About the Contributors

Pallab Saha is currently a member of the faculty with the National University of Singapore (NUS). His current research and consulting interests include Enterprise Architecture, IT Governance, and Business Process Management. He has published several research papers in these areas. Pallab is an active researcher in the area of Enterprise Architecture and has published his first book titled “Handbook of Enterprise Systems Architecture in Practice” in March 2007. He is currently working towards his second book in the same discipline. Dr. Saha also leads the Information Systems Management research group within NUS–Institute of Systems Science. Dr. Saha teaches courses in Enterprise Architecture, IT Governance and Business Process Management at the post-graduate and senior executive levels (including CIOs). His current consulting engagements are in Enterprise Architecture for Singapore Government agencies. He has provided consulting and advisory services to Infocomm Development Authority of Singapore, Intellectual Property Office of Singapore, CPF Board, and Great Eastern Life Assurance among others. Dr. Saha is the primary author of the Enterprise Architecture Methodology and Toolkit for the Government of Singapore. He is also a contributing author of the Enterprise Architecture Management Guide being developed by the International Association of Enterprise Architects (a|EA) and is a frequently invited speaker at international and local conferences on Enterprise architecture and IT governance (including keynote sessions). Prior to academia, he was instrumental in managing Baxter’s environmental health and safety offshore development centre in Bangalore as Head of Projects and Development. He has worked on engagements in several Fortune 100 organizations in various capacities. Pallab received his Ph.D in 1999 from the Indian Institute of Science, Bangalore. His Ph.D dissertation was awarded the best thesis in the department. His Ph.D. proposal was selected as one of the top five in India and received a special research grant for the same. Earlier he completed an M.B.A in Information Systems and prior to that gained a B.Sc. in Electronic Sciences from Bangalore University. He can be contacted at pallab@nus.edu.sg.

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Chris Aitken holds a PhD in psychophysiology and has worked with a variety of government agencies over the last 15 years in both clinical and IM & ICT roles. During the last 6 years he has held a number of IM & ICT related positions and is currently Manager Enterprise Architecture and Information Management in Queensland Health in Australia. Chris’ clinical applied research background means that he brings a combination of a strong human service delivery perspective and a keen logical rigour to his approach to enterprise architecture and IM & ICT implementation. Chris’ current interests include topics as varied as; the development of an abstract enterprise meta-model, IM & ICT policy and standards development, and the integration of IM & ICT strategic planning with enterprise architecture.
Leonidas G. Anthopoulos was born in Trikala, Greece in 1974. He graduated (1996) and he got his PHD in the e-Government area (2005) from the Department of Informatics of the Aristotle University of Thessaloniki (AUTh). He is an Expert Counselor in e-Government and e-Diplomacy of the Hellenic Ministry of Foreign Affairs, while he has worked for many organizations such as the Greek Ministry of Education, the Research Committee (AUTh), the Information Society S.A. (Ministry of Interior of Greece) etc. He has published several works for international journals, magazines and conferences and his research interests concern e-Government, Information Society aspects and social networks.

Guido Bayens, MSc, MBA is a principal consultant at Novius Business & Information Management. He is also the head of the architecture team at ICTU and responsible for the Dutch government reference architecture. Guido studied sociology in Utrecht and attained a Master of Business Administration degree at Henley. From 2001 – 2005 he was responsible for the business and ICT architecture of UWV, the national Dutch Social Security agency. His vision on the possibilities of business architecture is based on almost 20 years of management experience in environments where fundamental changes of strategic policy were to be made.

Scott Bernard has over twenty years of experience in information technology management including work in the academic, federal, military, and private sectors. He is currently the Deputy CIO and Chief Enterprise Architect at the Federal Railroad Administration in Washington DC. He also serves on the faculty of the School of Information Studies at Syracuse University and is a lecturer at the School of Computer Science at Carnegie Mellon University. Dr. Bernard wrote a textbook on Enterprise Architecture in 2004 and is the Chief Editor of the Journal of Enterprise Architecture.

Amit Bhagwat has worked on Enterprise-wide IT transformation programs through two decades. Amit has served as strategist, leader, mentor, manager and auditor for Enterprise Architecture and Systems Engineering practices in enterprises leading in the world / Europe in their sector. He serves on the British Computer Society Elite (Effective Leadership in Information Technology) group. Among the very small number of IBM-Rational accredited instructors to educate IBM and premier-partner staff consultants, Amit is also TOGAF-8 accredited and contributes to Ethics Workgroup of AOGEA. Amit has written widely on Requirement-Project-Process Management, Analysis, Design, Visual Modeling Concepts and Estimation Techniques, with 17 publications, including an oft-quoted cover feature for The Rational Edge, to his credit. In 2007, Amit led Enterprise Architecture Maturity Appraisal for one of the largest British government departments and advised CTOs of two multinational institutions, both leaders in their field in the UK.

Timothy Biggert has led the Human Resources Line of Business enterprise architecture team since June 2004. In that role, he has guided his team in the development of the HR LOB EA artifacts and target requirements. He is now working with HR LOB Program stakeholders to benchmark existing practices and help define the Federal HR enterprise of the future. Tim is an IBM-certified Senior Managing Consultant with IBM’s Global Business Services (GBS) Public Sector Human Capital Management consulting practice. Over the course of his 19 years working for the world’s largest consulting firm, Tim has led teams in many different project areas including human capital strategy, enterprise architecture, business transformation, organization change, project management, education development and delivery, methodology creation and implementation, and application development. He has worked on a broad
range of business environments including federal, state, and local government, education, aerospace, retail, manufacturing, distribution and logistics, financial services, banking, life sciences, pharmaceutical, agriculture, utility and telecommunications. He has a Masters Degree in Business Administration from the University of Minnesota.

William S. Boddie serves as the Professor of Systems Management at the U.S. National Defense University (NDU) Information Resources Management (IRM) College. Dr. Boddie has nearly 30 years experience leading and managing information technology (IT) environments for public, private, and non-profit-sector organizations. Dr. Boddie specializes in organizational leadership, enterprise performance effectiveness, enterprise architecture, and program and project management and is the NDU IRM College Professor of the Year for 2006 – 2007. Further, Dr. Boddie developed and delivered the Business Information Technology Leadership Certificate Program, a continuing education program, to various Washington DC colleges since 1999.

Anand Desai is Professor in the John Glenn School of Public Affairs at the Ohio State University. His research interests include performance measurement and evaluation in the public sector and the use of policy modeling to support public sector decision-making.

Wijnand Derks (1973) is scientific researcher at Telematica Institute since 2005. Previously, he worked at the research department of the largest Dutch telecom company KPN Telecom (1997-2001) and the faculty of computer science at University of Twente (2001-2005). In the past ten years he worked on several fundamental and applied research projects in national and international context in the domains of scaleable database- and transaction technology, enterprise architecture and cross-enterprise workflow management. His prime interests involve the development and application of fundamentally new ICT solutions in the industry. Within Telematica Institute he develops new application concepts for demand-driven and integral electronic service provisioning in the context of public-private partnerships. In addition, he is involved in the research program Software for Service where ICT-users, ICT-suppliers and research parties jointly to develop novel business models and ICT-based applications.

Alan Dyer has many years experience with organisational decision-making, from a variety of perspectives (including as a “consumer”, “provider” and “developer”); the majority of these experiences were gained through the Australian Defence Forces. Alan has been directly involved in information and knowledge management – in the form of technology, projects or abstract application of principles – for the last 17 years. Alan’s current studies include post-graduate research in Enterprise Architecture, building upon a B.Sc. (Maths and CompSci) and an M.Sc.(IT). Alan is currently employed by EWA-Australia (http://www.ewa-australia.com).

Neil Fairhead, in a 30 year career in information technology has worked as an enterprise architect and technology strategist with a number of major organizations including the Canada Post, the Canadian Imperial Bank of Commerce, the British Home Office and a major British bank. He also brings service management experience to bear following several years at Microsoft where he helped to introduce ITIL. His IT experience includes systems engineering at IBM, office and distributed systems at Digital (DEC), information engineering at James Martin Associates and he is currently focused on structured managed service offerings at Fujitsu Services. He has studied at Cambridge, Manchester Business School and,
post-experience, at Harvard Business School. He is a certified management consultant and a Fellow of the Institute of Service Management as well as being TOGAF certified.

**John Good** is currently a Director at Serco Consulting where he leads the Enterprise Architecture capability group. He focuses on helping organisations establish Enterprise Architecture teams and specializes in data and information architecture and the use of enterprise architecture in enabling major business transformation. His career spans 20 years in information and media technology as a solutions and enterprise architect, principal technologist and technology strategist. A graduate of Edinburgh University in Computer and Management Sciences, and a TOGAF certified practitioner, he trained in information systems with Price Waterhouse before a career with DHL, the BBC and his current consulting role.

**Shirley Gregor** heads the National Centre for Information Systems Research in the College of Business and Economics at the Australian National University. Professor Gregor has led several large projects in the e-commerce area funded by the private sector and government. Professor Gregor was inaugural President of the Australasian Association of Information Systems and is Vice-President of the Australian Council of Professors and Heads of Information Systems. Professor Gregor was made an Officer of the Order of Australia in the Queen’s Birthday Honour’s list in June 2005 for services as an educator and researcher in the field of information systems and in the development of applications for electronic commerce in the agribusiness sector.

**Dennis Hart** is a Senior Lecturer in the College of Business and Economics at the Australian National University and has research interests in the areas of ownership issues in information systems development and information management; Semiotics and information systems. Dr Hart was a former senior officer in the Royal Australian Navy before commencing a career as an academic. In addition to his academic activities, Dr Hart also manages and runs a 20 acre vineyard with his partner on a property near Yass in the state of New South Wales.

**Shuyuan Mary Ho** is a PhD Candidate at School of Information Studies, Syracuse University. Her research interests focus on information systems security, which includes information content security, information security management and computing security. Her dissertation is in the interdisciplinary area of behavioral anomaly detection for online community. This research is aimed to discover the mechanism for detecting changes in trustworthiness for countering insider threats. Shuyuan is a CISSP certified by (ISC)2 and a CISM certified by ISACA. She has acquired a Master in Philosophy in Information Science and Technology, a Master in Business Administration, and a Bachelor in Computer Science.

**Marijn Janssen** is director of education of the Systems Engineering, Policy Analysis & Management Master at the Faculty of Technology, Policy and Management of Delft University of Technology. He is elected as secretary of the IFIP WP 8.5 working group on Information Systems in Public Administration. He also teaches courses on middleware architecture, web-information systems and management, and designing large-scale ICT-infrastructure and services. He conducted several research projects in the field of e-government, enterprise architecture and orchestration in interorganizational networks. He is an associate editor of the International Journal of E-Government Research (IJEGR) and International Journal of E-business Research (IJEBR) and co-chair of the E-government Architecture, Infrastructure
and Interoperability minitrack at the HICSS conference. He serves on several international program committees and is a program chair of the Annual Conference on Digital Government (dg.o2008). He published over 100 refereed publications.

Hong Sik Kim is Adjunct Professor of Korea Polytechnic University, Computer Engineering Department and Secretary of KIITA (Korea Institute of Information Technology Architecture). He had been involved in the a|EA standardization project (EAMG: Enterprise Architecture Management Guide) for 2 years as a vice president of a|EA Korean Chapter. He suggested a more practical and sustainable development strategy to the EA community world wide, especially for area of the quality and maturity model of EIA in stead of EA. He had experiences to consolidate 21 MIS departments of Hyundai Group into one mega center as a foundation member of Hyundai Information Technology. And He introduced company wide QMS (Quality Management System), TickIT scheme (British standard version of ISO 9000-3) and institutionalized the QMS for 6 years. He also had introduced customer satisfaction system company-wide and executed pilot project of MBNQA (Malcolm Baldridge National Quality Award).

Bram Klievink is research assistant and Ph.D. researcher at Delft University of Technology at the faculty of Technology, Policy and Management. Bram holds a degree in political science from the University of Nijmegen (M.Sc, 2006) and a degree in business information systems (2004). His research focus is on coordination mechanisms for public-private cooperation in electronic government service-delivery. For this research he participates in two major research projects. One is on creating demand-driven integrated electronic service-delivery by government and private partners, which aims at exploring future directions for public services. The other project is on the coordination of multiple channels operated by government, private parties may be part of these channels.

Marc M. Lankhorst is a senior member of scientific staff at Telematica Instituut where he heads the institute’s expertise group on Service Architectures. His research interests range from enterprise architecture and business process management to service orientation and model-driven software development. In the past, he has managed several multi-party research projects with partners from government, industry and academia. At the moment, he is responsible for a major project on integrated, demand-driven e-government services. Furthermore, he teaches several courses on architecture at universities and other institutes. Marc holds an MSc in Computer Science from the University of Twente and a PhD from the University of Groningen in the Netherlands.

Ryan Kobb has provided business performance management and program management leadership to the IBM team supporting the OPM Office of the Human Resources Line of Business since March 2005. In that role, he helps lead the management of the HR LOB governance structure and provides support in the areas of enterprise architecture, change management, and communications and outreach. He is now working to complete the migration planning guidance that agencies will leverage to select and migrate to a shared service center as well developing a transformation toolkit for agencies as they prepare for their selection and migration to a shared service center. Ryan is a Senior Consultant in IBM’s Global Business Services (GBS) Public Sector Financial Management Practice. He is IBM-certified in Earned Value Management and recently has been recognized by Consulting Magazine as one of the “Top 30 Consultants Under the Age of 30”.
About the Contributors

Nigel Martin is a Lecturer in the College of Business and Economics at the Australian National University, and has principal research interests in the areas of Enterprise Architecture, Requirements Engineering, IT Governance, ICT Strategy, Systems Design and Electronic Government. Dr Martin was a former oil industry manager, and government executive working primarily in the areas of defence, national security, and law enforcement.

John Mo is a Professor and Discipline Head for Manufacturing and Materials Engineering at the RMIT University, Melbourne, Australia. Prior to this, John was the Team Leader of the Manufacturing Systems and Infrastructure Networks research group in the Division of Manufacturing and Infrastructure Technology of Commonwealth Scientific and Industrial Research Organisation (CSIRO). John led several large scale international projects involving multi-disciplinary teams in the development of advanced project collaboration systems for designing one-off facilities such as chemical plants and high value computer controlled assets. His team of 15 professionals had completed projects on developing methodologies for risks analysis, critical infrastructure protection modelling, electricity market simulation, wireless communication, fault detection and production scheduling. He also led the National EPC Network Demonstrator Project and its extension, which were the first EPC implementation conforming to EPC Global standard. He obtained his PhD from Loughborough University, UK. John is a Fellow of the Institution of Engineers, Australia.

Sungwook Moon is working as a software consultant at ComponentBasis, Co., Ltd., Korea. He has experienced dozens of software development projects, and mainly played a role for component-based development discipline mentoring and software quality assurance. In addition, he has much interest in software process improvement and software architecture. Since 2003, he has presented his researches at several conferences such as the European Software Process Improvement and the Korea Society of Management Information Systems. Recently, he joined in MIS department of University of Seoul as a PhD candidate to research into service-oriented architecture and enterprise architecture. He obtained his MS degree in Chemical Engineering from Korea Advanced Institute of Science and Technology in 1998 and his BS degree in Chemical Engineering from Yonsei University in 1996.

Laszlo Nemes was Chief Research Scientist and Science Director in the Division of Manufacturing and Infrastructure Technology of Commonwealth Scientific and Industrial Research Organisation (CSIRO) Australia. He led a research program with more than 50 staff working on enterprise integration, machine vision, autonomous robotics, signal diagnostics and process control. In addition, he also led complex international research teams to complete large, industry related R&D projects in the area of computer aided design and manufacturing, within the international Intelligent Manufacturing Systems program. His achievements are hallmarked with six industry related patents; over 100 papers published internationally, six books/monographs. His major achievement, the development of the Generic Enterprise Reference Architecture was developed in a team of international experts and was endorsed as the Annex to ISO enterprise engineering standard. Dr Nemes is a Fellow of the Australian Academy of Technological Sciences and Engineering, Fellow of the Institution of Engineers, Australia.

Klaus Niemann has more than 25 years experience with the design of complex IT-architectures in the telecommunication and financial sector. He worked as system designer, software architect, consultant, project manager and enterprise architect in several positions and for a wide range of clients. Klaus holds
a diploma in computer science from the Technical University of Berlin. In the 80s his main focus was on distributed systems, telecommunication and banking networks in Europe as well as in the Far East. In the 90s he worked on the introduction of object orientation to large organizations and then focused on client/server architectures. He frequently gave professional training sessions, published several articles and books, and also became a frequent speaker to conferences. He founded ACT! Consulting in 1998 with special emphasis on enterprise architecture management. He developed the enterprise architecture framework t-eam (toolbox for enterprise architecture management). Klaus is a member of the OpenGroup’s Architecture Forum and works with the International Committee on EA Standards (Association of Enterprise Architects).

**Vassilios Peristeras** is a Research Fellow and Adjunct Lecturer at the National University of Ireland, Galway, Digital Enterprise Research Institute (DERI). He has studied Political Science and holds M.Sc and PhD in Information Systems. For the last 12 years, he has worked for the Greek National Center for Public Administration and Decentralization, the United Nations, the Center for Research and Technology Hellas (CERTH), the University of Macedonia and as consultant for many governments and private companies. His main research areas are eGovernment, enterprise architecture and semantic technologies. He has published more than 40 papers in international conferences and scientific journals.

**Jay Ramanathan** is the Director of Research at the Collaborative for Enterprise Transformation and Innovation (or CETI). She is currently engaged in developing programs of industry-focused research, practice, and education. Particular areas of interest are Adaptive Complex Enterprise Architectures for Business-IT alignment and management; and business-driven IT innovation.

**Rajiv Ramnath** is Director of Practice at the Collaborative for Enterprise Transformation and Innovation (CETI) at OSU. His expertise ranges from wireless sensor networking and pervasive computing to business-IT alignment, enterprise architecture, software engineering, e-Government, collaborative environments and work-management systems.

**Kunal Suryavanshi** has led the IBM team supporting the OPM Office of the Human Resources Line of Business since April 2003. In that role, he provides thought leadership and strategic advice to the OPM HR LOB leadership team. He was influential in building the coalition of 24 Federal agencies that crafted the vision, goals, and concept of operations of the HR LOB program and that subsequently developed the HR LOB target enterprise architecture and requirements for shared service centers. Kunal is an Associate Partner and IBM-certified strategy consultant in IBM’s Global Business Services (GBS) Federal Strategy and Change Practice. He has led teams in many different project areas including electronic government strategy, enterprise architecture, business transformation, organization change, project management, and business case development for Federal IT projects. Kunal has an undergraduate degree in Civil Engineering from University of Bombay and an MBA from Carnegie Mellon University.

**Konstantinos Tarabanis** is a Professor at the Department of Business Administration of the University of Macedonia, Greece and the Director of the Information Systems Laboratory at the same university. He received an Engineering Diploma in Mechanical Engineering from the National Technical University of Athens (1983), an M.S. degree in both Mechanical Engineering and Computer Science (1984 and 1988...
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respectively), and a Ph.D. degree in Computer Science (1991), at Columbia University, New York, NY. He was a research staff member at the IBM T.J. Watson Research Center 1991-1994 and was employed by the IBM Corporation as a whole during 1984-1994. In recognition of his research, he was the recipient of the Anton Philips Best Paper Award at the 1991 IEEE International Conference on Robotics and Automation. His current research interests include e-government and e-business. In recognition of his work in the field of e-government, he was the recipient of the Best Paper Award in the e-government track at the European Conference on Information Systems in 2000. Also in recognition of his work in the field of e-Business he received the Outstanding Research Paper Award in the 7th Annual Conference of the International Academy of e-Business in 2007.

Dwight Toavs, PhD, is a Professor of Systems Management at the National Defense University’s Information Resources Management College in Washington, D.C. His academic, teaching, and research interests lie at the intersection of public policy, governance, and information technology in public organizations. In particular, he is interested in visual techniques and technologies as a means to understand and explain policy topics. He is the creator of PolicyWorld, the first virtual reality depiction of a contemporary public policy topic, a 3D collaborative virtual environment for exploring information resources management policies in the US Federal government. His interest in information visualization, cognitive mapping, and virtual environments results from the expressive and communicative potential of these approaches to aid in understanding complex policy and governance issues. He can be contacted at toavs@ndu.edu.

John A. Zachman is the originator of the “Framework for Enterprise Architecture” which has received broad acceptance around the world as an integrative framework, or “periodic table” of descriptive representations for Enterprises. John is not only known for this work on Enterprise Architecture, but is also known for his early contributions to IBM’s Information Strategy methodology (Business Systems Planning) as well as to their Executive team planning techniques (Intensive Planning). He retired from IBM in 1990, having served them for 26 years. He presently is Chairman of the Board of Zachman Framework Associates, a worldwide consortium managing conformance to the Zachman Framework principles. He is Chief Executive Officer of the Zachman Institute for Framework Advancement (ZIFA), an organization dedicated to advancing the conceptual and implementation states of the art in Enterprise Architecture. He also operates his own education and consulting business, Zachman International (www.ZachmanInternational.com). John serves on the Executive Council for Information Management and Technology (ECIMT) of the United States Government Accountability Office (GAO). He is a Fellow for the College of Business Administration of the University of North Texas. He serves on the Advisory Board for the Data Resource Management Program at the University of Washington and on the Advisory Board of the Data Administration Management Association International (DAMA-I) from whom he was awarded the 2002 Lifetime Achievement Award. He was awarded the 2004 Oakland University, Applied Technology in Business (ATIB), Award for IS Excellence and Innovation. John has been focusing on Enterprise Architecture since 1970 and has written extensively on the subject. He is the author of the book, “The Zachman Framework for Enterprise Architecture: A Primer on Enterprise Engineering and Manufacturing.” He has facilitated innumerable executive team planning sessions. He travels nationally and internationally, teaching and consulting, and is a popular conference speaker, known for his motivating messages on Enterprise Architecture issues. He has spoken to many thousands of enterprise managers and information professionals on every continent. In addition to his professional activities,
John Zachman serves on the Elder Council of the Church on the Way (First Foursquare Church of Van Nuys, California), the Board of Directors of Living Way Ministries, a radio and television ministry of the Church on the Way, the President’s Cabinet of the King’s College and Seminary, the Board of Directors of the Los Angeles Citywide Children’s Christian Choir and on the Board of Directors of Native Hope International, a Los Angeles-based ministry to the Native American people. Prior to joining IBM, John served as a line officer in the United States Navy and is a retired Commander in the U. S. Naval Reserve. He chaired a panel on “Planning, Development and Maintenance Tools and Methods Integration” for the U.S. National Institute of Standards and Technology. He holds a degree in Chemistry from Northwestern University, has taught at Tufts University, has served on the Board of Councilors for the School of Library and Information Management at the University of Southern California, as a Special Advisor to the School of Library and Information Management at Emporia State University, and on the Advisory Council to the School of Library and Information Management at Dominican University.