragnea

Application and Industry Paper Session 13 - Web Services
Using an Interface Proxy to Host Versioned Web Services
David Frank, Linh Lam, Liana Fong, Ru Fang, and Manoj Khangaonkar
Ensuring Service Level Agreements for Service Workflows
Dyachuk Dmytro and Ralph Deters
On Improving Change Management Process for Enterprise IT Services
Xiang Luo, Koushik Kar, Sambit Sahu, Prashant Pradhan, and Anees Shaikh

Application and Industry Paper Session 14 - Workflow
Managing Security and Privacy Integration across Enterprise Business Process and Infrastructure
John A. Anderson and Vijay Rachamadugu
Generation of BPEL Customization Processes for SaaS Applications from Variability Descriptors
Ralph Mietzner and Frank Leymann
Deriving Explicit Data Links in WS-BPEL Processes
Oliver Kopp, Rania Khalaf, and Frank Leymann
Application and Industry Paper Session 15 - Workflow
Component-Based Composition Of Wide-Area Workflows
Karthick Sankarachary
Solving the Service Composition Puzzle
Yuan-Chi Chang, Pietro Mazzoleni, George A. Mihaila, and David Cohn
Optimum Decentralized Choreography for Web Services Composition
Saayan Mitra, Ratnesh Kumar, and Samik Basu

Application and Industry Paper Session 16 - SOA
Service-Oriented Mobile Applications for Ad-Hoc networks
Yuri Natchetoi, Huaigu Wu, and Yi Zheng
A Service-Oriented Approach to Storage Backup
Hao Cheng, Yao H. Ho, Kien A. Hua, Danzhou Liu, Fei Xie, and Ynn-Pyng Tsaur
Toward Web Service Dependency Discovery for SOA Management
Sujoy Basu, Fabio Casati, and Florian Daniel

Application and Industry Paper Session 17 – Case Study
A Method for Service Center Architecture Based on Industry Standards
Avivit Bercovici, Amit Fisher, Fabiana Fournier, Guy Rackham, Natalia Razinkov, and Inna Skarbovsky
Text to Intelligence: Building and Deploying a Text Mining Solution in the Services Industry for Customer Satisfaction Analysis
Shantanu Godbole and Shourya Roy

Application and Industry Paper Session 18 – Case Study
iFAO: Spatial Decision Support Services for Facility Network Transformation
Wenjun Yin, Xinxin Bai, Minghua Zhu, Ming Xie, and Jin Dong
A Method and Case Study of Designing Presentation Module in An SOA-based Solution Using Configurable Architectural Building Blocks (ABBs)
Liang-Jie Zhang, Jia Zhang, and Abdul Allam

Work-in-Progress

Work-in-Progress Paper Session 1 - Workflow / SOA
SDMA: A Service-Based Architecture of Data Mining Application
Liutong Xu, Yi Wang, Guanhui Geng, Xiangang Zhao, and Nan Du
An Interdisciplinary Methodology for Building Service-oriented Systems on the Web
Steffen Lamparter and York Sure
SOAMS: A Novel SOA-based System and Network Management Model and Scheme
ZhiHui Lu, Yong Li, Jie Wu, ShiYong Zhang, and YiPing Zhong
Extended BPEL System for e-Engineering Framework by Considering the Characteristics of Mechanical Engineering Service
Jai-Kyung Lee, Seung Hak Kuk, Hyeon Soo Kim, and Seong-Whan Park
WSLA+: Web Service Level Agreement Language for Collaborations
Surya Nepal, John Zic, and Shiping Chen
A Methodology for Model-Driven Web Application Composition
Dimitrios A. Kateros, Georgia M. Kapitsaki, Nikolaos D. Tselikas, and Iakovos S. Venieris

Work-in-Progress Paper Session 2 - Workflow / SOA
A Formal Model for Channel Passing in Web Service Composition
Cai Chao, Yang Hongli, Zhao Xiangpeng, and Qiu Zongyan
Towards a General Framework for Web Service Composition
Srividya Kona, Ajay Bansal, M. BrianBlake, and Gopal Gupta
Composable Data Processing in Environmental Science - A Process View
Andreas Wombacher
Enhancing Semantic Web Services Composition with User Interaction
Peter Bartalos and Mária Bieliková  
A Fault Propagation Approach for Highly Distributed Service Compositions  
Meiko Jensen  
SpiG4WSC: A Calculus for Secure Services Composition  
Xu Dong Hong, Qi Yong, and Hou Di  

Work-in-Progress Paper Session 3 - Web Services  
A Formal Model of Service Delivery  
Lakshmish Ramaswamy and Guruduth Banavar  
Robust Web Service Discovery in Large Networks  
Stephan Pöhlsen and Christian Werner  
Formal Verification of Web Service Interaction Contracts  
German Shegalov and Gerhard Weikum  
A Fuzzy-set based Semantic Similarity Matching Algorithm for Web Service  
Li Bai and Min Liu  
A Model-Driven Approach to Service Orchestration  
Philip Mayer, Andreas Schroeder, and Nora Koch  
A Framework for QoS Driven Selection of Services  
Caroline Herssens, Stéphane Faulkner, François Fouss, and Ivan Jureta  

Work-in-Progress Paper Session 4 - Web Services  
Query Evaluation and Performance Optimization in Distributed Community Data Sharing System Based on Web Services  
Wenlong Huang, Taoying Liu, and Yi Zhao  
On Service Orchestration in Mobile Computing Environments  
Ustun Yildiz, Remi Badonnel, and Claude Godart  
Towards a User-perceived Service Availability Metric  
Lingshuang Shao, Lu Zhang, Junfeng Zhao, Bing Xie, and Hong Mei  
Towards a Service Management System in Virtualized Infrastructures  
Roman Belter  
Exploring the Impact of Queue Management on Quality of Service for SMBs  
Kinnis Gosha, Jakita O. Thomas, and Juan E.Gilbert  
Exploiting XML Schema for Interpreting XML Documents as RDF  
Pham Thi Thu Thuy, Young-Koo Lee, Sungyoung Lee, and Byeong-Soo Jeong  

Work-in-Progress Paper Session 5 - Performance  
Identify Authorization Control Requirement in Business Collaboration  
Daiqin He and Jian Yang  
A General Service-Oriented Grid Computing Framework for Global Optimization Problem Solving  
M. Wahib, Asim Munawar, Masaharu Munetomo, and Akama Kiyoshi  
A Negotiation Service for Trading Intangible Goods on Real-time Markets  
Freimut Bodendorf and Florian Lang  
GSMA based Automated Negotiation Model for Grid Scheduling  
P.Balakrishnan, S.Thamarai Selvi, and G.Rajesh Britto  
Virtual Execution Environments for ensuring SLA-compliant Job Migration in Grids  
Dominic Battré, Matthias Hovestadt, Odej Kao, Axel Keller, and Kerstin Vo  
Mining Process Variants: Goals and Issues  
Chen Li, Manfred Reichert, and Andreas Wombacher  

Work-in-Progress Paper Session 6 – Semantic Web / Access Control  
A Practical Geographic Ontology for Spatial Web Services  
Shuai Yuan, Jun Shen, and Jun Yan  
A Situations & Goals Semantic Model for Designing and Implementing Semantic Web Services-based Processes  
Alessio Gugliotta, Stefan Dietze, and John Domingue  
Using Semantics for Resource Allocation in Computing Service Providers  
Jorge Ejarque, Marc de Paloi, Iñigo Goiri, Ferran Julia, Jordi Guitart, Jordi Torres, and Rosa M. Badia  
Grounding and Execution of OWL-S Based SemanticWeb Services  
John T.E. Timm, and Gerald C. Gannod
Verification of Privacy Timed Properties in Web Service Protocols

A New Optimal Policy for Spare Part Service System under Nonstationary Stochastic Demand
Jie Yang, Hongwei Ding, Wei Wang, and Jin Dong

Work-in-Progress Paper Session 7 - Business
The Impossibility of Boosting Resilience of Fully-connected Services for Solving Set-consensus Tasks
Juhua Pu, Zhang Xiong, and Xingwu Liu
Enterprise Mashups: Design Principles towards the Long Tail of User Needs
Volkert Hoyer, Katarina Stanoevska-Slabeva, Till Janner, and Christoph Schroth
A Model for Digital Business Ecosystem and Topological Analysis
Juan Wang and Philippe De Wilde
From Feature Models to Business Processes
Joaquin Peña, Ildefonso Montero, and Antonio Ruiz-Cortes
SLA Negotiation System Design Based on Business Rules
Halina Kaminski and Mark Perry
Hierarchical Business Process Clustering
Jae-Yoon Jung, Joonsoo Bae, and Ling Liu

Work-in-Progress Paper Session 8 - Case Study
PoEM - Potsdam Encoding for Models
Hagen Overdick and Martin Czuchra
Enhanced Maintenance Services with Automatic Structuring of IT Problem Ticket Data
Xing Wei, Anca Sailer, and Ruchi Mahindru
Mobile Clinical Systems on an Interoperable Medical Framework
Eunjeong Park, Hyo Suk Nam, and Heonshik Shin
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Identifying Opportunities for Web Services Security Performance Optimizations
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Ph.D. Symposium

A Model for Securing E-Banking Authentication Process
Antonio San Martino and Xavier Perramon
Policy-based Web Service Selection in Context Sensitive Environment
Wei Tao Zhou, Xiaolin Zheng, William Wei Song, Xiaofeng Du, and Deren Chen
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Education Methodology Summit

Using Problems to Learn Service-oriented Computing
Sandeep Purao, Vijay Vaishnavi, John Bagby, Faye Borthick, Brian Cameron, Lisa Lenze, Steve Sawyer, Hoi Suen, and Richard Welke
A Reference Curriculum for Service Engineering
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Integration of Services Computing Curricula in Information Technology
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Developing an SSME Initiative for Instruction & Research at Morgan State University
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When Service Computing Meets Software Engineering
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## Electronic Service Marketing Workshop (ESM 2008)

- Why Context, Content and Contract are Key for Dynamic Service Selection
  - Zakir Laliwala, Amee Desai, Sanjay Chaudhary, and Abdul Allam
- Consumer Phase Shift Simulation Based on Social Psychology and Complex Networks
  - Takashi Yoshida, Nobuyuki Tomizawa, Tomohisa Gotoh, Hiroto Iguchi, Kei Sugio, and Ken'ichi Ikeda
- A conceptual model for optimum pricing in a competitive multi-service communication market
  - Morteza Mohamadkhan and Vahid Chizari
- Semantic Discovery of Expressive Service Descriptions
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## Methodologies for Non-functional Properties Workshop (MNPSC 2008)

- Methodology and Tools for End-to-End SOA Security Configurations
  - Fumiko Satoh, Michiaki Tatsubori, Yuichi Nakamura, Nirmal K. Mukhi, and Kouichi Ono
- Modeling Business Process Availability
  - Nikola Milanovic, Bratislav Milic, and Miroslaw Malek
- SLAWs: Towards a conceptual architecture for SLA enforcement
  - Jose Antonio Parejo, Pablo Fernandez, Antonio Ruiz-Cortes, and Jose Maria Garcia
- Customisable Model Transformations based on Non-functional Requirements
  - Ashley Sterritt and Vinny Cahill
- Control Cases during the Software Development Life-Cycle
  - Joe Zou and Christopher J. Pavlovski
- A Taxonomy for Identifying and Specifying Non-functional Requirements in Service-oriented Development
  - Matthias Galster and Eva Bucherer
- Wireless Certificate Management Protocol Supporting Mobile Phones
  - Yong Lee, Jaeil Lee, and GooYeon Lee
- Middleware Support for Pluggable Non-functional Properties in Wireless Sensor Networks
  - Pruet Boonma and Junichi Suzuki
- Multiobjective Optimization of SLA-aware Service Composition
  - Hiroshi Wada, Paskorn Champrasert, Junichi Suzuki, and Katsuya Oba
- Specifying Flexible Charging Rules for Composable Services
  - Brendan Jennings, Lei Xu, and Eamonn de Leastar
- QoS-Aware Semantic Service Selection: An Optimization Problem
  - Jose Maria Garcia, David Ruiz, Antonio Ruiz Cortés, and Jose Antonio Parejo

## Service- and Process-Oriented Software Engineering Workshop (SOPOSE 2008)

- On The Discovery of Business Processes Orchestration Patterns
  - Nuno Rodrigues and Luis Barbosa
- A Business-Goal-Service-Capability Graph for the Alignment of Requirements and Services
  - Matthias Galster and Eva Bucherer
- Generating Correct Protocols from Contracts: A Commitment-based Approach
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CAPSICUM - A Conceptual Model for Service Oriented Architecture Designs
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The Role of Service Granularity in A Successful SOA Realization – A Case Study
Naveen Kulkarni and Vishal Dwivedi
Light Weight SOA Governance – A Case Study
Deepti Parachuri, Nagarani Badveeti, and Sudeep Mallick
Interorganisational architectural framework leveraging Web services and AJAX
Jai Ganesh and Mayank Mathur

Scientific Workflows Workshop (SWF 2008)

WS-BioZard: A Wizard for Composing Bioinformatics Web Services
Zhiming Wang, John A. Miller, Jessica C. Kissinger, Rui Wang, Douglas Brewer, and Cristina Aurrecochea
Using Characteristics of Computational Science Schemas for Workflow Metadata Management
Scott Jensen and Beth Plale
BioFlow: A Web-based Declarative Workflow Language for Life Sciences
Hasan Jamil and Bilal El-Hajj-Diab
Iterative Workflows for Numerical Simulations in Subsurface Sciences
Jared Chase, Karen Schuchardt, George Chin, Jr., Jeff Daily, and Timothy Scheibe
Trident: Scientific Workflow Workbench for Oceanography
Scientific Workflow Systems for 21st Century, New Bottle or New Wine?
Yong Zhao, Ioan Raicu, and Ian Foster
End-to-End Scientific Data Management using Workflows
Yogesh Simmhan
Lifecycle of Scientific Workflows and Their Provenance: A Usage Perspective
Ilkay Altintas

Web X.0 Workshop (WebX 2008)

SOA Generic Views - In the Eye of the Beholder
Stefan Eicker, Reinhard Jung, Widura Schwittek, and Thorsten Spies
XML Schema Representation and Reasoning: A Description Logic Method
Xiaobing Wu, David Ratcliffe, and Mark A. Cameron
Pipe Network 3D Visualization Service Architecture
Liutong Xu, Guanhui Geng, Min Shi, and Suping Lin
Towards a Model Driven Service Engineering Process
Ateret Anaby-Tavor, David Amid, Aviad Sela, and Amit Fisher

Web Service Composition and Adaptation Workshop
(WSCA 2008)

A Method for Automated Web Service Selection
Hong Qing Yu and Stephan Reiff-Marganiec
Composition of interactive Web services based on controller synthesis
Philippe Balbiani, Fahima Cheikh, and Guillaume Feuillade
Automatic Composition of Services with Security Policies
Yannick Chevaliery, Mohamed Anis Mekki, and Michaël Rusinowitch
On Utilizing Qualitative Preferences in Web Service Composition: A CP-net based approach
Ganesh Ram Santhanam, Samik Basu, and Vasant Honavar

Dynamic Service Discovery using Active Lookup and Registration
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Techniques to Produce Optimal Web Service Compositions
Eduardo Blanco, Yudith Cardinale, Maria-Ester Vidal, and Jesus Graterol

**Testing on Web Services Workshop (WS-Testing 2008)**

QGWEngine: A QoS-aware Grid Workflow Engine
Yong Wang, Li Wang, and Guiping Dai

Evaluation of QoS-Based Web Service Matchmaking Algorithms
Kyriakos Kritikos and Dimitris Plexousakis

An Approach for Verification in Service-Oriented Computing
Soo Ho Chang, Fang Fang Chua, and Soo Dong Kim