
Phan Cong-Vinh (NTT University, Vietnam)

Autonomic computing and networking (ACN), a concept inspired by the human autonomic system, is a priority research area and a booming new paradigm in the field.

Formal and Practical Aspects of Autonomic Computing and Networking: Specification, Development, and Verification outlines the characteristics, novel approaches of specification, refinement, programming and verification associated with ACN. The goal of ACN and the topics covered in this work include making networks and computers more self-organized, self-configured, self-healing, self-optimizing, self-protecting, and more. This book helpfully details the steps necessary towards realizing computer and network autonomy and its implications.

Topics Covered:

- ACN for Cognitive Networks
- ACN for Multi-Agent Systems
- ACN for P2P, Grid, Ad Hoc, and Sensor Networks
- ACN for Storage and Caching Systems
- ACN Test-Beds
- Applications of Formal Methods in ACN Development
- Formalizing Languages That Enable ACN
- Security and Trust in ACN
- Software Architectures for ACN
- Validation and Verification Techniques for ACN

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Phan Cong-Vinh received a PhD in computer science from London South Bank University (LSBU) in UK, a BS in mathematics and an MS in computer science from Vietnam National University (VNU) in Ho Chi Minh City, and a BA in English from Hanoi University of Foreign Languages Studies in Vietnam. He finished his PhD dissertation with the title of Formal Aspects of Dynamic Reconfigurability in Reconfigurable Computing Systems supervised by Prof. Jonathan P. Bowen at LSBU where he was affiliated with Centre for Applied Formal Methods (CAFM), Institute for Computing Research (ICR). From 1983 to 2000, he was a lecturer in mathematics and computer science at VNU, Posts and Telecommunications Institute of Technology (PTIT) and several other universities in Vietnam before he joined research with Dr. Tomasz Janowski at International Institute for Software Technology (IIST) in Macao SAR, China, as a fellow in 2000. From 2001 to 2010 he did research together with Prof. Jonathan P. Bowen as a research scholar and then collaborative research scientist at CAFM. From January 2011 to May 2011 he worked for FPT - Greenwich collaborative program at FPT University (FU) in Vietnam as a visiting lecturer. From June 2011 to present he has become a member of NTT University (NTTU) to take on the responsibilities of an IT Department's Deputy Dean. Regarding academic publications, he has been author or co-author of many refereed contributions published in prestigious journals, conference proceedings or edited books. He is the author of a book on computing science titled Dynamic Reconfigurability in Reconfigurable Computing Systems: Formal Aspects of Computing (2009) and editor of two titles besides the present work, Autonomic Networking-On-Chip: Bio-Inspired Specification, Development, and Verification (CRC Press) and Advances in Autonomic Computing: Formal Engineering Methods for Nature-Inspired Computing Systems (Springer), to be published in 2011 and 2012, respectively. He is also an IEEE member. His research interests center on all aspects of formal methods, autonomic computing and networking, reconfigurable computing, ubiquitous computing, and applied categorical structures in computer science.
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