

Dr. Hassan Gomaa
Chair and Professor
Department of Computer Science
George Mason University

Publications

Ph.D. Thesis

H. Gomaa, “A Modeling Approach to the Evaluation of Computer System Performance”, Imperial College of Science and Technology, London University, March 1976.

Diploma of Imperial College Dissertation (equivalent to Masters Thesis)

H. Gomaa, “Implementation of Data Structures”, Imperial College of Science and Technology, London University, October 1968.

Published Textbooks

1. H. Gomaa, “Software Design Methods for Concurrent and Real-Time Systems”, Addison-Wesley SEI Series in Software Engineering, ISBN 0-201-52577-1, 1993, Fourth Printing, March 1999. (Also translated into Chinese by Pearson Education Asia Ltd. and Tsinghua Press, 2003).
2. H. Gomaa, “Designing Concurrent, Distributed, and Real-Time Applications with UML”, Addison-Wesley Object Technology Series, ISBN: 0-201-65793-7, 2000, Fourth Printing, July 2004. (Also translated into Chinese by Beijing University of Aeronautics and Astronautics Press, 2004).
3. H. Gomaa, “Designing Software Product Lines with UML: From Use Cases to Pattern-based Software Architectures”, Addison-Wesley Object Technology Series, ISBN: 0-201-77595-6, July 2004.

Journal Publications:

1. H. Gomaa, “An Exercise in Resource Allocation”, Software - Practice and Experience, Vol. No. 3, 1974.
2. H. Gomaa, “The Calibration and Validation of a Hybrid Simulation/Regression Model of a Batch Computer System”, Software, Practice and Experience, Vol. 8, No. 1, 1978.
3. H. Gomaa, “A Hybrid Simulation/Regression Model of a Virtual Storage System”, The Computer Journal, November 1981.

4. H. Gomaa, J. Lui and P. Woo, "The Software Engineering of a Microcomputer Application System", *Software - Practice and Experience*, Vol. 12, 309-321, 1982.
5. H. Gomaa, "The Design and Calibration of a Simulation Model of a Star Computer Network", *Software - Practice and Experience*, Vol. 12, 599-610, 1982.
6. H. Gomaa, "A Software Design Method for Real Time Systems", *Communications ACM*, Vol. 27, No. 9, September 1984, pages 938-949.
7. H. Gomaa, "Software Development of Real Time Systems", *Communications ACM*, Vol. 29, No.7, July 1986, pages 657-668.
8. H. Gomaa, "The Role of Prototyping in Large Scale Software System Development", *Large Scale Systems* 12, North-Holland, 1987.
9. H. Gomaa, "A Software Design Method for Distributed Real Time Applications", *Journal of Systems and Software*, February 1989.
10. H. Gomaa, L. Kerschberg, V. Sugumaran, "A Knowledge-Based Approach to Domain Modeling: Application to NASA's Payload Operations Control Centers", *Journal of Telematics and Informatics*, Vol. 9, Nos 3/4, 1992.
11. H. Gomaa, "A Behavioral Analysis Method for Real-Time Control Systems", *Control Engineering Practice*, Vol. 1, No. 1, pp 115-120, 1993.
12. H. Gomaa, "A Reuse-Oriented Approach to Structuring and Configuring Distributed Applications", *The Software Engineering Journal*, March 1993.
13. H. Gomaa, "Software Design Methods for Large Scale Real-Time Systems", *Journal of Systems and Software*, Vol. 25, No. 2, May 1994.
14. H. Gomaa, "Reusable Software Requirements and Architectures for Families of Systems", *Journal of Systems and Software*, April 1995.
15. H. Gomaa, L. Kerschberg, V. Sugumaran, C. Bosch, I Tavakoli, "A Knowledge-Based Software Engineering Environment for Reusable Software Requirements and Architectures", *Journal of Automated Software Engineering*, Vol. 3, 285-307, 1996.
16. H. Gomaa, D. Menasce, L. Kerschberg, "A Software Architectural Design Method for Large-Scale Distributed Information Systems", *Journal of Distributed Systems Engineering*, September 1996.
17. H. Gomaa, "Software Design Methods for Distributed Applications", *Virtual Roundtable on Software Engineering for Parallel and Distributed Systems*, *IEEE Concurrency*, July-September, 1997.

18. H. Gomaa and E. O'Hara, "Dynamic Navigation in Multiple View Software Specifications and Designs", *Journal of Systems and Software*, Vol. 41, 93-103, 1998.
19. H. Gomaa, "Use Cases for Distributed Real-Time Software Architectures", *Journal of Parallel and Distributed Computing Practices*, Vol. 1, No. 2, 1998, 1-14.
20. H. Gomaa and G.A. Farrukh, "Methods and Tools for the Automated Configuration of Distributed Applications from Reusable Software Architectures and Components", *IEE Proceedings – Software*, Vol. 146, No. 6, December 1999.
21. K. Mills and H. Gomaa, "A Knowledge-Based Method for Inferring Semantic Concepts from Graphical Models of Real-Time Systems", *ACM Transactions on Software Engineering and Methodology*, Vol. 9, No. 3, pages 306-337, July 2000.
22. D. Menasce and H. Gomaa, "A Method for Design and Performance Modeling of Client/Server Systems," *IEEE Transactions on Software Engineering*, Vol. 26, No.11, Pages 1066-1085, November 2000.
23. K. Mills and H. Gomaa, "Knowledge-Based Automation of a Design Method for Concurrent and Real-Time Systems", *IEEE Transactions on Software Engineering*, Volume: 28 Issue: 3, Pages 228 -255, March 2002.
24. D. Webber and H. Gomaa, "Modeling Variability in Software Product Lines with the Variation Point Model", *Journal of Science of Computer Programming*, Volume 53, Issue 3, Pages 305-331, Elsevier, December 2004.
25. B. Blake and H. Gomaa, "Agent-Oriented Compositional Approaches to Services-Based Cross-Organizational Workflow", *Journal of Decision Support Systems*, Volume 40, Issue 1, Pages 31-50, July 2005.
26. M.E. Shin and H. Gomaa, "Software Requirements and Architecture Modeling for Evolving Non-Secure Applications into Secure Applications", *Journal of Science of Computer Programming*, Volume 66, Issue 1, Pages 60-70, Elsevier, April 2007.
27. D. Menasce, H. Ruan and H. Gomaa, "QoS Management in Service-Oriented Architectures", *Journal of Performance Evaluation*, Volume 64, Issues 7+8, Pages 646-663, Elsevier, August 2007.

Publications in Refereed Conference Proceedings:

1. H. Gomaa and M.M. Lehman, "Performance Analysis of an Interactive Computing System in a Controlled Environment", *Proceedings On-Line Conference on Computer System Evaluation*, London, September 1973.

2. H. Gomaa and P.S. Roberts, "A postgraduate student project to design and implement the nucleus of a multiprogramming system". Proceedings of the U.K. Inter-University Computing Colloquium, Edinburgh, U.K. September 1973.
3. H. Gomaa, "Regression Models for the Evaluation of Computer System Performance". Proceedings of the Eurocomp Conference on Computer Performance Evaluation, London, September 1976.
4. H. Gomaa, "A Modelling Approach to the Evaluation of Computer System Performance". Proceedings of the 2nd International Workshop on Modelling and Performance Evaluation of Computer Systems, Stresa, Italy, October 1976.
5. H. Gomaa, "A Hybrid Simulation/Regression Modelling Approach for Evaluating Multiprogramming Computer Systems". Proceedings of the IFIP International Symposium on Computer Performance Modelling, Measurement and Evaluation, Yorktown Heights, New York, August 1977.
6. H. Gomaa, J. Kramer and B.K. Penney, "A student group project in operating system implementation". Proceedings of the ACM Symposium on Computer Science Education, Detroit, Michigan, February 1978.
7. H. Gomaa, "A Simulation Based Model of a Virtual Storage System". Proceedings of the ACM/IEEE Simulation Symposium, Tampa, Florida, March 1979.
8. H. Gomaa, "A Simulation Model of a Star Computer Network. Proceedings of the IEEE International Conference on Communications, Boston, June 1979.
9. H. Gomaa, "A Comparison of Software Engineering Methods for System Design". Proceedings of the National Electronics Conference, Chicago, October 1979.
10. H. Gomaa and D. B.H. Scott, "A Tool in the Specification of Man/Machine Interface Requirements". Proceedings of the Purdue University Workshop on Process Control Systems, September 1980.
11. H. Gomaa and D. B.H. Scott, "An APL Prototype of a Management and Control System for Semiconductor Fabrication Facility". Proceedings of the APL Users Conference, Toronto, Canada, October 1980.
12. H. Gomaa and D. B.H. Scott, "Prototyping as a Tool in the Specification of User Requirement". Proceedings of the IEEE 5th International Conference on Software Engineering, San Diego, March 1981.
13. H. Gomaa, J. R. DeBolt and D.B.H. Scott, "PROMIS - A Process Management and Information System for Integrated Circuit Fabrication". Proceedings of the IEEE Conference on Computer Software and Applications (COMPSAC), Chicago, Illinois, November 1981.

14. H. Gomaa, "The Impact of Rapid Prototyping on Specifying User Requirements". Proceedings of the ACM Workshop on Rapid Prototyping, April 1982 and also in ACM Software Engineering Notes, April 1983.
15. H. Gomaa and S.J. Martello, "A Partially Automated Method for Testing Interactive Systems". Proceedings of the IEEE Conference on Computer Software and Applications (COMPSAC), Chicago, Illinois, November 1982.
16. H. Gomaa and B.K. Wylie, "A Modular Extensible System for Industrial Robot Control". Proceedings of the International Machine Tool Technical Conference, September 1984.
17. H. Gomaa, J. Lawrence and B.K. Wylie, "User Friendly Programming of Industrial Robots". Proceedings of the International Machine Tool Technical Conference, September 1984.
18. H. Gomaa and B.K. Wylie, "RC2000 Controls Robot and System Components", Robotics World, December 1984.
19. H. Gomaa and J. Lawrence, "A User Friendly Interface for Robot Programming", September 1984. Proceedings of the Society for Manufacturing Engineers AutoFact Conference, May 1985.
20. H. Gomaa, R. Carpenter and J. Popelas, "Menu Programming - An Environment for Programming Robots", Proceedings of the IEEE Computer Integrated Technologies Conference, Montreal, November 1985.
21. H. Gomaa and J. Taylor, "The Software Design of a Robot Controller", Proceedings of IEEE Industrial Electronics Conference, San Francisco, CA, November 1985.
22. H. Gomaa, "Computer Integrated Manufacturing Architecture for Flexible Manufacturing Systems". Proceedings of the Society for Manufacturing Engineers FMS86 Conference, March 1986.
23. H. Gomaa "Using the DARTS software design method for Real-Time Systems". Proceedings of the Structured Methods Conference, Chicago, August 1987.
24. H. Gomaa, "Concurrent Processing with Multiple Robot Systems". Proceedings of the IEEE Computer Integrated Technologies Conference, Montreal, November 1987.
25. H. Gomaa, "Extending the DARTS Software Design Method to Distributed Real-Time Applications". Proceedings of the Twenty-first Hawaii International Conference on System Sciences, IEEE Computer Society Press, 1988.
26. H. Gomaa, "Software Design of Distributed Manufacturing Control Systems". Proceedings of the Third IEEE International Symposium on Intelligent Control, IEEE Press, 1988.

27. H. Gomaa, "Structuring Criteria for Real Time System Design", Proceedings 11th International Conference on Software Engineering, IEEE Computer Society Press, 1989.
28. H. Gomaa, "Integrating Software Design Methods with CASE", Proceedings IEEE Computer Assisted Software Engineering Workshop (CASE 89), London, England, July 1989.
29. H. Gomaa, R. Fairley and L. Kerschberg , "Towards an Evolutionary Domain Life Cycle Model", Proceedings Workshop on Domain Modeling for Software Engineering, OOPSLA 89, New Orleans, October 1989.
30. H. Gomaa, "A Domain Requirements Analysis and Specification Method for Software Reuse", Proceedings Third Annual Workshop: Methods and Tools for Reuse, June 1990.
31. H. Gomaa, "Criteria for Structuring a System into Objects", Proceedings Finding the Object Workshop, Object-Oriented Programming Systems Languages and Applications Conference, Ottawa, October 1990.
32. H. Gomaa and L. Kerschberg , "An Evolutionary Domain Life Cycle for Domain Modeling and Target System Generation", Proceedings Workshop on Domain Modeling for Software Engineering, International Conference on Software Engineering, Austin, Texas, May 1991.
33. H. Gomaa and M. Cochran, "Validating the ADARTS Software Design Method for Real-Time Systems", Proceedings TriAda Conference, San Jose, CA, October 1991.
34. H. Gomaa, L. Kerschberg, C. Bosch, V. Sugumaran, and I. Tavakoli, "A Prototype Software Engineering Environment for Domain Modeling and Reuse," Proceedings NASA/Goddard Sixteenth Annual Software Engineering Workshop, December 1991. Also in Proceedings Fourth Annual Workshop on Methods and Tools for Reuse. Herndon, VA., November 1991.
35. H. Gomaa, "An Object-Oriented Domain Analysis and Modeling Method for Software Reuse," Proceedings Hawaii International Conference on System Sciences, Hawaii, January 1992.
36. H. Gomaa, "Structuring and Configuring Distributed Applications", Proceedings International Workshop on Configurable Distributed Systems, London, March 1992.
37. H. Gomaa, "A Behavioral Analysis and Modeling Method for Real-Time Systems", Proceedings IFAC/IFIP Real-Time Programming Workshop, Bruges, Belgium, June 1992.
38. H. Gomaa, Kerschberg, L. and Sugumaran, V., "Generating Target System Specifications from a Domain Model", Proceedings IFIP World Computer Congress, Madrid, Spain, September 1992.
39. H. Gomaa, "Methods and Tools for Reusable Software Architectures", Proceedings International Workshop on Software Reuse, Lucca, Italy, March 1993.

40. H. Gomaa, "Methods and Tools for Domain Specific Software Architectures", Proceedings Workshop on Software Reuse, Owego, November 1993.
41. H. Gomaa, "Integrating Rate Monotonic Analysis with Software Design Methods for Real-Time Systems", Proceedings SEI Workshop on Rate Monotonic Analysis, Pittsburgh, PA, November 1993.
42. H. Gomaa, with P. Ammann, J. Offutt, D. Rine and B. Sanden, "A Five year Perspective on Software Engineering Graduate Programs at George Mason University", Proceedings SEI Conference on Software Engineering Education, San Antonio, TX, January 1994.
43. H. Gomaa, "Configuration of Distributed Heterogeneous Information Systems", Proc. Second International Workshop on Configurable Distributed Systems", Pittsburgh, PA, March 1994.
44. H. Gomaa and E. O'Hara, "Dynamic Navigation of Specifications and Designs: A Computer-Human Interaction Perspective", Proceedings Workshop on Software Engineering and Human-Computer Interaction, ICSE 16, Sorrento, Italy, May 1994.
45. H. Gomaa, "Object-Oriented Design Methods for Concurrent and Real-Time Systems", Proceedings CASE Japan 94 Conference, Tokyo, Japan, July 1994.
46. H. Gomaa, L. Kerschberg, V. Sugumaran, C. Bosch, I Tavakoli, "A Prototype Domain Modeling Environment for Reusable Software Architectures". Proceedings IEEE International Conference on Software Reuse, Rio de Janeiro, Brazil, November 1994.
47. H. Gomaa, "Domain Modeling Methods and Environments", Proceedings ACM SIGSOFT Symposium on Software Reusability, Seattle, April 1995.
48. H. Gomaa, "Design Methods for Domain Specific Software Architectures", Proceedings Workshop on Software Architectures, International Conference on Software Engineering, Seattle, April 1995.
49. H. Gomaa and L. Kerschberg, "Domain Modeling for Software Reuse and Evolution", Proceedings IEEE Computer Assisted Software Engineering Workshop (CASE 95), Toronto, July 1995.
50. H. Gomaa, D. Menasce, and L. Kerschberg, "A Performance-Oriented Design Methodology for Large-Scale Distributed Data-Intensive Information Systems", Proceedings IEEE International Conference on the Engineering of Complex Computer Systems, Ft. Lauderdale, November 1995.
51. H. Gomaa and R. Pettit, "A Software Design Method for Ada 95 Based Concurrent and Real-Time Systems", Proceedings ACM Tri-Ada 95, Anaheim, November 1995.
52. H. Gomaa, "Courses on Software Design Methods for Real-Time Systems", Proceedings SEI Workshop on Real-Time Systems Education", Daytona Beach, April 1996.

53. H. Gomaa and K. Mills, "A Knowledge-based Approach for Automating a Design Method for Concurrent and Real-Time Systems", Proceedings Eighth International Conference on Software Engineering and Knowledge Engineering, Lake Tahoe, CA, June 1996.
54. L. Kerschberg, H. Gomaa, D. Menasce, J.P. Yoon, "Data and Information Architectures for Large-Scale Distributed Data Intensive Information Systems", Proceedings Eighth International Conference on Scientific and Statistical Database Management, Stockholm, Sweden, June 1996.
55. H. Gomaa and G. Farrukh, "An Approach for Generating Executable Distributed Applications from Reusable Software Architectures", Proceedings IEEE International Conference on the Engineering of Complex Computer Systems, Montreal, October 1996.
56. H. Gomaa and R. Pettit, "Integrating Petri Nets with Design Methods for Concurrent and Real-Time Systems", Proceedings IEEE Workshop on Real-Time Applications, Montreal, October 1996.
57. H. Gomaa, "Use Cases for Distributed Real-Time Software Architectures", Proc. IEEE International Workshop on Parallel and Distributed Real-Time Systems", Geneva, March 1997.
58. H. Gomaa and G. Farrukh, "A Software Engineering Environment for Configuring Distributed Applications from Reusable Software Architectures", Proceedings IEEE International Workshop on Software Technology and Practice, London, June 1997.
59. H. Gomaa, "A Software Architecture for Earth Observing Systems", Proc. International Conference on Earth Observation and Environmental Information, Alexandria, Egypt, October 1997.
60. H. Gomaa and G. Farrukh, "Automated Configuration of Distributed Applications from Reusable Software Architectures", Proceedings IEEE International Conference on Automated Software Engineering, Lake Tahoe, November 1997.
61. D. Menasce and H. Gomaa, "On a Language Based Method for Software Performance Engineering of Client/Server Systems", Proceedings IEEE Workshop on Software Performance, Santa Fe, New Mexico, October 1998.
62. H. Gomaa and G. Farrukh, "Composition of Software Architectures from Reusable Architecture Patterns, Proceedings IEEE International Workshop on Software Architectures, Orlando, Florida, November 1998.
63. H. Gomaa and G. Farrukh, "A Reusable Architecture for Federated Client/Server Systems", Proceedings ACM Symposium on Software Reusability, Los Angeles, May 1999.
64. H. Gomaa and G. Farrukh, "Software Engineering of a Distributed Object Architecture for Federated Client/Server Systems", Proc. ACM/IEEE Workshop on Engineering Distributed Objects, ICSE 99, Los Angeles, May 1999.
65. H. Gomaa, "Inter-Agent Communication in Cooperative Information Agent-Based Systems", Proc. International Workshop on Cooperative Information Agents, Uppsalla, Sweden, July 1999, Published by Springer Verlag LNAI 1652, Pages 137-148.

66. H. Gomaa and G. Farrukh, "A Component-based Architecture for Distributed Federated Client/Server Systems", Proceedings 14th International Symposium on Computer and Information Sciences, Kusadasi, Turkey, October 1999.
67. H. Gomaa and G. Farrukh, "Reusable Architectures for Software Product Lines", Proc. ACM/IEEE Software Product Lines Workshop, International Conference on Software Engineering, Limerick, Ireland, June 2000.
68. H. Gomaa, "Object Oriented Analysis and Modeling for Families of Systems with the UML", Proc. 6th International Conference on Software Reuse, Springer Verlag LNCS 1844, Pages 88-99, Vienna, Austria, June 2000.
69. H. Gomaa, L. Kerschberg, and G. Farrukh, "Domain Modeling of Software Process Models", Proceedings IEEE International Conference on the Engineering of Complex Computer Systems, IEEE Computer Society Press, Pages 50-60, Tokyo, September 2000.
70. H. Gomaa, S. Liu, and M. Shin, "Integration of the Domain Modeling Method for Families of Systems with the SOFL Formal Specification Language", Proceedings IEEE International Conference on the Engineering of Complex Computer Systems, IEEE Computer Society Press, Pages 61-71, Tokyo, September 2000.
71. H. Gomaa and D. Menasce, "Design and Performance Modeling of Component Interconnection Patterns for Distributed Software Architectures", Proceedings ACM Workshop on Software Performance, ACM Press, Pages 117-126, Ottawa, Canada, September 2000.
72. H. Gomaa, "Designing Real-Time Applications with the COMET/UML Method", Proc. ACM Workshop on Formal Design Techniques for Real-Time UML, York, England, October 2000.
73. H. Gomaa, and R. Pettit, "Validation of Dynamic Behavior in UML Using Colored Petri Nets", Proc. ACM Workshop on Dynamic Behavior in UML Models: Semantic Questions, York, England, October 2000.
74. H. Gomaa, D. Menasce, E. Shin, "Reusable Component Interconnection Patterns for Distributed Software Architectures," Proceedings ACM Symposium on Software Reusability, ACM Press, Pages 69-77, Toronto, Canada, May 2001.
75. H. Gomaa, "Modeling Software Product Lines with UML", Proc. ACM/IEEE Software Product Lines Workshop, International Conference on Software Engineering, Toronto, Canada, May 2001.
76. H. Gomaa and D. Wijesekera, "The Role of UML, OCL and ADLs in Software Architecture", Proc. ACM/IEEE Workshop on Describing Software Architecture with UML, International Conference on Software Engineering, Toronto, Canada, May 2001.
77. Pettit, Robert G., and Hassan Gomaa, "Modeling State-Dependent Objects using Coloured Petri Nets", Proceedings of Workshop on Modelling of Objects, Components, and Agents, Pages 105-120, University of Aarhus, Denmark, August 2001.
78. H. Gomaa, "Concurrent Software Design with UML", Proc. ACM Workshop on Concurrency Issues in UML, Toronto, Canada, October 2001.

79. H. Gomaa and M. Gianturco, "Domain Modeling for World Wide Web Based Software Product Lines with UML", Proc. 7th International Conference on Software Reuse, Springer Verlag LNCS 2319, Pages 78-92, Austin, Texas, April 2002.
80. D. Webber and H. Gomaa, "Modeling Variability with the Variation Point Model", Proc. 7th International Conference on Software Reuse, Springer Verlag LNCS 2319, Pages 109-122, Austin, Texas, April 2002.
81. H. Gomaa and M.E. Shin, "Multiple-View Meta-Modeling of Software Product Lines", Proceedings IEEE International Conference on the Engineering of Complex Computer Systems, Greenbelt, MD, December 2002.
82. B. Blake and H. Gomaa, "Object-Oriented Modeling Approaches to Agent-Based Cross-Organizational Workflow Systems", Proc. 2nd ACM/IEEE International Workshop on Software Engineering for Large-Scale Multi-Agent Systems, International Conference on Software Engineering, Portland, OR, May 2003.
83. H. Gomaa and M.E. Shin, "Variability in Multiple-View Models of Software Product Lines", Proc. ACM/IEEE International Workshop on Software Variability Management, International Conference on Software Engineering, Portland, OR, May 2003.
84. M. Abdulla, D. Wijesekera and H. Gomaa, "Designing QoS Based Multimedia Systems Using UML", Proc. Ninth International Conference on Distributed Multimedia Systems, Miami, Florida, September 2003.
85. R. Pettit and H. Gomaa, "Improving the Reliability of Concurrent Object-Oriented Software Designs", Proc. 9th IEEE International Workshop on Object-oriented Real-time Dependable Systems, Capri, Italy, October 2003.
86. H. Gomaa and D. Wijesekera, "Consistency in Multiple-view Dynamic UML Models", Proc. ACM Workshop on Consistency Problems in UML-based Software Development, San Francisco, October 2003.
87. H. Gomaa and M. Hussein, "Dynamic Software Reconfiguration In Software Product Families", Proc. 5th International Workshop on Product Family Engineering, Siena, Italy, November, 2003, Springer Verlag LNCS 3014, Pages 435-444.
88. H. Gomaa and D. Webber, "Modeling Adaptive and Evolvable Software Product Lines Using the Variation Point Model", Proc. Hawaii International Conference on System Sciences, Hawaii, January 2004.
89. D. Menasce, H. Ruan and H. Gomaa, "A Framework for QoS-Aware Software Components", Proc. International Workshop on Software Performance, Redwood City, California, January 2004.
90. H. Gomaa and M.E. Shin, "Modeling Complex Systems by Separating Application and Security Concerns", Proceedings IEEE International Conference on the Engineering of Complex Computer Systems, Florence, Italy, April 2004.
91. R. Pettit and H. Gomaa, "Modeling Behavioral Patterns of Concurrent Software Architectures Using Petri Nets", Proc. Fourth Working IEEE/IFIP Conference on Software Architecture, Oslo, Norway, June, 2004.

92. H. Gomaa and M. Hussein, "Software Reconfiguration Patterns for Dynamic Evolution of Software Architectures", Proc. Fourth Working IEEE/IFIP Conference on Software Architecture, Oslo, Norway, June, 2004.
93. H. Gomaa and M.E. Shin, "A Multiple-View Meta-Modeling Approach for Variability Management in Software Product Lines", Proc. 8th International Conference on Software Reuse, Springer Verlag LNCS 3017, Pages 274-285, Madrid, Spain, July 2004.
94. H. Gomaa and M.E. Shin, "Consistency Checking in Multiple-View Meta-Models of Software Product Lines", Proc. Workshop on Quality Assurance in Reuse Contexts, Software Product Line Conference, Boston, August 2004.
95. H. Gomaa and M.E. Shin, "Tool Support for Software Variability Management and Product Derivation in Software Product Lines", Proc. Workshop on Software Variability Management for Product Derivation, Software Product Line Conference, Boston, August 2004.
96. H. Gomaa and M.Saleh, "Software Product Line Engineering for Web Services and UML", Proc. 3rd ACS/IEEE International Conference on Computer Systems and Applications, Cairo, Egypt, January 2005.
97. M.Saleh and H. Gomaa, "Separation of Concerns in Software Product Line Engineering", Proc. Workshop on Modeling and Analysis of Concerns in Software, International Conference on Software Engineering, St. Louis, MO, May 2005.
98. E. Olimpiew and H. Gomaa, "Model-based Testing for Applications Derived from Software Product Lines". Proc. Workshop on Advances in Model-Based Software Testing, International Conference on Software Engineering, St. Louis, MO, May 2005.
99. H. Gomaa, "Building Software Systems and Product Lines from Software Architectural Patterns", Workshop on Building Systems from Patterns, Glasgow, UK, July 2005.
100. H. Gomaa, "Architecture-Centric Evolution in Software Product Lines", Workshop on Architecture-Centric Evolution, Glasgow, UK, July 2005.
101. E. Olimpiew and H. Gomaa, "Reusable System Tests for Applications Derived from Software Product Lines", Second International Workshop on Software Product Line Testing, Rennes, France, September 2005.
102. H. Gomaa, "Variability Management in Software Product Lines", Workshop on Model Driven Development for Software Product-lines: Fact or Fiction?, Montego Bay, Jamaica, October 2005.
103. H. Gomaa and E. Olimpiew, "The Role of Use Cases in Requirements and Analysis Modeling", Workshop on Use Cases in Model-Driven Software Engineering, Montego Bay, Jamaica, October 2005.
104. R. Pettit and H. Gomaa, "Increasing Confidence in the Design Models of Concurrent and Real-Time Object-Oriented Software", Workshop on Modeling and Analysis of Real-Time and Embedded Systems, Montego Bay, Jamaica, October 2005.
105. H. Gomaa and M.Saleh, "Software Product Line Engineering and Dynamic Customization of a Radio Frequency Management System", Proc. 4th ACS/IEEE

International Conference on Computer Systems and Applications, Dubai/Sharjah, UAE, March 2006.

106. R. Pettit and H. Gomaa, "Modeling Behavioral Patterns of Concurrent Objects Using Petri Nets", Proc. 9th IEEE International Symposium on Object and component-oriented Real-time distributed Computing, Gyeongju, Korea, April 2006.
107. R. Pettit and H. Gomaa, "Modeling Behavioral Design Patterns of Concurrent Objects", Proc. International Conference on Software Engineering, Shanghai, China, May 2006.
108. M. Kim, S. Kim, S. Park, M. Choi, M. Kim, H. Gomaa, "UML-Based Service Robot Software Development: A Case Study", Proc. International Conference on Software Engineering, Shanghai, China, May 2006.
109. H. Gomaa and M. Saleh, "Feature Driven Dynamic Customization of Software Product Lines", Proc. 9th International Conference on Software Reuse, Springer Verlag LNCS 4039, Pages 58-72, Torino, Italy, June 2006.
110. E. Olimpiew and H. Gomaa, "Customizable Requirements-based Test Models for Software Product Lines", International Workshop on Software Product Line Testing, Baltimore, MD, August 2006.
111. H. Gomaa, "A Software Modeling Odyssey: Designing Evolutionary Architecture-centric Real-Time Systems and Product Lines", Keynote paper, Proc. ACM/IEEE 9th International Conference on Model-Driven Engineering, Languages and Systems, Springer Verlag LNCS 4199, Pages 1-15, Genova, Italy, October 2006.
112. J. Street and H. Gomaa, "An Approach to Performance Modeling of Software Product Lines", Workshop on Modeling and Analysis of Real-Time and Embedded Systems, Genova, Italy, October 2006.
113. H. Gomaa and M.E. Shin, "Automated Software Product Line Engineering and Product Derivation", Proc. Hawaii International Conference on System Sciences, Hawaii, January 2007.
114. R. Pettit, and H. Gomaa, "Analyzing Behavior of Concurrent Software Designs for Embedded Systems", Proc. 10th IEEE International Symposium on Object and component-oriented Real-time distributed Computing, Santorini Island, Greece, May 2007.
115. J. Street, R. Pettit, and H. Gomaa, "Independent Model-Driven Software Performance Assessments of UML Designs", Proc. 10th IEEE International Symposium on Object and component-oriented Real-time distributed Computing, Santorini Island, Greece, May 2007.
116. H. Gomaa and M. Hussein, "Model-Based Software Design and Adaptation", Proc. ACM/IEEE ICSE Workshop on Software Engineering for Adaptive and Self-Managing Systems, Minneapolis, MN, May 2007.
117. H. Gomaa, "Modeling Software Adaptation Patterns", Proc Workshop on Model-Driven Software Adaptation, Berlin, Germany, July 2007.
118. H. Gomaa, "Feature Dependent Coordination and Adaptation of Component-Based Software Architectures", Proc Workshop on Coordination and Adaptation Techniques, Berlin, Germany, July 2007.

119. P. Jayaraman, J. Whittle, A. Elkhodary, H. Gomaa, "Model Composition in Product Lines and Feature Interaction Detection using Critical Pair Analysis", Proc. ACM/IEEE 10th International Conference on Model-Driven Engineering, Languages and Systems, Nashville, TN, October 2007.
120. J. Street and H. Gomaa, "Software Architectural Reuse Issues in Service-Oriented Architectures", Proc. Hawaii International Conference on System Sciences, Hawaii, January 2008.

Chapters in Books:

1. H. Gomaa, "Performance Models of Computer Systems". Published in "Computer Performance Evaluation", edited by Nicholas Benwell, Advance Publications, December 1978.
2. H. Gomaa, "Prototypes - Keep Them or Throw Them Away?", in Prototyping State of the Art Report, Pergamon Infotech Ltd, 1986.
3. H. Gomaa, "The Impact of Prototyping on Software Systems Engineering", in System and Software Requirements Engineering, edited by R. Thayer and M. Dorfman, IEEE Computer Society Press, Second Edition, 1997.
4. H. Gomaa, "Programming of Multiple Robot Systems", in Concise International Encyclopedia of Robotics Applications and Automation, edited by R.C. Dorf, John Wiley & Sons, 1990.
5. H. Gomaa, "Information Concerns in the Design of Real Time Software", in Concise Encyclopedia of Information Processing in Systems and Organizations, edited by A.P. Sage, Pergamon Press, 1990.
6. H. Gomaa, "Concurrent Systems Design", Published in Encyclopedia of Software Engineering, Ed. J. Marciniak, John Wiley & son, 1994.
7. Bosch C, H. Gomaa, L. Kerschberg, "Design and Construction of a Software Engineering Environment: Experiences with Eiffel", IEEE Readings in Object-Oriented Systems and Applications", IEEE Computer Society Press, 1995.
8. H. Gomaa, "Design Methods for Concurrent and Real-Time Systems", in Software Engineering, edited by M. Dorfman and R. Thayer, IEEE Computer Society Press, 1996.
9. H. Gomaa and D. Menasce, "Performance Engineering of Component-Based Distributed Software Systems". Published in "Performance Engineering", Editors Reiner Dumke, Claus Rautenstrauch, Andreas Schmietendorf, Andre Scholz, Springer Verlag LNCS # 2047, Pages 40-55, 2001.
10. H. Gomaa, "Concurrent Systems Design", Encyclopedia of Software Engineering, Second Edition, Ed. J. Marciniak, John Wiley & son, January 2002.
11. B. Blake and H. Gomaa, "Object-Oriented Modeling Approaches to Agent-Based Workflow Services", Advances in Software Engineering for Large-Scale Multi-Agent Systems", Ed. C. Lucena et al, Springer Verlag LNCS, Springer, 2004.

12. H. Gomaa, "Modern Software Design Methods for Concurrent and Real-Time Systems", in Software Engineering: Vol 1: The Development Process, Third Edition, edited by M. Dorfman and R. Thayer, Wiley-IEEE Computer Society Press, 2005. ISBN: 0-471-68417-1, October 2005.
13. H. Gomaa, "Concurrent Programming", in Encyclopedia of Computer Science and Engineering, Benjamin Wah (Ed.), John Wiley & Sons, Inc., Accepted for Publication.