

## List of Publications of Andrea Bobbio

### 1971

- [1] A. Bobbio and C. Vaciago. Neutron transmission study through a simple bent conducting tube. *Nuclear Instruments and Methods*, 91:429-437, 1971.

### 1972

- [2] A. Bobbio, O. Saracco, and R. Riva. Rottura per elettromigrazione delle connessioni di alluminio nei circuiti integrati. In: *Rendiconti LXXIII Riunione Annuale AEI*, Memoria 3.3.04, Torino, 1972.

### 1973

- [3] A. Bobbio and O. Saracco. On the spread of time-to-failure measurements in thin metallic films. *Thin Solid Films*, 17:S13-S16, 1973.

### 1974

- [4] A. Bobbio, A. Ferro, and O. Saracco. Electromigration failure in Al thin films under constant and reversed dc powering. *IEEE Transactions on Reliability*, R-23:194-202, 1974.
- [5] A. Bobbio, A. Ferro, and O. Saracco. Analysis of the electromigration induced damage through the kinetics of void formation. In *Proceedings Congrès National de Fiabilité*, pages 85-97, Perros Guirec (France), 1974.

### 1975

- [6] A. Bobbio and O. Saracco. A modified reliability expression for the electromigration time-to-failure. *Microelectronics and Reliability*, 14:431-433, 1975.

### 1976

- [7] A. Bobbio, A. Masoero, and P. Mazzetti A. Stepanescu. Transverse field effect on current noise and the electrical conductivity of discontinuous metallic films. *Thin Solid Films*, 36:33-36, 1976.
- [8] A. Bobbio and O. Saracco. Un meccanismo di degradazione: elettromigrazione in corrente alternata. *Alta Frequenza*, XLV:468-472, 1976.

### 1977

- [9] A. Bobbio and O. Saracco. The reliability data bank of the 'Circolo dell'Affidabilità' at IEN. *Alta Frequenza*, XLVI:128-133, 1977.
- [10] A. Bobbio and O. Saracco. The computerized reliability data handling system for electronic components at IEN. In *Proceedings 2-nd European Reliability Data Bank Seminar*, pages 1-16, Stockholm, 1977.
- [11] A. Bobbio, M. Celasco, F. Fiorillo, and P. Mazzetti. Studio dei difetti nei metalli con il metodo del rumore di corrente. In: *Rendiconti LXXVIII Riunione Annuale AEI*, Memoria 9, Como, 1977.

- [12] A. Bobbio and O. Saracco. Codes and procedures for data handling at the reliability data bank of the Circolo dell'Affidabilità. In: *Proceedings National Conference on Reliability*, Paper: NCR/6/1-12, Nottingham (UK), 1977.

#### 1978

- [13] A. Bobbio and O. Saracco. Il MIL-HDBK e i fattori di stress. In *Corso avanzato sull'affidabilità dei componenti elettronici*, AICQ - FAST, Milano, 1978.
- [14] A. Bobbio, A. Cumani, A. Premoli, and O. Saracco. Ottimizzazione di test statistici per l'analisi automatica di dati di affidabilità. In *Atti X Convegno Annuale AICQ*, pages 59-71, Torino, 1978.

#### 1979

- [15] A. Bobbio, A. Premoli, and O. Saracco. Estensione dei modelli markoviani all'analisi dell'affidabilità di sistemi riparabili con tempi di guasto e di riparazione distribuiti con legge non esponenziale. In: *Rendiconti LXXX Riunione Annuale AEI*, Memoria 1, Santa Margherita Ligure, 1979.

#### 1980

- [16] G.C. Bello and A. Bobbio. A reliability data bank in the petrochemical sector. In *Proceedings 3-rd European Reliability Data Bank Seminar*, pages 211-224, Bradford (UK), 1980.
- [17] A. Bobbio, A. Cumani, A. Premoli, and O. Saracco. Modelling and identification of non-exponential distributions by homogeneous Markov processes. In *Proceedings 6-th Advances in Reliability Technology Symposium*, pages 373-392, Bradford (UK), 1980.
- [18] A. Bobbio. Fenomeni di elettromigrazione. In *Affidabilità e fisica dei meccanismi di guasto dei semiconduttori*, pages 213-242, *Seminario Scientifico-Tecnico di Lecce - 3 Corso*, Castro Marina (Lecce), 1980.
- [19] A. Bobbio and A. Premoli. A nonlinear integer algorithm for optimal reliability allocation. In *Proceedings IEEE International Conference on Circuits and Computers*, pages 1142-1145, Port Chester NY (USA), 1980.
- [20] A. Bobbio, A. Premoli, and O. Saracco. Multistate homogeneous Markov models in reliability analysis. *Microelectronics and Reliability*, 20:875-880, 1980.

#### 1981

- [21] A. Bobbio and O. Saracco. Previsione automatica dell'affidabilità di apparati elettronici. *L'Elettrotecnica*, LXVIII:135-141, 1981.
- [22] V. Amoia, A. Bobbio, A. Premoli, M. Santomauro, and O. Saracco. Optimum time-domain design of system reliability. *IEEE Transactions on Reliability*, R-30:71-73, 1981.

#### 1982

- [23] A. Bobbio and A. Cumani. Modelling wear-out by multistate homogeneous Markov processes. In E. Lauger and J. Moltoft, editors, *Reliability in Electrical and Electronic Components and Systems (Proceedings EUROCON 82)*, pages 101-106, North-Holland, 1982.

- [24] A. Bobbio, A. Premoli, and M. Santomauro. Time-domain availability optimization of repairable systems. In E. Lauger and J. Moltoft, editors, *Reliability in Electrical and Electronic Components and Systems (Proceedings EUROCON 82)*, pages 1051-1055, North-Holland, 1982.
- [25] A. Bobbio and O. Saracco. An analysis of the reliability data on electronic components collected by the 'Circolo dell'Affidabilità'. *Alta Frequenza*, LI:164-169, 1982.
- [26] A. Bobbio and A. Premoli. Fast algorithm for unavailability and sensitivity analysis of series-parallel systems. *IEEE Transactions on Reliability*, R-31:359-361, 1982.

### 1983

- [27] A. Bobbio. A Petri net approach to the reliability and performability analysis of complex systems. In *Proceedings International Conference on Microelectronics and Teleinformatics (BIAS-83)*, pages 1-14, Milano, 1983.
- [28] A. Bobbio and A. Cumani. A Markov approach to wear-out modelling. *Microelectronics and Reliability*, 23:113-119, 1983.
- [29] A. Bobbio and O. Saracco. The reliability data bank on electronic components of the Circolo dell'Affidabilità: operating procedures and some results. In: *Proceedings 4-th EUREDATA Conference*, Paper: 11.3 / 1-11, Venezia, 1983.
- [30] A. Bobbio and A. Cumani. Markov models: a new class of distributions for the analysis of lifetime data samples. In: *Proceedings 4-th EUREDATA Conference*, Paper: 10.3 / 1-13, Venezia, 1983.
- [31] A. Bobbio and A. Premoli. Analysis of non-regenerative repair processes through homogeneous Markov models. *International Journal of Systems Science*, 14:647-659, 1983.
- [32] A. Bobbio and O. Saracco. Affidabilità previsionale - Parte I: componenti elettronici e manuali di affidabilità. *Elettronica Oggi*, 163-170, Settembre 1983.
- [33] A. Bobbio. Affidabilità previsionale - Parte II: apparati e sistemi. *Elettronica Oggi*, 245-252, Ottobre 1983.

### 1984

- [34] M. Ajmone Marsan, A. Bobbio, G. Conte, and A. Cumani. Performance analysis of degradable multiprocessor systems using generalized stochastic Petri nets. *IEEE Computer Society, Distributed Processing Technical Committee Newsletter*, 6, SI-1:47-54, 1984.
- [35] A. Bobbio, A. Cumani, and R. Del Bello. Reduced Markovian representation of stochastic Petri net models. *Systems Science*, 10:5-23, 1984.
- [36] A. Bobbio and A. Cumani. Discrete state stochastic systems with phase type distributed transition times. In *Proceedings AMSE International Conference on Modelling and Simulation*, Vol. 1.1, pages 173-192, Athens, 1984.

### 1985

- [37] J.B. Dugan, A. Bobbio, G. Ciardo, and K. Trivedi. The design of an unified package for the solution of stochastic Petri net models. In *Proceedings International Workshop on Timed Petri Nets*, pages 6-13, IEEE Computer Society no. 674, Torino, 1985.

- [38] M. Ajmone Marsan, G. Balbo, A. Bobbio, G. Chiola, G. Conte, and A. Cumani. On Petri nets with stochastic timing. In *Proceedings International Workshop on Timed Petri Nets*, pages 80-87, IEEE Computer Society no. 674, Torino, 1985.
- [39] A. Bobbio, O. Saracco, and G. Viarengo. Evaluation of the reliability features of electric vehicles in actual operating conditions. In: *Proceedings Drive Electric '85*, Paper 5.13; 1-4, Sorrento (Italy), 1985.

## 1986

- [40] A. Bobbio and A. Verna. A performance oriented reliability model of a pumping station in a fire protection system. In H.J. Wingender, editor, *Reliability Data Collection and Use in Risk and Availability Assessment (Proceedings 5-th EUREDATA Conference)*, pages 606-614, Springer Verlag, 1986.
- [41] G. Mattana, A. Bobbio, L. Giannelli, and E. Zanoni. Il circolo dell'Affidabilità sui componenti elettronici. *Elettronica Oggi*, 47-51, Agosto 1986.
- [42] A. Bobbio. Modelli previsionali di affidabilità per dispositivi ad altissima scala di integrazione. *Fisica e Tecnologia*, 9:181-196, 1986.
- [43] A. Bobbio and K.S. Trivedi. [An aggregation technique for the transient analysis of stiff Markov chains](#). *IEEE Transactions on Computers*, C-35:803-814, 1986.
- [44] N. Piccinini, A. Verna, and A. Bobbio. Optimum design of a fire extinguishing pumping installation in a chemical plant. In *Proceedings World Congress III of Chemical Engineering*, Vol. II, pages 1112-1115, Tokio, 1986.

## 1987

- [45] A. Bobbio. The effect of an imperfect coverage on the optimum degree of redundancy of a degradable multiprocessor system. In: *Proceedings RELIABILITY '87*, Vol. II, Paper: 5B/3/1-13, Birmingham (UK), 1987.
- [46] A. Bobbio and G. Savant Aira. Modelli di sistemi automatizzati di lavorazione mediante reti deterministiche di Petri. *Pixel*, 8:15-23, 1987.
- [47] A. Bobbio and G. Savant Aira. Modelling automated production systems by deterministic Petri nets. In: *Proceedings 3-rd International Conference on Simulation in Manufacturing*, 127-136, Torino, 1987.

## 1988

- [48] A. Bobbio. Analisi probabilistica del comportamento nel tempo di impianti industriali. *Impiantistica Italiana*, 1:40-44, 1988.
- [49] A. Bobbio. Studio della sicurezza di un impianto quando l'evento catastrofico dipende dalla durata dell'avaria. *Manutenzione*, 1:20-28, 1988.
- [50] A. Bobbio and E. Vaccarino. Analisi dell'affidabilità di sistemi con l'impiego di distribuzioni non esponenziali. *ATA - Ingegneria Automotoristica*, 41:264-273, 1988.
- [51] A. Bobbio and E. Vaccarino. Reliability analysis of series/parallel systems with component time-to-failure distribution of phase type. In *Proceedings 4-th International Conference on Automobile Reliability*, pages 159-168, Prague, 1988.

- [52] A. Bobbio, G. Picciolo, N. Piccinini, and M. Scarrone. Probabilità della durata di disservizio in un impianto di abbattimento di gas tossici. In *Proceedings XV International Conference on Industrial Hazards*, pages 121-131, Firenze, 1988.
- [53] E. Vaccarino and A. Bobbio. Reliability prediction of electronic components: methods used in the automotive industry. In *Proceedings 2-nd International Conference on Methodology and Innovations in Automotive Experimentation*, pages 873-884, Firenze, 1988.

#### 1989

- [54] A. Bobbio, L. Roberti, and E. Vaccarino. Computing cumulative measures in reward stochastic processes by a Phase-type approximation. In V. Colombari, editor, *Reliability Data Collection and Use in Risk and Availability Assessment (Proceedings 6-th EUREDATA Conference)*, pages 682-693, Springer Verlag, 1989.
- [55] P. Legato, A. Bobbio, and L. Roberti. The effect of failures and repairs on multiple cell production lines. In *Proceedings 20-th International Symposium on Automotive Tecnology & Automation*, pages 209-225, Firenze, 1989.
- [56] M. Ajmone Marsan, G. Balbo, A. Bobbio, G. Chiola, G. Conte, and A. Cumani. The effect of execution policies on the semantics and analysis of stochastic Petri nets. *IEEE Transactions on Software Engineering*, 15:832-846, 1989.
- [57] A. Bobbio. Petri nets generating Markov reward models for performance/reliability analysis of degradable systems. In R. Puigjaner and D. Potier, editors, *Modelling Techniques and Tools for Computer Performance Evaluation*, pages 353-365, Plenum P.C., 1989.

#### 1990

- [58] A. Bobbio. [System modelling with Petri nets](#). In A.G. Colombo and A. Saiz de Bustamante, editors, *Systems Reliability Assessment*, pages 103-143, Kluwer Academic P.G., 1990.
- [59] A. Bobbio and K. Trivedi. Computation of the distribution of the completion time when the work requirement is a PH random variable. *Stochastic Models*, 6:133-150, 1990.
- [60] A. Bobbio. Dependability analysis of fault-tolerant systems: a literature survey. *Microprocessing and Microprogramming*, 29:1-13, 1990.
- [61] A. Bobbio and K. Trivedi. [Computing cumulative measures of stiff Markov chains using aggregation](#). *IEEE Transaction on Computers*, 39:1291-1298, October 1990.

#### 1991

- [62] A. Bobbio and L. Roberti. The hitting time in multi-reward semi-Markov models. In I.G. Niemegeers N.M. Van Dijk B.R. Haverkort, editor, *Proceedings of the First International Workshop on Performability Modelling of Computer and Communication Systems (PMCCSI)*, pages 57-76, February 1991.
- [63] A. Bobbio. Architectural factors influencing the reliability of fault-tolerant VLSI arrays. *Microelectronics and Reliability*, 31:963-968, 1991.
- [64] A. Bobbio. A multi-reward stochastic model for the completion time of parallel tasks. In A. Jensen and V.B. Iversen, editors, *Teletraffic and Datatraffic in a period of change (Proceedings of ITC-13 International Teletraffic Congress, Copenhagen)*, pages 577-582, Elsevier Science Publishers, 1991.

## 1992

- [65] A. Bobbio. Stochastic reward models in performance/reliability analysis. *Journal on Communications*, XLIII:27-35, 1992.
- [66] V. Nicola, A. Bobbio, and K. Trivedi. A unified performance reliability analysis of a system with a cumulative down time constraint. *Microelectronics and Reliability*, 32:49-65, 1992.
- [67] A. Bobbio and A. Cumani. ML estimation of the parameters of a PH distribution in triangular canonical form. In G. Balbo and G. Serazzi, editors, *Computer Performance Evaluation*, pages 33-46, Elsevier Science Publishers, 1992.
- [68] E. Vaccarino and A. Meriga and A. Bobbio. Dependability analysis of fault-tolerant automotive equipment: a case study. In *Proceedings 3rd International Conference on Innovation and Reliability in Automotive Design and Testing*, Firenze, April 1992.
- [69] A. Bobbio and L. Roberti. Distribution of the minimal completion time in multi-reward semi-Markov models. *Performance Evaluation*, 14:239-256, 1992.
- [70] A. Bobbio. Trees analysis techniques in system reliability. *European COMETT II Seminars in Industrial Safety & Reliability*, St. Etienne, 1992.

## 1993

- [71] A. Bobbio and M. Telek. Task completion time. In *Proceedings 2nd International Workshop on Performability Modelling of Computer and Communication Systems (PMCCS2)*, 1993.

## 1994

- [72] A. Bobbio and M. Telek. A benchmark for PH estimation algorithms: results for Acyclic PH. *Stochastic Models*, 10:661-677, 1994.
- [73] A. Bobbio and M. Telek. Computational restrictions for SPN with generally distributed transition times. In *First European Dependable Computing Conference (EDCC-1), Lecture Notes in Computer Science*, Springer Verlag, vol. LNCS-852:131-148, 1994.

## 1995

- [74] A. Bobbio and M. Telek. Markov regenerative SPN with non-overlapping activity cycles. In *International Computer Performance and Dependability Symposium - IPDS95*, IEEE Computer Society Press, 124-133, 1995.
- [75] M. Telek and A. Bobbio. Markov regenerative stochastic Petri nets with age type general transitions. In *Application and Theory of Petri Nets (16-th International Conference)*, Lecture Notes in Computer Science, Springer Verlag, vol. LNCS-935: 471-489, 1995.
- [76] M. Telek and A. Bobbio and L. Jereb and A. Puliafito and K. Trivedi. Steady state analysis of Markov regenerative SPN with age memory policy. In *8-th International Conference on Modeling Techniques and Tools for Computer Performance Evaluation*, Lecture Notes in Computer Science, Springer Verlag, vol. LNCS-977:165-179, 1995.
- [77] A. Bobbio and V.G. Kulkarni and A. Puliafito and M. Telek and K. Trivedi. Preemptive repeat identical transitions in Markov Regenerative Stochastic Petri Nets. In *6-th International Conference on Petri Nets and Performance Models - PNPM95*, IEEE Computer Society Press, 113-122, 1995.

- [78] A. Bobbio and M. Telek. Evaluation of the completion time and catastrophic failure time of a two state system. In *Proceedings 9-th Symposium on Reliability in Electronics (RELECTRONIC '95)*, 67-72, 1995.

#### 1996

- [79] A. Bobbio and M. Telek. Combined preemption policies in MRSPN. In *Fault Tolerant Systems and Software*, Narosa Pub. House, New Dehli - India, 92-98, 1996.
- [80] A. Bobbio and A. Montefusco and P. Tavella. A stochastic approach to the determination of calibration intervals. In *Proceedings IEEE Instrumentation and Measurement Technology Conference*, vol 1, 54-57, 1996.
- [81] M. Telek and A. Bobbio and A. Puliafito. Steady State Solution of MRSPN with mixed preemption policies. In *International Computer Performance and Dependability Symposium - IPDS96*, IEEE Computer Society Press, 106-115, 1996.
- [82] A. Bobbio and P. Tavella and A. Montefusco and S. Costamagna. Determining the optimal calibration interval of process control instruments. In *Proceedings 3-rd International Workshop on Performability Modeling of Computer and Communication Systems (PMCCS3)*, 66-70, 1996.
- [83] A. Bobbio and A. Puliafito and M. Scarpa and M. Telek . Time domain analysis of Markov regenerative processes. In *8-th European Simulation Symposium*, 187-191, 1996.

#### 1997

- [84] P. Tavella and A. Bobbio and A. Montefusco and S. Costamagna. Stochastic drift models for the determination of calibration intervals. In *Advanced Mathematical Tools in Metrology III*, World Scientific Publishing Company, 232-238, 1997.
- [85] A. Bobbio and A. Puliafito and M. Telek. New primitives for interlaced memory policies in Markov regenerative stochastic Petri nets. In *7-th International Conference on Petri Nets and Performance Models - PNPM97*, IEEE Computer Society Press, 1997.
- [86] A. Bobbio and M. Telek. Transient analysis of a preemptive resume M/D/1/2/2 through Petri nets. *Periodica Polytechnica*, Ser. El. Eng., 41:123-146, 1997.
- [87] A. Bobbio and P. Tavella and A. Montefusco and S. Costamagna. Monitoring the calibration status of a measuring instrument by a stochastic model. *IEEE Transactions on Instrumentation and Measurement*, 46: 747-751, 1997.

#### 1998

- [88] A. Bobbio and A. Puliafito and M. Scarpa and M. Telek. WebSPN: A WEB-accessible Petri net tool. In: *International Conference on Web-Based Modeling & Simulation*, 137-142, 1998.
- [89] A. Bobbio and D. Del Corso and L. Farinetti and G. Malnati and E. Ovcin and D. Vidotto. SICURO Project. In: *7-th World Conference on Continuing Engineering Education - WCCEE98*, 334-338, 1998.
- [90] A. Bobbio and A. Puliafito and M. Telek and K. Trivedi. [Recent developments in non-Markovian stochastic Petri nets](#). *Journal of Circuits Systems and Computers*, 8:1, 119-158, 1998.
- [91] A. Bobbio and M. Sereno. Fine grained software rejuvenation models. In: *International Computer Performance and Dependability Symposium - IPDS98*, IEEE Computer Society Press, 4-12, 1998.

- [92] M. Scarpa and A. Bobbio. Kronecker representation of stochastic Petri nets with discrete PH distributions. In: *International Computer Performance and Dependability Symposium - IPDS98*, IEEE Computer Society Press, 52-61, 1998.
- [93] M. Ajmone Marsan and A. Bobbio and S. Donatelli. Petri nets in performance analysis: An Introduction. In W. Reisig and G. Rozenberg, editors, *Lectures on Petri Nets I: Basic Models, Lecture Notes in Computer Science*, Springer Verlag, vol. LNCS-1491:211-256, 1998.
- [94] A. Bobbio and M. Telek. Non-exponential stochastic Petri nets: An overview of methods and techniques. *Computer Systems: Science & Engineering*, 13:6, 339-351, 1998.
- [95] L. Portinale and A. Bobbio. [Bayesian networks for dependability analysis: an application to digital control reliability](#). In: *15-th Conference Uncertainty in Artificial Intelligence, UAI-99*, July, 551-558, 1999.

## 1999

- [96] M. Gribaudo and M. Sereno and A. Bobbio. Fluid Stochastic Petri Nets: An Extended Formalism to include non-Markovian Models. In: *8-th International Conference on Petri Nets and Performance Models - PNPM99*, IEEE Computer Society Press, pp 74-81, September, 1999.
- [97] A. Bobbio and S. Garg and M. Gribaudo and A. Horváth and M. Sereno and M. Telek. Modeling Software Systems with Rejuvenation, Restoration and Checkpointing through Fluid Stochastic Petri Nets. In: *8-th International Conference on Petri Nets and Performance Models - PNPM99*, IEEE Computer Society Press, pp 82-91, September, 1999.
- [98] A. Bobbio and G. Franceschinis and L. Portinale and R. Gaeta. Exploiting Petri nets to support fault-tree based dependability analysis. In: *8-th International Conference on Petri Nets and Performance Models - PNPM99*, IEEE Computer Society Press, pp 146-155, September, 1999.
- [99] O. Botti, V. De Florio, G. Deconinck, F. Cassinari, S. Donatelli, A. Bobbio, A. Klein, H. Kufner, R. Lauwereins, E. Thurner, E. Verhulst. TIRAN: Flexible and Portable Fault Tolerance Solutions for Cost Effective Dependable Applications. In: *5th Int. Euro-Par Conference on Parallel Processing (EuroPar 99)*, P. Amestoy, P. Berger, M. Dayd, I. Duff, V. Frayss, L. Giraud, D. Ruiz (Eds.), Lecture Notes in Computer Science Vol. LNCS-1685, Springer-Verlag, Toulouse, France, Aug. 31-Sep. 3, pp. 1166-1170, 1999.
- [100] A. Bobbio and L. Portinale and M. Minichino and E. Ciancamerla. Comparing fault trees and bayesian networks for dependability analysis. In: *18-th Int. Conference on Computer Safety, Reliability and Security, SAFECOMP99*, Lecture Notes in Computer Science, Springer Verlag, vol. LNCS-1698: 310-322, 1999.

## 2000

- [101] O. Botti, V. De Florio, G. Deconinck, R. Lauwereins, F. Cassinari, S. Donatelli, A. Bobbio, A. Klein, H. Kufner, E. Thurner, and E. Verhulst. The TIRAN approach to reusing Software implemented fault tolerance. In: *8th Euromicro Workshop on Parallel and Distributed Processing (PDP2000)*, (IEEE Comp. Soc. Press), Rhodes, Greece, pp 325-332, Jan. 2000.
- [102] A. Bobbio and A. Puliafito and M. Telek. [A modeling framework to implement preemption policies in non-Markovian SPN](#). *IEEE Transactions Software Engineering*, 26:36-54, 2000.
- [103] A. Bobbio and L. Portinale. Bayesian networks in dependability analysis. In: *Int. Conference on Dependable Systems and Networks, DSN2000*, Short Communication, pp B44-B45, 2000.



- [104] A. Bobbio and V. G. Kulkarni and M. Telek. Partial loss in reward models. In: *2nd International Conference on Mathematical Methods in Reliability, MMR'2000*, Bordeaux, pp 207-210, 2000.

## 2001

- [105] M. Gribaudo and M. Sereno and A. Horváth and A. Bobbio. [Fluid stochastic Petri nets augmented with flush-out arcs: Modelling and analysis](#). *Discrete Event Dynamic Systems*, 11(1/2):97-117, 2001.
- [106] A. Bobbio and L. Portinale and M. Minichino and E. Ciancamerla. [Improving the Analysis of Dependable Systems by Mapping Fault Trees into Bayesian Networks](#). *Reliability Engineering and System Safety*, 71:249-260, 2001.
- [107] A. Bobbio and M. Telek. Task completion time in degradable systems. In B.R. Haverkort, R. Marie, G. Rubino and K. S. Trivedi, editors, *Performability Modelling: Techniques and Tools*, Wiley, Chapter 7:139-161, 2001.
- [108] A. Bobbio and S. Bologna and E. Ciancamerla and P. Incalcaterra and C. Kropp and M. Minichino and E. Tronci. [Advanced techniques for safety analysis applied to the gas turbine control system of ICARO co-generative plant](#). In: *X Convegno Tecnologie e Sistemi Energetici Complessi*, Genova, pp 339-350, 2001.
- [109] A. Bobbio and A. Horváth. [Petri nets with discrete phase timing: A bridge between stochastic and functional analysis](#). In: *Second International Workshop on Models for Time-Critical Systems (MTCS 2001)*, Amsterdam, pp 22-38, 2001- also in *ENTCS*, 52, 2002.
- [110] A. Bobbio and G. Franceschinis and L. Portinale and R. Gaeta. [Dependability assessment of an industrial programmable logic controller via parametric fault-tree and high level Petri net](#). In: *9-th International Conference on Petri Nets and Performance Models - PNPM01*, IEEE Computer Society Press, pp 29-38, September, 2001.
- [111] M. Gribaudo, A. Bobbio and M. Sereno. [Modeling physical quantities in industrial systems using fluid stochastic Petri nets](#). In: *Proceedings 5-th International Workshop on Performability Modeling of Computer and Communication Systems (PMCCS5)*, pp 81-85, September, 2001.
- [112] A. Bobbio and A. Horváth. [Model checking time Petri nets using NuSMV](#). In: *Proceedings 5-th International Workshop on Performability Modeling of Computer and Communication Systems (PMCCS5)*, pp 100-104, September, 2001.
- [113] S. Bologna, E. Ciancamerla, M. Minichino, A. Bobbio, G. Franceschinis, L. Portinale and R. Gaeta. [Comparison of methodologies for the safety and dependability assessment of an industrial programmable logic controller](#). In: *European Safety & Dependability Conference (ESREL2001)*, pp 411-418, September, 2001.
- [114] A. Bobbio M. Sereno and C. Anglano. [Fine grained software degradation models for optimal rejuvenation policies](#). *Performance Evaluation*, 46:45-62, 2001.
- [115] A. Bobbio and S. Bologna and E. Ciancamerla and M. Minichino and E. Tronci. Tecniche di modellazione probabilistiche e deterministiche per l'analisi di sicurezza del sistema di controllo di una turbina a gas. In: *Convegno Nazionale "Sicurezza nei Sistemi Complessi"*, (In Italian) Bari, October, 2001 (in Italian).

## 2002

- [116] A. Bobbio and A. Horv ath and M. Telek. [The scale factor: A new degree of freedom in Phase Type approximation](#). In: *Proceedings International Conference on Dependable Systems and Networks - DSN2002*, IEEE Computer Society Press, pp 627-636, 2002.
- [117] A. Bobbio and A. Horv ath and M. Telek. [PhFit: A general Phase Type fitting tool](#). In: *Proceedings International Conference on Dependable Systems and Networks - DSN2002*, IEEE Computer Society Press, p 543, 2002.
- [118] A. Bobbio and E. Ciancamerla and G. Franceschinis and R. Gaeta and M. Minichino and L. Portinale. [Methods of increasing modelling power for safety analysis applied to a turbine digital control system](#). In: *21st Int. Conference on Computer Safety, Reliability and Security, SAFECOMP02*, S. Anderson, S. Bologna M. Felici (Eds.), Springer Verlag, vol. LNCS-2434: 212-223, 2002.
- [119] M. Gribaudo and A. Horv ath and A. Bobbio and E. Tronci and E. Ciancamerla and M. Minichino. [Model-checking based on Fluid Petri Nets for the temperature control system of the ICARO co-generative plant](#). In: *21st Int. Conference on Computer Safety, Reliability and Security, SAFECOMP02*, S. Anderson, S. Bologna M. Felici (Eds.), Springer Verlag, vol. LNCS-2434: 273-283, 2002.
- [120] M. Sonza Reorda, M. Violante, N. Mazzocca, S. Venticinque, A. Bobbio, G. Franceschinis. A Hierarchical Approach for Designing Dependable Systems. In: *Seventh Annual IEEE Int. Workshop on High Level Design Validation and Test, HLDVT'02*, October, 2002.

### 2003

- [121] A. Bobbio, G. Franceschinis, R. Gaeta, L. Portinale. [Parametric Fault-Tree for the Dependability Analysis of Redundant Systems and its High Level Petri Net Semantics](#). *IEEE Transactions on Software Engineering*, 29:270-287, 2003.
- [122] M. Gribaudo and A. Horv ath and A. Bobbio and E. Tronci and E. Ciancamerla and M. Minichino. [Fluid Petri Nets and Hybrid Model-checking: A comparative case study](#). *Reliability Engineering and System Safety*, 81:239-257, 2003.
- [123] A. Bobbio and E. Ciancamerla and G. Franceschinis and R. Gaeta and M. Minichino and L. Portinale. [Sequential application of heterogeneous models for the safety analysis of a control system: A case study](#). *Reliability Engineering and System Safety*, 81:269-280, 2003.
- [124] A. Bobbio, A. Horv ath, M. Scarpa and M. Telek. [Acyclic Discrete Phase Type Distributions: Properties and a Parameter Estimation Algorithm](#). *Performance Evaluation*, 4:1-32, 2003.
- [125] A. Bobbio and S. Montani, L. Portinale. Parametric Dependability Analysis through Probabilistic Horn Abduction. In: *Proceedings 19th Conference on Uncertainty in AI UAI 2003*, pp 65-72, August 2003.
- [126] A. Bobbio and M. Gribaudo and A. Horv ath. [Modeling a car safety controller using fluid stochastic Petri nets](#). In: *Proceedings 6-th International Workshop on Performability Modeling of Computer and Communication Systems (PMCCS6)*, pp 27-30, September, 2003.

### 2004

- [127] A. Bobbio, A. Horv ath and M. Telek. [The Scale Factor: A New Degree of Freedom in Phase Type Approximation](#). *Performance Evaluation*, 56(1-4):121-144, 2004.
- [128] A. Bobbio and D. Codetta Raiteri. [Parametric Fault Trees with Dynamic Gates and Repair Boxes](#). In: *Proceedings of Reliability and Maintainability Symposium RAMS2004*, pp. 459-465, 2004.

- [129] L. Portinale, A. Bobbio and S. Montani,. From AI to Dependability: Using Bayesian Networks for Reliability Modeling and Analysis (Extended abstract). In: *Fourth International Conference on Mathematical Methods in Reliability (MMR2004)*, June 2004.
- [130] S. Bernardi, A. Bobbio and S. Donatelli. [Petri nets and dependability](#). *Lectures on Concurrency and Petri Nets*, W. Reisig and G. Rozenberg, Springer Verlag - LNCS, Vol 3098, 125-179, 2004.

## 2005

- [131] A. Bobbio, A. Horv ath and M. Telek. Matching three moments with minimal acyclic phase type distributions. *Stochastic Models*, 21: 303-326, 2005.
- [132] A. Bobbio and D. Codetta Raiteri and M. De Pierro and G. Franceschinis. System Level Dependability Analysis, In: Springer Series in Advanced Microelectronics, Vol 17, pages 151-174, ISBN 1852338997, M. Sonza Reorda, Z. Peng M. Violante eds., Springer, 2005.
- [133] S. Montani, L. Portinale and A. Bobbio. Dynamic Bayesian networks for modeling advanced fault tree features in dependability analysis, In: "*Advances in Safety and Reliability*" (*European Safety and Reliability Conf - ESREL2005*), pages 1414-1422, Balkema Pub, 2005.
- [134] D. Codetta-Raiteri and A. Bobbio. Solving dynamic reliability problems by means of ordinary and fluid stochastic petri nets. In: "*Advances in Safety and Reliability*" (*European Safety and Reliability Conf - ESREL2005*), vol. 1, pages 381-389, Balkema Pub, 2005.
- [135] A. Bobbio, E. Ciancamerla, M. Minichino, E. Tronci. Stochastic and Functional Analysis of a Public Mobile Network in a Safety Critical Context. In: "*Advances in Safety and Reliability*" (*European Safety and Reliability Conf - ESREL2005*), Balkema Pub, 2005.
- [136] A. Bobbio and D. Codetta Raiteri and M. De Pierro and G. Franceschinis. Efficient analysis Algorithms for Parametric Fault Trees. Analysis, In: *Proceedings of the Workshop on Techniques, Methodologies and Tools for Performance Evaluation of Complex Systems*, pages 91-105, Turin, September 2005.
- [137] D. Codetta-Raiteri and A. Bobbio. Evaluation of a benchmark on dynamic reliability via Fluid Stochastic Petri Nets. In: *Proceedings of the International Workshop on Performability Modeling of Computer and Communication Systems*, pages 52-55, Turin, September 2005.
- [138] L. Portinale, A. Bobbio and S. Montani, [From Artificial Intelligence to Dependability: Using Bayesian Networks for Reliability Modeling and Analysis](#). In: *Modern Statistical and Mathematical Methods in Reliability*, A. Wilson, N. Limnios, S. Keller-McNulty and Y. Armijo Eds., Series on Quality, Reliability and Engineering Statistics, Vol 10, World Scientific, pages 365-381, October 2005.
- [139] D. Codetta-Raiteri and A. Bobbio. Modelling dynamic reliability via fluid Petri nets. In: *Proceedings of the International Conference on Reliability and Safety Engineering, INCREASE2005*, pp 43-56, December 2005.
- [140] A. Bobbio, E. Ciancamerla, M. Minichino, E. Tronci. Functional analysis of telecontrol system and stochastic measures of its GSM/GPRS connections. *The Archives of Transport*, Vol XVII, No 3-4, pp 39-55, 2005.

## 2006

- [141] S. Montani, L. Portinale, A. Bobbio, M. Varesio, D. Codetta-Raiteri. A tool for automatically translating Dynamic Fault Trees into Dynamic Bayesian Networks. In: *Proceedings of Reliability and Maintainability Symposium RAMS2006*, pp. 434-441, 2006.

- [142] A. Bobbio, C. Ferraris, R. Terruggia. New challenges in network reliability analysis. In: *Proceedings of International Workshop on Complex Network and Infrastructure Protection - CNIP06*, pp. 554-564, Rome, March, 2006.
- [143] D. Codetta-Raiteri and A. Bobbio. [Stochastic Petri nets supporting dynamic reliability evaluation](#). *International Journal of Materials & Structural Reliability*, Vol 4, No 1, pp 65-77, 2006.
- [144] S. Montani, L. Portinale, A. Bobbio, D. Codetta-Raiteri, Automatically translating dynamic fault trees into dynamic bayesian networks by means of a software tool, *Proc. International Conference on Availability, Reliability and Security (ARES) 2006*, Wien, April 2006, 804-809 2006.
- [145] A. Bobbio and M. Gribaudo and A. Horváth. Modelling a Car Safety Controller in Road Tunnels using Hybrid Petri Nets. In: *Proceedings of 9th International IEEE Conference on Intelligent Transportation Systems ICTS2006*, 1436 - 1441, Toronto, September, 2006.
- [146] A. Bobbio. La struttura delle Reti in un Mondo Interconnesso. *Mondo Digitale*, No. 4, 3-18, 2006 (*In Italian*).

## 2007

- [147] A. Bobbio, R. Terruggia. Binary decision diagrams in network reliability analysis. In: *1st IFAC Workshop on Dependable Control of Discrete Systems (DCDS'07)*, pp 57-62, Paris, June 2007
- [148] A. Bobbio, M. Gribaudo. Stochastic models and methods for the safety and reliability analysis of DES. In: *1st IFAC Workshop on Dependable Control of Discrete Systems (DCDS'07)*, pp 275-276, Paris, June 2007 (Summary of an invited talk).
- [149] L. Portinale, A. Bobbio, D. Codetta-Raiteri, S. Montani, Compiling Dynamic Fault Trees into Dynamic Bayesian Networks: the RADYBAN Tool, In: *23-th Conference Uncertainty in Artificial Intelligence, UAI-07, Bayesian Modeling Application Workshop*, Vancouver, August 2007.
- [150] A. Bobbio, R. Terruggia, A. Boellis, E. Ciancamerla, M. Minichino. A tool for network reliability analysis. In: *SAFECOMP 2007*, September 2007
- [151] M. Gribaudo, A. Bobbio. Performability analysis of a sensor network by interacting Markovian agents. In: *Proceedings 7th Int. Workshop on Performability Modelling of Computer and Communication Systems (PMCCS-7)*, Edimburgh, September 2007.

## 2008

- [152] M. Gribaudo, D. Cerotti, A. Bobbio. Analysis of On-Off policies in sensor networks using interacting Markovian agents. In: *4-th International Workshop on Sensor Networks and Systems for Pervasive Computing - PerSens 2008*, pages 300-305, Hong Kong, March 2008.
- [153] A. Bobbio, D. Codetta-Raiteri, S. Montani, L. Portinale. Reliability analysis of Systems with Dynamic Dependencies. In: *Bayesian Networks: A Practical Guide to Applications*, O. Pourret, P. Naim and B.G. Marcot Eds., pages 225-238, John Wiley & Sons, March 2008
- [154] A. Bobbio, R. Terruggia, E. Ciancamerla, M. Minichino. Evaluating network reliability versus topology by means of BDD algorithms. In: *PSAM-9*, Hong Kong, May 2008.
- [155] G. Bonanni, E. Ciancamerla, M. Minichino, R. Clemente, A. Iacomini, A. Scarlatti, E. Zendri, A. Bobbio, R. Terruggia. Availability and QoS analysis of interconnected networks. In: *5th International Service Availability Symposium, ISAS 2008 Tokyo*, Japan, May 19-21, 2008.

- [156] S. Montani, L. Portinale, A. Bobbio, D. Codetta-Raiteri. Radyban: A tool for reliability analysis of dynamic fault trees through conversion into dynamic Bayesian networks. *Reliability Engineering and System Safety*, 93:922-932, 2008
- [157] A. Bobbio. Stochastic modeling techniques for the dependability analysis of DES. In: *16-th Mediterranean Conference on Control and Automation MED-08*, 633-634 (Abstract of a Plenary Talk), June, 2008
- [158] A. Bobbio, M. Gribaudo, M. Telek. Analysis of large scale interacting systems by mean field method. In: *QEST 08*, (St Malo, France), pp. 215-224, IEEE CS, Sept. 2008
- [159] D. Cerotti, M. Gribaudo, A. Bobbio. Disaster Propagation in inhomogeneous media via Markovian agents. In: *3rd International Workshop on Critical Information Infrastructure Security CRITIS-08*, LNCS, vol 5508, Springer 2009
- [160] A. Bobbio, S. Garg, M. Gribaudo, A. Horvath, M. Sereno, M. Telek. Compositional fluid stochastic Petri net model for operational software system performance. In: *Int. Workshop on Software Aging and Rejuvenation WOSAR-08*, Seattle, Nov 2008

## 2009

- [161] A. Bobbio, R. Terruggia. Reliability and Quality of Service in weighted probabilistic networks using algebraic decision diagrams. In: *Proceedings IEEE Annual Reliability and Maintainability Symposium – RAMS 2009*, pages 19-24, Fort Worth, TX, 2009.
- [162] A. Bobbio, D. Codetta-Raiteri, S. Montani, L. Portinale. Modeling Cascading Failure Propagation through Dynamic Bayesian Networks. In: *2nd IFAC Workshop on Dependable Control of Discrete Systems (DCDS'09)*, pages 239-244, Bari, Italy, 2009
- [163] G. Merle and J.M. Roussel and J.J.Lesage and A. Bobbio. Algebraic Expression of the Structure Function of a subclass of Dynamic Fault Trees. In: *2nd IFAC Workshop on Dependable Control of Discrete Systems (DCDS'09)*, Bari, Italy, 2009
- [164] D. Cerotti, M. Gribaudo, A. Bobbio. Presenting Dynamic Markovian Agents with a Road Tunnel Application. In: *MASCOTS09, IEEE-CS*, pg 621-624, London, 2009.
- [165] D. Cerotti, M. Gribaudo, A. Bobbio. Fire prevention by means of WSN: A preliminary propagation study using Interactive Markovian Agents. In: *Proceedings 9-th International Workshop on Performability Modeling of Computer and Communication Systems (PMCCS-9)*, 2009.
- [166] D. Bruneo and M. Scarpa and A. Bobbio and D. Cerotti and M. Gribaudo. Analytical modeling of swarm intelligence in Wireless Sensor Networks, In: *Fourth International Conference on Performance Evaluation Methodologies and Tools (Valuetools 2009)*, 93:922-932, 2009
- [167] A. Bobbio, E. Ciancamerla, Di Blasi, A. Iacomini, F. Mari, I. Melatti, M. Minichino, A. Scarlatti, E. Tronci, R. Terruggia and E. Zendri. Risk analysis via heterogeneous models of SCADA interconnecting Power Grids and Telco Networks, In: *4th International Conference on Risks and Security of Internet and Systems (CRISIS09)*, 90-97, 2009

## 2010

- [168] G. Merle and J.M. Roussel and J.J.Lesage and A. Bobbio. Probabilistic Algebraic Analysis of Fault Trees With Priority Dynamic Gates and Repeated Events. *IEEE Transactions on Reliability*, vol 59:1, 250-261, 2010.

- [169] A. Bobbio, G. Bonanni, E. Ciancamerla, R. Clemente, A. Iacomini, M. Minichino, A. Scarlatti, R. Terruggia, E. Zendri. Unavailability of critical SCADA communication links interconnecting a power grid and a Telco network, *Reliability Engineering and System Safety*, 95:1345-1357, 2010.
- [170] R. Terruggia, A. Bobbio. QoS Analysis of Weighted Multi-state Probabilistic Networks via Decision Diagrams, In: *SAFECOMP 2010*, E. Schoitsch Ed., Springer Verlag - LNCS, Vol 6351, 41-54, 2010.
- [171] D. Cerotti, M. Gribaudo, A. Bobbio, C.T. Calafate and P. Manzoni. A Markovian agent model for fire Propagation in outdoor environments, In: *Computer Performance Engineering (EPEW2010)*, A. Aldini et al, Springer Verlag - LNCS, Vol 6342, 131-146, 2010.
- [172] D. Bruneo and M. Scarpa and A. Bobbio and D. Cerotti and M. Gribaudo. Adaptive Swarm Intelligence Routing Algorithms for WSN in a Changing Environment, In: *IEEE Sensors 2010 Conference*, 1813-1818, 2010.

## 2011

- [173] A. Bobbio and R. Terruggia and E. Ciancamerla and M. Minichino. Reliability Analysis of Multi-source Multi-sink Critical Interacting Systems. In: *3rd IFAC Workshop on Dependable Control of Discrete Systems (DCDS'11)*, pp 129-134, Saarbrücken, June 2011
- [174] D. Bruneo and M. Scarpa and A. Bobbio and D. Cerotti and M. Gribaudo. Traffic analysis in WSN with swarm intelligence based routing protocol, In: *INFQ 2011*, paper No. 17, 2011.
- [175] A. Bobbio, D. Bruneo, D. Cerotti and M. Gribaudo. Markovian Agents: A New Quantitative Analytical Framework for Large-Scale Distributed Interacting Systems, In: *Proc. Int. Conf. Design and Modeling in Science, Education, and Technology (DeMset '11)*, 327-332, 2011.

## 2012

- [176] R. Terruggia and A. Bobbio and A. Bonaventura and E. Ciancamerla and D. Lefevre and M. Minichino. Temporal Network Reliability in Perturbed Scenarios: Application to a SCADA System, In: *Proceedings IEEE Annual Reliability and Maintainability Symposium – RAMS 2012, pages 1-7, Reno, NV, 2012.*
- [177] D. Bruneo and M. Scarpa and A. Bobbio and D. Cerotti and M. Gribaudo. Markovian agent modeling swarm intelligence algorithms in wireless sensor networks, *Performance Evaluation*, 69, 135-149, 2012
- [178] D. Codetta-Raiteri, A. Bobbio, S. Montani, L. Portinale. A dynamic Bayesian network based framework to evaluate cascading effects in a power grid. *Engineering Applications of Artificial Intelligence*, 25, 683-697, 2012
- [179] M. Beccuti and A. Bobbio and G. Franceschinis and R. Terruggia. A new symbolic approach for network reliability analysis, In: *Proceedings IEEE International Conference on Dependable Systems and Networks, DSN2012*, 1-12, 2012.
- [180] E. Barbierato and A. Bobbio and M. Gribaudo and M. Iacono. Multiformalism to Support Software Rejuvenation Modeling, In: *IEEE 23rd International Symposium on Software Reliability Engineering Workshops (WOSAR 2012)*, 271-276, 2012.

## 2013

- [181] A. Bobbio and D. Cerotti and M. Gribaudo. Markovian Agent models for wireless sensor networks deployed in environmental protection, In: *"Proceedings 3rd International Workshop on Model Based Safety Assessment - IWMSA'2013, pages 2, Versailles, 2013.*
- [182] A. Bobbio and L. Egidi and R. Terruggia. A methodology for qualitative/quantitative analysis of weighted attack trees, In: *4th IFAC Workshop on Dependable Control of Discrete Systems (DCDS'13), pp 6, York, September 2013*
- [183] A. Bobbio and L. Egidi and R. Terruggia and E Ciancamerla and M. Minichino. Weighted attack trees for the cybersecurity analysis of SCADA systems. *3<sup>rd</sup> International Defence and Homeland Security Simulation Workshop DHSS 2013, Athens, September, 2013*
- [184] A. Bobbio, D. Codetta-Raiteri, L. Portinale, A. Guiotto, Y. Yushtein. A Unified Modelling and Operational Framework for Fault Detection, Identification, and Recovery in Autonomous Spacecrafts. In *"Theory and Application of Multi-Formalism Modeling"*, pages 239-258, IGI-Global, October 2013.

## 2014

- [185] A. Bobbio and D. Cerotti and M. Gribaudo. Markovian Agent models with applications to wireless sensor networks. Invited talk: *"International Conference on Advances in Applied Probability, Graph Theory and Fuzzy Mathematics"*, pages 2, Kolenchery, Kerala, India, 11-14-january 2014.
- [186] D. Cerotti, M. Gribaudo and A. Bobbio. Markovian agents models for wireless sensor networks deployed in environmental protection. *Reliability Engineering and System Safety*, 130: 149–158, 2014.

## 2015

- [187] D. Bruneo and M. Scarpa and A. Bobbio and D. Cerotti and M. Gribaudo. An Intelligent Swarm of Markovian Agents, In: Kacprzyk J., Pedrycz W. (eds) *Springer Handbook of Computational Intelligence*, Springer, 1345-1359, 2015
- [188] H. Sukhwani and A. Bobbio and K.S. Trivedi. Largeness Avoidance in Availability Modeling using Hierarchical and Fixed-point Iterative Techniques, *International Journal of Performability Engineering*, 11:4, 305-319, 2015

## 2016

- [189] R. B. Fricks, A. Bobbio and K. S. Trivedi, "Reliability models of chronic kidney disease," 2016 Annual Reliability and Maintainability Symposium (RAMS), Tucson, AZ, January 2016, pp. 1-6.
- [190] K. Trivedi and A. Bobbio. Reliability and Availability Modeling in Practice; Tutorial 2, In *The 46<sup>th</sup> IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)*, Toulouse (France), June, 2016.
- [191] R. Pincioli and K. Trivedi and A. Bobbio. Parametric Sensitivity and Uncertainty Propagation in Dependability Models, In *10th International Conference on Performance Evaluation Methodologies and Tools (Valuetools 2016)*, Taormina,(Italy), October 2016
- [192] A. Bobbio and D. Cerotti and M. Gribaudo and M. Iacono and D. Manini. Markovian Agent Models: A Dynamic Population of Interdependent Markovian Agents, In *Seminal Contributions to Modelling and Simulation*, K. Al-Begain and A. Bargiela (Eds.), Springer, 185-203, 2016

## 2017

- [193] Kishor S. Trivedi and Andrea Bobbio, *Reliability and Availability Engineering: Modeling, Analysis, and Applications*, Cambridge University Press, 2017, Pages 726. [www.cambridge.org/9781107099500](http://www.cambridge.org/9781107099500)
- [194] A. Bobbio, C. Bolchini, D. Cerotti, M. Gribaudo and A. Miele. Scalable analytical model of the reliability of multicore systems-on-chip by interacting Markovian agents, In *11th International Conference on Performance Evaluation Methodologies and Tools (Valuetools 2017)*, Venice, (Italy), December 2017
- [195] R. Pincioli, A. Bobbio, C. Bolchini, D. Cerotti, M. Gribaudo, A. Miele and K. Trivedi. Epistemic Uncertainty Propagation in a Weibull Environment for a Two-Core System-on-Chip, In *II International Conference on System Reliability and Safety (ICSRS2017)*, Milan, December 2017

## 2019

- [196] K. Trivedi and A. Bobbio. Reliability and Availability Analysis in Practice; Tutorial 2, In: *Proceedings of Reliability and Maintainability Symposium RAMS2019*, Orlando, 2019
- [197] D. Cerotti , A. Miele, M. Gribaudo, A. Bobbio, C. Bolchini. Scalable analytical model for reliability measures in aging VLSI by interacting Markovian agents, *Performance Evaluation*, 132, 21-37, 2019
- [198] A. Bobbio. Modeling dependencies in complex system dependability; [Abstract](#) in: *33rd International ECMS Conference on Modelling Simulation*, Keynote Speech, Caserta, 2019 ([Slides](#))

## 2020

- [199] K. Trivedi and A. Bobbio. Reliability and Availability Analysis in Practice; Tutorial 2, In: *Proceedings of Reliability and Maintainability Symposium RAMS2020*, Palm Springs, CA, 2020
- [200] Andrea Bobbio, Antonio Puliafito, Marco Scarpa and Miklós Telek. Stochastic Modeling Techniques in Software Aging and Rejuvenation Phenomena, In *Handbook of Software Aging and Rejuvenation*, T. Dohi, K. Trivedi and A. Avritzer (Eds.), World Scientific, 363-401, 2020
- [201] Salvatore Distefano, Marco Scarpa, Xiaolin Chang, Andrea Bobbio. Assessing Dependability of Web Services under Moving Target Defense Techniques, In *Proceedings of the 30th European Safety and Reliability Conference and the 15th Probabilistic Safety Assessment and Management Conference*, P. Baraldi, F. Di Maio and E. Zio (Eds.), Research Publishing, Singapore, Paper 4175, 2020

## 2021

- [202] Trivedi, Kishor, Andrea Bobbio. Reliability and Availability Analysis in Practice, In *Handbook of Advanced Performability Engineering*, K.B. Misra Ed., Springer Int Publishing, pp 501-522, 2021
- [203] D. Cerotti, A. Bobbio, D. Bruneo, S. Distefano, M. Scarpa, M. Gribaudo. Assessing self-adapting routing algorithm in an industrial IoT environment, *Proceedings of Reliability and Maintainability Symposium RAMS2021*, paper 86, Orlando, FL, 2021
- [204] Bo Liu, A. Bobbio, Jing Bai, J. Martinez, X. Chang, K. Trivedi. Transient Security and Dependability Analysis of MEC Micro Datacenter under Attack, *Proceedings of Reliability and Maintainability Symposium RAMS2021*, paper152, Orlando, FL, 2021



## 2022

- [205] A. Bobbio, L. Campanile, M. Gribaudo, M. Iacono, F. Marulli, M. Mastroianni. A cyber warfare perspective on risks related to health IoT devices and contact tracing, *Neural Computing and Applications*, Springer, Jan 20:1-15. doi: 10.1007/s00521-021-06720-1, 2022
- [206] D. Cerotti, S. Mancini, M. Gribaudo, and A. Bobbio. Analysis of an Electric Vehicle Charging System Along a Highway. In: Ábrahám, E., Paolieri, M. (eds) *Quantitative Evaluation of Systems. QEST 2022*. Lecture Notes in Computer Science, vol 13479. Springer, pp 298-316, 2022.

## 2024

- [207] K. Trivedi and A. Bobbio, "Reliability and Availability Analysis in Practice: Toward Multilevel Models for Complex Systems," in *Computer*, vol. 57, no. 4, pp. 82-92, April 2024.