
IEEE ICWS/SCC/SERVICES 2007 Plenary Panel 1

Services Computing in Daily Work: Service Engineering vs. Software Engineering

Panel Moderators and Panelists

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Sridhar Iyengar — IBM Distinguished Engineer, Strategist of Services Software Research at the IBM TJ Watson Research Center, USA

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Panel Theme

Today, more and more software are augmented with service-oriented packaging. At the same time, more and more business and government services are provided and offered in the form of software. However, there are debates on whether and how much service engineering has in common with software engineering. Can we design service engineering models and frameworks in a similar spirit as the way software has been engineered in the past two decades? Or should software be designed, engineered and offered in a way similar to services that existed even before computer age?

This panel aims to explore the intrinsic and multi-facet relationships between engineering software and engineering services in terms of user requirement, engineering design, life cycle, maintenance, quality and performance monitoring and tuning. We encourage panelists to use their first hand research and development experiences to exploit commonality and fundamental differences, if any, between service engineering and software engineering, and discuss the effects of such relationships on the coupling and the transformation of both computing and business into a more service oriented paradigm. The key questions to be addressed and debated by this panel include:

- Service Engineering vs. Software Engineering: what do they have in common? And when and how they differ from one another?
- Can service engineering benefit from the well-known software engineering principles, architectures, and frameworks?
- Can a better understanding of service engineering help improve the theory and engineering practice of software engineering?

- How can we leverage the intrinsic relationship between service engineering and software engineering to better meet quality of service demand of Web services, business, and consumers?

Biographies

Hemant Jain — Dr. Hemant Jain is Wisconsin Distinguished & Tata Consultancy Services Professor of Management Information System in Sheldon B. Lubar School of Business at University of Wisconsin - Milwaukee. Dr. Jain received his Ph. D. in Information System from Lehigh University. Dr. Jain's interests are in the area of Electronic Commerce, System Development using Reusable Components, Web Services, Service Oriented Architecture, Business Architecture Design, and Health Informatics. Dr. Jain is an associate editor of Information Systems Research a flagship journal of INFORMS. He also serves on the editorial Board of the Information Technology & Management, International Journal of Web Services Research, Information Management, and International Journal of Information Technology and Decision Making. He was the program committee co-chair of 2004 IEEE Conference on Web Services and is general chair of IEEE International Conference on Services Computing 2006.

Calton Pu — Professor and John P. Imlay, Jr. Chair in Software at College of Computing, Georgia Tech. Professor Pu received his PhD in Computer Science from University of Washington in 1986. Calton's research interests are in the areas of distributed computing, database systems, and operating systems. In distributed systems and databases research, his focus is on extended transaction processing and Internet applications. In operating systems, he is applying the idea of specialization. Comparing with usual centralized systems, distributed and parallel systems softwares display unique characteristics in distance, complexity, extensibility, concurrency and availability. Making software handle these problems in a reliable and efficient way is the emphasis of Calton Pu's work. The sponsors for Calton Pu's research include both government funding agencies such as DARPA, NSF, and companies from industry such as IBM, Intel, and HP.

Sridhar Iyengar — Sridhar Iyengar, an IBM Distinguished Engineer, leads Services Software Research at the IBM TJ Watson Research Center. Sridhar is also a member of the Rational CTO Council and IBM Software Group Architecture Board Steering Committee helping drive software tools & methods direction across IBM. Sridhar works with development teams and architects inside IBM and in the industry to accelerate the use of industry standard models, patterns and metadata for developing, integrating and managing applications. His work focuses on the use of models, metadata and transformation frameworks that can be used create an integrated software tools platform that makes it easy for systems integrators (specifically IBM's GBS) and customers to govern the business process of software and systems development and delivery. Sridhar also serves on the OMG Architecture Board and Board of Directors.

Brian Blake — Dr. Blake currently is Associate Professor and Chair of the Department of Computer Science at Georgetown University. His research interest lies in Service-oriented computing, Enterprise integration and eCommerce, Component based Software engineering, and software engineering education. He obtained his Bachelor of Electrical Engineering with a concentration in Computer Science from Georgia Institute of Technology in 1994 and PhD in Information and Software Engineering from George Mason University in 2000. Working full-time through his graduate degrees, he was a Software Integration Consultant and later a Software Architect for Lockheed Martin from 1994 to 1998. In April 1998, he became a Sr. Computer Scientist with General Dynamics designing component-based systems in the intelligence domain. After joining Georgetown University in the Fall 2000, he has consulted for several industry and government organizations engineering service-based systems.

Carl K. Chang — Dr. 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). He is the current Editor-in-Chief of IEEE Computer. 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.