

CURRICULUM VITAE

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Date of Birth: July 30, 1948
Place of Birth: Zurich, Switzerland
Marital Status: Married, no children
Citizenship: Swiss

EDUCATION:

1979 Ph.D., Technical Sciences, ETH Zurich, Switzerland
1973 M.S., Automatic Control, ETH Zurich, Switzerland
1972 B.S., Electrical Engineering, ETH Zurich, Switzerland

RESEARCH INTERESTS:

Methodologies of modeling and simulation, modeling and simulation software design, software engineering, compiler generators, artificial intelligence, object-oriented modeling, bond graphs, inductive reasoning, fuzzy logic, neural networks, numerical ordinary differential equation and differential algebraic equation solvers, knowledge-based design of high-autonomy systems, intelligent control, computer-aided control system design.

TEACHING INTERESTS:

Any from the above (courses taught include: continuous system modeling, continuous system simulation, discrete event simulation, analog control systems, digital control systems, linear system theory, numerical linear algebra, digital logic, analog circuits, signals and systems).

ACADEMIC/SCIENTIFIC POSITIONS:

- 2005 - Senior Researcher, ETH Zurich, Switzerland
2005 - Emeritus Professor, University of Arizona, Tucson, AZ
2002 - 2004 Director of Undergraduate Studies, ECE Dept., Univ. of Arizona
1997 - 2000 Group Chair of Computer Engineering Program, Univ. of Arizona
1997 - 2005 Full Professor, University of Arizona, Tucson, AZ
1984 - 1997 Associate Professor, University of Arizona, Tucson, AZ
1983 Chief Assistant, ETH Zurich, Switzerland
1977 - 1983 Lecturer in Simulation, ETH Zurich, Switzerland
1977 - 1982 Research Assistant, ETH Zurich, Switzerland
1976 - 1977 Teaching Assistant, ETH Zurich, Switzerland
1972 - 1976 Research Associate, ETH Zurich, Switzerland
1969 - 1972 Supporting Assistant, ETH Zurich, Switzerland
- 2004 (Fall) Visiting Professor, ETH Zurich, Switzerland
2001 (Fall) Visiting Professor, ETH Zurich, Switzerland (Sabbatical)
1993 (Fall) Visiting Professor, Columbia University, New York (Sabbatical)
1993 - 2001 Visiting Professor, Technical University of Catalonia, Spain
1999 (Sum.) Visiting Professor, University of Rosario, Argentina
1992 (Sum.) Visiting Professor, Air- and Space Research Center, Germany
1991 (Sum.) Visiting Professor, University of Ghent, Belgium
1987 (Sum.) Visiting Professor, ETH Zurich, Switzerland
1982 (Sept.) Visiting Professor, Delft Technical University, Netherlands

PUBLICATIONS:

Books:

1. Cellier, F.E., D. Broman, P. Fritzson, and E.A. Lee, Eds. (2011), *EOOLT 2011*, Proc. of the 4th Intl. Workshop on Equation-based Object-oriented Modeling Languages and Tools, Zurich, Switzerland, September 5, 2011, ISSN: 1650-3686, 120 p.
2. Fritzson, P., E.A. Lee, F.E. Cellier, and D. Broman, Eds. (2010), *EOOLT 2010*, Proc. of the 3rd Intl. Workshop on Equation-based Object-oriented Modeling Languages and Tools, Oslo, Norway, October 3, 2010, ISSN: 1650-3686, 120 p.
3. Cellier, F.E. and J.J. Granda, Eds. (2010), *Bond Graph Modeling and Simulation*, Proc. of the 2010 SCS Spring Simulation Multi-conference, Orlando, FL, April 11-15, 2010, The Society for Computer Simulation, Simulation Series, Vol. 42, No. 2, ISBN: 978-1-61738-209-3, 230 p.
4. Fritzson, P., F.E. Cellier, and D. Broman, Eds. (2008), *EOOLT 2008*, Proc. of the 2nd Intl. Workshop on Equation-based Object-oriented Languages and Tools, Paphos, Cyprus, July 8, 2008, ISSN: 1650-3686, 140 p.

5. Fritzson, P., F.E. Cellier, C. Nytsch-Geusen, D. Broman, and M. Cebulla, Eds. (2007), *EOOLT 2007*, Proc. of the 1st Intl. Workshop on Equation-based Object-oriented Languages and Tools, Berlin, Germany, July 30, 2007, Technische Universität Berlin, Forschungsberichte der Fakultät IV – Elektrotechnik und Informatik, Vol. 2007-11, ISSN: 1436-9915, 163 p.
6. Granda, J.J. and F.E. Cellier, Eds. (2007), *Bond Graph Modeling and Simulation*, Proc. of the 2007 SCS Western Multi-conference, San Diego, CA, January 15-17, 2007, The Society for Computer Simulation, Simulation Series, Vol. 39, No. 1, ISBN: 1-56555-310-1, 263 p.
7. Cellier, F.E. and E. Kofman (2006), *Continuous System Simulation*, Springer-Verlag, New York.
8. Granda, J.J. and F.E. Cellier, Eds. (2005), *Bond Graph Modeling and Simulation*, Proc. of the 2005 SCS Western Multi-conference, New Orleans, LA, January 23-25, 2005, The Society for Computer Simulation, Simulation Series, Vol. 37, No. 1, ISBN: 1-56555-287-3, 315 p.
9. Cellier, F.E. and J.J. Granda, Eds. (2003), *Bond Graph Modeling and Simulation*, Proc. of the 2003 SCS Western Multi-conference, Orlando, FL, January 20-22, 2003, The Society for Computer Simulation, Simulation Series, Vol. 35, No. 2, ISBN: 1-56555-257-1, 323 p.
10. Sarjoughian, H.S. and F.E. Cellier, Eds. (2001), *Discrete Event Modeling and Simulation Technologies: A Tapestry of Systems and AI-based Theories and Methodologies – A Tribute to the 60th Birthday of Bernard P. Zeigler*, Springer-Verlag, New York, ISBN: 0-387-95065-6, 397 p.
11. Sarjoughian, H.S., F.E. Cellier, M.M. Marefat, and J.W. Rozenblit, Eds. (2000), *AI, Simulation and Planning in High Autonomy Systems*, Tucson, AZ, March 6-8, 2000, The Society for Computer Simulation, ISBN: 1-56555-194-X, 372 p.
12. Granda, J.J. and F.E. Cellier, Eds. (1999), *Bond Graph Modeling and Simulation*, Proc. of the 1999 SCS Western Multi-conference, San Francisco, CA, January 18-20, 1999, The Society for Computer Simulation, Simulation Series, Vol. 31, No. 1, ISBN: 1-56555-155-9, 393 p.
13. Cellier, F.E. and J.J. Granda, Eds. (1995), *Bond Graph Modeling and Simulation*, Proc. of the 1995 SCS Western Multi-conference, Las Vegas, NV, January 15-18, 1995, The Society for Computer Simulation, Simulation Series, Vol. 27, No. 1, ISBN: 1-56555-037-4, 310 p.

14. Cellier, F.E., S.E. Mattsson, and J.O. Gray, Eds. (1994), *Computer-Aided Control System Design*, Proc. of the 1994 IEEE/IFAC Joint Conference, Tucson, AZ, March 7-9, 1994, IEEE #94TH0619-7, ISBN: 0-7803-1800-5, 609 p.
15. Granda, J.J. and F.E. Cellier, Eds. (1993), *Bond Graph Modeling and Simulation*, Proc. of the 1993 SCS Western Multi-conference, San Diego, CA, January 17-20, 1993, The Society for Computer Simulation, Simulation Series, Vol. 25, No. 2, ISBN: 1-56555-019-6, 341 p.
16. Cellier, F.E. (1991), *Continuous System Modeling*, Springer-Verlag, New York, ISBN: 0-387-97502-0, 755p.
17. Cellier, F.E., Ed. (1986), *Languages for Continuous System Simulation*, Proc. of the 1986 SCS Western Multi-conference, San Diego, CA, January 23-25, 1986, The Society for Computer Simulation, ISBN: 0-911801-08-1, 145 p.
18. Cellier, F.E., Ed. (1982), *Progress in Modeling and Simulation*, Academic Press, London, ISBN: 0-12-164780-3, 466 p.

Chapters in Refereed Books:

1. Fritzson, P., E.A. Lee, F.E. Cellier, and D. Broman (2011), "Equation-based Object-oriented Modeling Languages and Tools: Report on the Workshop EOOLT'2010 at MODELS'2010," in: *Models in Software Engineering*, (J. Dingel and A. Solberg, eds.), Springer-Verlag, pp. 140-144.
2. Kofman, E., F.E. Cellier, and G. Migoni (2010), "Continuous System Simulation and Control," *Discrete-event Modeling and Simulation: Theory and Applications*, (G.A. Wainer and P.J. Mosterman, eds.), CRC Press, Boca Raton, FL, pp. 75-107.
3. Fritzson, P., D. Broman, F.E. Cellier, and C. Nytsch-Geusen (2008), "Equation-based Object-oriented Languages and Tools: Report on the Workshop EOOLT'2007 at ECOOP'2007," *Object-oriented Technology: ECOOP'2007 Workshop Reader*, (D. Clarke and S. Ducasse, eds.), Lecture Notes in Computer Science, Vol. 4906, Springer-Verlag, Berlin, pp. 27-39.
4. Sarjoughian, H.S. and F.E. Cellier (2001), "Toward a Unified Foundation for Simulation-based Acquisition," *Discrete Event Modeling and Simulation Technologies: A Tapestry of Systems and AI-based Theories and Methodologies – A Tribute to the 60th Birthday of Bernard P. Zeigler*, (H.S. Sarjoughian and F.E. Cellier, eds.), Springer-Verlag, New York, pp. 1-14.
5. F.E. Cellier (2000), "Simulation und Vorhersage: Sind Simulationstechniker die Propheten der Neuzeit?" *Gedanken zur Zeit – Festschrift anlässlich des 60sten*

Geburtstags von Herrn Prof. Dr. Bernd Schmidt, (R. Rimane, Ed.), SCS Publishing, Erlangen, Germany, pp. 1-28.

6. Cellier, F.E., H. Elmqvist, and M. Otter (2000), "Modeling from Physical Principles," *Control System Fundamentals*, (W.S. Levine, ed.), CRC Press, Boca Raton, FL, pp. 99-108.
7. Otter, M. and F.E. Cellier (2000), "Software for Modeling and Simulating Control Systems," *Control System Fundamentals*, (W.S. Levine, ed.), CRC Press, Boca Raton, FL, pp. 419-432.
8. Cellier, F.E., H. Elmqvist, and M. Otter (1995), "Modeling from Physical Principles," *The Control Handbook*, (W.S. Levine, ed.), CRC Press, Boca Raton, FL, pp. 99-108.
9. Otter, M. and F.E. Cellier (1995), "Software for Modeling and Simulating Control Systems," *The Control Handbook*, (W.S. Levine, ed.), CRC Press, Boca Raton, FL, pp. 415-428.
10. Cellier, F.E. and C.M. Rinvall (1995), "Computer-Aided Control System Design: Techniques and Tools," *Systems Modeling and Computer Simulation*, (N. Kheir, ed.), second edition, Marcel Dekker, New York, pp. 413-453.
11. Cellier, F.E. (1993), "Integrated Continuous-System Modeling and Simulation Environments," *CAD for Control Systems*, (D. Linkens, ed.), Marcel Dekker, New York, pp. 1-29.
12. Cellier, F.E. (1992), "Ordinary Differential Equation Models: Numerical Integration of Initial Value Problems," *Concise Encyclopedia of Modeling and Simulation*, (D.P. Atherton and P. Borne, eds.), Pergamon Press, Oxford, pp. 313-317.
13. Cellier, F.E. (1992), "Simulation Modeling Formalism: Ordinary Differential Equations," *Concise Encyclopedia of Modeling and Simulation*, (D.P. Atherton and P. Borne, eds.), Pergamon Press, Oxford, pp. 420-423.
14. Cellier, F.E., L.C. Schooley, M.K. Sundareshan and B.P. Zeigler (1992), "Computer-Aided Design of Intelligent Controllers: Challenge of the Nineties," *Recent Advances in Computer Aided Control Systems Engineering* (M. Jamshidi and C.J. Herget, eds.), Elsevier Science Publishers, Amsterdam, the Netherlands, pp. 53-80.
15. Zeigler B.P., S.D. Chi, and F.E. Cellier (1991), "Model-based Architecture for High Autonomy Systems," *Engineering Systems with Intelligence – Concepts, Tools and Applications*, (S.G. Tzafestas, ed.), Kluwer Academic Publishers, Dordrecht, Netherlands, pp. 3-22.
16. Cellier, F.E. (1991), "General System Problem Solving Paradigm for Qualitative Modeling," *Qualitative Simulation, Modeling, and Analysis*, (P.A. Fishwick and P.A.

Luker, eds.), Springer-Verlag, New York, pp. 51-71.

17. Cellier, F.E. (1990), "Rechnerunterstützter Entwurf von Regelungssystemen – Verfahren und Werkzeuge," *Simulation in der Regelungstechnik*, (K.H. Fasol, ed.), Springer-Verlag, Berlin, pp. 57-73.
18. Cellier, F.E. (1987), "Ordinary Differential Equation Models: Numerical Integration of Initial Value Problems," *Encyclopedia of Control*, (M. Singh, ed., topic: Simulation, B.P. Zeigler, topic-ed.), Pergamon Press, Oxford, Vol. 5, pp. 3555-3559.
19. Cellier, F.E. (1987), "Simulation Modeling Formalism: Ordinary Differential Equations," *Encyclopedia of Control*, (M. Singh, ed., topic: Simulation, B.P. Zeigler, topic-ed.), Pergamon Press, Oxford, Vol. 6, pp. 4356-4360.
20. Cellier, F.E. and C.M. Rinvall (1987), "Computer-Aided Control System Design: Techniques and Tools," *Systems Modeling and Computer Simulation*, (N. Kheir, ed.), Marcel Dekker, New York, pp. 631-679.
21. Cellier, F.E. (1985), "Stiff Computation: Where to Go?" *Progress in Stiff Computation*, (R.C. Aiken, ed.), Oxford Academic Press, Oxford, pp. 386-392.
22. Rinvall, C.M. and F.E. Cellier (1985), "A Structural Approach to CACSD," *Computer-Aided Control Systems Engineering*, (M. Jamshidi and C.J. Herget, eds.), North-Holland Publishing, Amsterdam, pp. 149-158.
23. Cellier, F.E. (1984), "How to Enhance the Robustness of Simulation Software," *Simulation and Model-Based Methodologies: An Integrative View*, (T.I. Ören, M.S. Elzas, and B.P. Zeigler, eds.), Springer-Verlag, New York, pp. 519-536.
24. Cellier, F.E. and A. Fischlin (1982), "Computer-Assisted Modeling of Ill-Defined Systems," *Progress in Cybernetics and Systems Research – Vol. 8: General Systems Methodology, Mathematical Systems Theory, Fuzzy Sets*, (R. Trappl, G.J. Klir, and F.R. Pichler, eds.), Hemisphere Publishing, McGraw-Hill, Washington, pp. 417-429.
25. Cellier, F.E. (1979), "Combined Continuous Discrete System Simulation Languages - Usefulness, Experiences, and Future Development," *Methodology in Systems Modeling and Simulation*, (B.P. Zeigler, M.S. Elzas, G.J. Klir, and T.I. Oren, eds.), North-Holland Publishing, Amsterdam, pp. 201-220.

Refereed Journals:

1. Cellier, F.E. (2011), "The Future of Energy and the Interconnected Challenges of the 21st Century," *Cassandra's Legacy*, October 30, 2011, <http://cassandralegacy.blogspot.com/2011/10/future-of-energy-and-interconnected.html>.

2. Escobet, A., À. Nebot, and F.E. Cellier (2011), "Fault Diagnosis System Based on Fuzzy Logic: Application to a Valve Actuator Benchmark," *J. Intelligent Fuzzy Systems*, **22**(4), pp. 155-171.
3. Migoni, G., E. Kofman, and F.E. Cellier (2011), "Quantization-based New Integration Methods for Stiff ODEs," *Simulation*, <http://dx.doi.org/10.1177/0037549711403645>.
4. Sanz, V., A. Urquía, F.E. Cellier, and S. Dormido (2011), "Modeling of Hybrid Control Systems Using the DEVSLib Modelica Library," *Control Engineering Practice*, <http://dx.doi.org/10.1016/j.conengprac.2010.11.014>.
5. López, J., F.E. Cellier, and G. Cembrano (2011), "Estimating the Horizon of Predictability in Time Series Predictions Using Inductive Modeling Tools," *Intl. J. General Systems*, **40**(3), pp. 263-282.
6. Castro, R., E. Kofman, and F.E. Cellier (2011), "Quantization-based Integration Methods for Delay-differential Equations," *Simulation Modeling Practice and Theory*, **19**(1), pp. 314-336.
7. Cellier, F.E., J. López, A. Nebot and G. Cembrano (2010), "Confidence Measures for Predictions in Fuzzy Inductive Reasoning," *Intl. J. General Systems*, **39**(8), pp. 839-853.
8. Sanz, V., A. Urquía, F.E. Cellier, and S. Dormido (2010), "System Modeling Using the Parallel DEVS Formalism and the Modelica Language," *Simulation Modeling Practice and Theory*, **18**(7), pp. 998-1018.
9. Nebot, A., F.E. Cellier, R. Carvajal, and F. Mugica (2009), "Fuzzy Inductive Reasoning for Variable Selection Analysis and Modelling of Biological Systems," *Intl. J. General Systems*, **38**(8), pp. 793-811.
10. Cellier, F.E. (2009), "Is the 2000 Watt Society Sustainable in Switzerland?" *The Oil Drum*, April 20, 2009, <http://www.theoil Drum.com/node/5316/>.
11. Cellier, F.E. (2008), "Energy Strategy for ETH Zurich: A Critical Review," *The Oil Drum*, April 23, 2008, <http://www.theoil Drum.com/node/3871/>.
12. Escobet, A., A. Nebot, and F.E. Cellier (2008), "Visual-FIR: A Tool for Model Identification and Prediction of Dynamical Complex Systems," *Simulation Modeling Practice and Theory*, **16**(1), pp. 76-92.
13. Zimmer, D. and F.E. Cellier (2007), "The Modelica Multi-bond Graph Library," *Simulation News Europe*, **17**(3/4), pp. 5-13.
14. Migoni, G., E. Kofman, and F.E. Cellier (2007), "Integración por Cuantificación de Sistemas Stiff," *Revista Iberoamericana de Automática e Informática Industrial*, **4**(3), pp. 97-106.

15. Cellier, F.E. (2007), "Ecological footprint, energy consumption, and the looming collapse," *The Oil Drum*, May 16, 2007, <http://www.theoil Drum.com/node/2534/>.
16. Escobet, A., A. Nebot, and F.E. Cellier (2007), "Fault detection and identification using FIRFMS," *Intl. J. General Systems*, **36**(3), pp. 347-374.
17. Beltrame, T. and F.E. Cellier (2006), "The Quantised State System Simulation in Dymola/Modelica Using the DEVS Formalism," *Simulation News Europe*, **16**(3), pp. 3-12.
18. Cellier, F.E., A. Nebot, and J. Greifeneder (2006), "Bond graph modeling of heat and humidity budgets of Biosphere 2," *Environmental Modeling & Software*, **21**(11), pp. 1598-1606.
19. Mirats, J.M., F.E. Cellier, and R.M. Huber (2004), "Reconstruction analysis based algorithm to decompose a complex system into subsystems," *Intl. J. General Systems*, **33**(5), pp. 527-551.
20. Nebot, A., F. Mugica, F.E. Cellier, and M. Vallverdú (2003), "Modeling and simulation of the central nervous system control with generic fuzzy models," *Simulation*, **79**(5), pp. 648-669.
21. Mirats, J.M., F.E. Cellier, R.M. Huber, and S.J. Qin (2002), "On the selection of variables for qualitative modelling of dynamical systems," *Intl. J. General Systems*, **31**(5), pp. 435-467.
22. Mirats, J.M., F.E. Cellier, and R.M. Huber (2002), "Variable selection procedures and efficient suboptimal mask search algorithms in fuzzy inductive reasoning," *Intl. J. General Systems*, **31**(5), pp. 469-498.
23. Nebot, A., F.E. Cellier, and F. Mugica (1999), "Simulation of Heat and Humidity Budget of Biosphere 2 without its Air Conditioning," *Ecological Engineering*, **13**, pp. 333-356.
24. Cellier, F.E. and A. de Albornoz (1998), "The Problem of Distortions in Reconstruction Analysis," *Systems Analysis, Modeling, Simulation*, **33**(1), pp. 1-19.
25. Nebot, A., F.E. Cellier, and M. Vallverdú (1998), "Mixed Quantitative/Qualitative Modeling and Simulation of the Cardiovascular System," *Computer Methods and Programs in Biomedicine*, **55**(2), pp. 127-155.
26. Uhrmacher, A.M., F.E. Cellier, and R.J. Frye (1997), "Applying Fuzzy-Based Inductive Reasoning to Analyze Qualitatively the Dynamic Behavior of an Ecological System," *International Journal on Applied Artificial Intelligence in Natural Resource Management*, **11**(2), pp. 1-10.

27. Cellier, F.E., A. Nebot, F. Mugica, and A. de Albornoz (1996), "Combined Qualitative/Quantitative Simulation Models of Continuous-Time Processes Using Fuzzy Inductive Reasoning Techniques," *Intl. J. General Systems*, **24**(1-2), pp. 95-116.
28. Borutzky, W. and F.E. Cellier (1996), "Tearing Algebraic Loops in Bond Graphs," *Trans. of SCS*, **13**(2), pp. 102-115.
29. Nebot, A., F.E. Cellier, and D.A. Linkens (1996), "Synthesis of an Anesthetic Agent Administration System Using Fuzzy Inductive Reasoning," *Artificial Intelligence in Medicine*, **8**(3), pp. 147-166.
30. Otter, M., H. Elmqvist, and F.E. Cellier (1996), "Modeling of Multi-body Systems with the Object-Oriented Modeling Language Dymola," *J. Nonlinear Dynamics*, **9**(1), pp. 91-112.
31. Cellier, F.E. (1995), "Bond Graphs: The Right Choice for Educating Students in Modeling Continuous-Time Physical Systems," *Simulation*, **64**(3), pp. 154-159.
32. Cellier, F.E. and J. López (1995), "Causal Inductive Reasoning: A New Paradigm for Data-Driven Qualitative Simulation of Continuous-Time Dynamical Systems," *Systems Analysis Modeling Simulation*, **18**(1), pp. 27-43.
33. Cellier, F.E. and F. Mugica (1995), "Inductive Reasoning Supports the Design of Fuzzy Controllers," *J. Intelligent & Fuzzy Systems*, **3**(1), pp. 71-85.
34. Cellier, F.E. and Y.D. Pan (1995), "Fuzzy Adaptive Recurrent Counter-propagation Neural Networks: A Tool for Efficient Implementation of Qualitative Models of Dynamic Processes," *J. Systems Engineering*, **5**(4), pp. 207-222.
35. James, J., G. Pang, F.E. Cellier, J. Gray, and S.E. Mattsson (1995), "The State of Computer-aided Control System Design (CACSD)," *IEEE Control Systems*, **15**(2), pp. 6-7 and pp. 98-99.
36. Cellier, F.E. (1994), "Teaching Physical System Modeling at the University of Arizona," *Simulation News Europe*, **10**, pp. p5-p7.
37. de Albornoz, A. and F.E. Cellier (1994), "Building Intelligence into an Autopilot – Using Qualitative Simulation to Support Global Decision Making," *Simulation*, **62**(6), pp. 354-363.
38. Cellier, F.E. and H. Elmqvist (1993), "Automated Formula Manipulation Supports Object-oriented Continuous System Modeling," *IEEE Control Systems*, **13**(2), pp. 28-38.
39. Schooley, L.C., B.P. Zeigler, F.E. Cellier, and F.Y. Wang (1993), "High-Autonomy Control of Space Resource Processing Plants," *IEEE Control Systems*, **13**(3), pp. 29-39.

40. Cellier, F.E. (1992), "Hierarchical Non-Linear Bond Graphs: A Unified Methodology for Modeling Complex Physical Systems," *Simulation*, **58**(4), pp. 230-248.
41. Kosier, S.L., R.D. Schrimpf, K.F. Galloway, and F.E. Cellier (1991), "Predicting Worst-Case Charge Buildup in Power-Device Field Oxides," *IEEE Trans. Nuclear Science*, **38**(6), pp. 1383-1390.
42. Wang, Q., and F.E. Cellier (1991), "Time Windows: An Approach to Automated Abstraction of Continuous-Time Models into Discrete-Event Models," *Intl. J. General Systems*, **19**(3), pp. 241-262.
43. Kosier, S.L., R.D. Schrimpf, F.E. Cellier, and K.F. Galloway (1990), "The Effects of Ionizing Radiation on the Breakdown Voltage of P-Channel Power MOSFETs," *IEEE Trans. Nuclear Science*, **37**(6), pp. 2076-2082.
44. Cellier, F.E. and C.M. Rinvall (1989), "Matrix Environments for Continuous System Modeling and Simulation," *Simulation*, **52**(4), pp. 141-149.
45. Davis, K.R., R.D. Schrimpf, F.E. Cellier, K.F. Galloway, D.I. Burton, and C.F. Wheatley, Jr. (1989), "The Effects of Ionizing Radiation on Power-MOSFET Termination Structures," *IEEE Trans. Nuclear Science*, **36**(6), pp. 2104-2109.
46. Vesanterä, P.J. and F.E. Cellier (1989), "Building Intelligence into an Autopilot Using Qualitative Simulation to Support Global Decision Making," *Simulation*, **52**(3), pp. 111-121.
47. Wu, Q.M., C.M. Yen, and F.E. Cellier (1989), "Analysis of Breakdown Phenomena in High-Voltage Bipolar Devices," *Transactions of SCS*, **6**(1), pp. 43-60.
48. Zeigler, B.P., F.E. Cellier, and J.W. Rozenblit (1988), "Design of a Simulation Environment for Laboratory Management by Robot Organizations," *J. of Intelligent and Robotic Systems*, **1**, pp. 299-309.
49. Cellier, F.E. and D.W. Yandell (1987), "SAPS-II: A New Implementation of the Systems Approach Problem Solver," *Intl. J. General Systems*, **13**(4), pp. 307-322.
50. Cellier, F.E. (1987), "Prisoner's Dilemma Revisited – A New Strategy Based on the General System Problem Solving Framework," *Intl. J. General Systems*, **13**(4), pp. 323-332.
51. Cellier, F.E. (1987), "Qualitative Simulation of Technical Systems by Means of the General System Problem Solving Framework," *Intl. J. General Systems*, **13**(4), pp. 333-344.
52. Rinvall, C.M. and F.E. Cellier (1986), "Evolution and Perspectives of Simulation Languages Following the CSSL-Standard," *Modeling, Identification, and Control*, **6**, pp.

181-199.

53. Wu, Q.M. and F.E. Cellier (1986), "Simulation of High-Voltage Bipolar Devices in the Neighborhood of Breakdown," *Mathematics and Computers in Simulation*, **28**, pp. 271-284.
54. Cellier, F.E. (1984), "How to Enhance the Robustness of Simulation Software," *Systems Analysis, Modeling and Simulation*," **1**(1), pp. 55-61.
55. Cellier, F.E. (1984), "Simulation Software: Today and Tomorrow," *SGA Bulletin*, **1**, pp. 7-22.
56. Mansour, M.A., W. Schaufelberger, F.E. Cellier, G. Maier, and C.M. Rinvall (1984), "The Use of Computers in the Education of Control Engineers at ETH Zürich," *European J. Engineering Education*, **9**, pp. 135-151.
57. Cellier, F.E. (1983), "New Problems in Software Complexity," *Simulation*, **41**(3), pp. 118-119.
58. Cellier, F.E. and A.A.B. Pritsker (1980), "Teaching Continuous Simulation Using GASP," *Simulation*, **34**(4), pp. 137-139.
59. Bongulielmi, A.P. and F.E. Cellier (1979), "On the Usefulness of Deterministic Grammars for Simulation Languages," *Simuletter*, **15**(1), pp. 14-36.

Keynote Presentations, Plenary Presentations, Invited Presentations:

1. Cellier, F.E. (2011), "Simulation kontinuierlicher Systeme unter Verwendung diskreter ereignisorientierter Algorithmen: ein Paradigmenwandel," *Proc. ASIM 2011, 21st Symposium Simulationstechnik*, Winterthur, Switzerland, September 7-9, 2011, pp. 15-18.
2. Cellier, F.E. (2011), "Objektorientierte Modellierung im Dienste der Medizin," *Modellbildung und Simulation: Herausforderung und Gewinn*, Zurich, Switzerland, February 2, 2011, no publication.
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Hierarchy for the Management of Simulation Models,” *Proc. Winter Simulation Conference*, New Orleans, LA, pp. 55-64.

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78. Kosier, S.L., R.D. Schrimpf, F.E. Cellier, and K.F. Galloway (1990), “The Effects of Ionizing Radiation on the Breakdown Voltage of P-Channel Power MOSFETs,” *Proc. IEEE Nuclear and Space Radiation Effects Conference*, Reno, NV.
79. Kosier, S.L., D. Zupac, R.D. Schrimpf, F.E. Cellier, K.F. Galloway, M.N. Darwish, C.A. Goodwin, and M.C. Dolly (1990), “Optimization of a Two-level Field-plate Termination Structure for Integrated-power Applications in Ionizing Radiation Environments,” *Proc. GOMAC'90, Government Microcircuit Applications Conference*, Las Vegas, NV.
80. Marner, W.J., J.W. Suitor, L.C. Schooley, and F.E. Cellier (1990), “Automation and Control of Off-Planet Oxygen Production Processes,” *Proc. Space'90, Engineering, Construction, and Operation in Space*, New York, Vol. 1, pp. 226-235.
81. Sarjoughian, H.S., F.E. Cellier, and B.P. Zeigler (1990), “Distributed Intelligent Agents and Hierarchical Diagnostic Units for Semi-Autonomous Tele-operation of a Fluid Handling Laboratory,” *Proc. Phoenix Conf. Computer and Communication*, Scottsdale, AZ, pp. 795-802.
82. Wang, Q., and F.E. Cellier (1990), “Time Windows: An Approach to Automated Abstraction of Continuous-time Models into Discrete-event Models,” *Proc. IEEE Conf. AI, Simulation and Planning in High Autonomy Systems*, Tucson, AZ, pp. 204-211.
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84. Schooley, L.C. and F.E. Cellier (1989), “Telescience: Remote Interaction with Scientific Experiments,” *Proc. TRI-89, Canadian Information Processing Society Conference on Telepresence and Remote Interaction*, Edmonton, Alberta, Canada.
85. Schooley, L.C. and F.E. Cellier (1989), “Automation and Control Philosophy,” *Proc. AESOP-89, Workshop on Automation of Extraterrestrial Systems for Oxygen Production*, La Jolla, CA, pp. 7-17.
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Process Plants,” *Proc. AIS-89, SERC Space Mining and Manufacturing Symposium*, Tucson, AZ, pp. IV:7-20.

87. Cellier, F.E. (1988), “Qualitative Simulation of Biomedical Processes: An Aid in Decision Making,” *Proc. World Congress on Medical Physics and Biomedical Engineering*, San Antonio, TX, p. 228.
88. Schooley, L.C., F.E. Cellier, and D.G. Schultz (1988), Remote Tele-operation of an Astro-metrical Telescope Facility and a Fluid Handling Laboratory for Space Station, *Proc. TTPP-II, Tele-science Test-bed Pilot Program Conf.*, Boulder, CO.
89. Cellier, F.E. (1987), “Computer-aided Control System Design Software: Standardization vs. Diversification,” *Proc. 10th IFAC World Congress on Automatic Control*, Munich, Germany, Vol. 11, p. 54.
90. Cellier, F.E. and C.M. Rimvall (1987), “Computer-Aided Control System Design: Techniques and Tools,” *Proc. 4th Intl. Symposium Modeling and Simulation Methodology*, Tucson, AZ.
91. Wu, Q.M., and F.E. Cellier (1987), “A Device Simulation Tool for High-voltage Bipolar Devices,” *Proc. IEEE Symposium Circuits and Systems*, Philadelphia, PA, Vol. 2, pp. 612-616.
92. Cellier, F.E. (1986), “Combined Continuous/Discrete Simulation - Applications, Techniques and Tools,” *Proc. Winter Simulation Conference*, Washington, DC, pp. 24-33.
93. Cellier, F.E. (1986), “Enhanced Run-time Experiments for Continuous System Simulation Languages,” *Proc. SCS Conference on Languages for Continuous System Simulation*, San Diego, CA, pp. 78-83.
94. Rimvall, C.M., F. Schmid, and F.E. Cellier (1986), “The Different Modeling Capabilities of IMPACT,” *Proc. IEEE Symposium Computer-Aided Control System Design*, Arlington, VA.
95. Cellier, F.E. and C.M. Rimvall (1985), “Distributed Modeling and Data Base Management in Simulation,” *Proc. SCS Multi-conference on Distributed Simulation*, San Diego, CA, pp. 21-24.
96. Rimvall, C.M. and F.E. Cellier (1985), “The Matrix Environment as Enhancement to Modeling and Simulation,” *Proc. 11th IMACS World Congress*, Oslo, Norway.
97. Rimvall, C.M. and F.E. Cellier (1984), “IMPACT: Interactive Mathematical Program for Automatic Control Theory,” *Proc. 6th Intl. Conf. Analysis and Optimization of Systems*, Nice, France, pp. 578-597.

98. Rimvall, C.M. and F.E. Cellier (1984), "MIDGET: Ein Flexibles Simulationstechnisches Entwicklungssystem," *Proc. ASIM'84, 2. Symposium Simulationstechnik*, Vienna, Austria, pp. 470-474.
99. Cellier, F.E. (1982), "Stiff Computation: Where to Go?" *Proc. Intl. Conf. Stiff Computation*, Park City, Utah, pp. 386-392.
100. Rimvall, C.M. and F.E. Cellier (1982), "GASP-VI: Ein Simulationspaket für prozessorientierte gemischt kontinuierliche und diskrete Simulation," *Proc. ASIM'82, 1. Symposium Simulationstechnik*, Erlangen, Germany, pp. 155-165.
101. Graber, A. and F.E. Cellier (1982), "Eignung der Simulationssprache SLAM-II zur Modellierung und Simulation großer Transportsysteme," *Proc. ASIM'82, 1. Symposium Simulationstechnik*, Erlangen, Germany, pp. 441-451.
102. Crosbie, R.E. and F.E. Cellier (1982), "Progress in Simulation Language Standards," *Proc. 10th IMACS World Congress on Simulation and Scientific Computation*, Montreal, Canada, pp. 411-412.
103. Rimvall, C.M. and F.E. Cellier (1982), "The GASP-VI Simulation Package for Process-oriented Combined Continuous and Discrete System Simulation," *Proc. 10th IMACS World Congress on Simulation and Scientific Computation*, Montreal, Canada, pp. 413-416.
104. Graber, A. and F.E. Cellier (1982), "On the Usefulness of SLAM-II for the Modeling and Simulation of Large Transport Systems," *Proc. 10th IMACS World Congress on Simulation and Scientific Computation*, Montreal, Canada, pp. 417-420.
105. Cellier, F.E. and J. Vogel (1981), "Teaching the Art of Modeling and Simulation at a Technical University," *Proc. WCCE'81, IFIP World Conf. on Computer Education*, Lausanne, Switzerland, Vol. 2, pp. 745-752.
106. Cellier, F.E. and A.P. Bongulielmi (1979), "The COSY Simulation Language," *Proc. 9th IMACS Congress on Simulation of Systems*, Sorrento, Italy, pp. 271-281.
107. Cellier, F.E. and P.J. Moebius (1979), "Towards Robust General Purpose Simulation Software," *Proc. ACM/SIGNUM Symposium on Numerical Ordinary Differential Equations*, Urbana-Champaign, IL.
108. Agathoklis, P., F.E. Cellier, M. Djordjevic, P.O. Grepper, and F.J. Kraus (1979), "Educational Aspects of Using Computer-Aided Design in Automatic Control," *Proc. IFAC Symposium Computer-Aided Design in Control Systems*, Zurich, Switzerland, pp. 441-446.
109. Cellier, F.E. (1977), "On the Solution of Parabolic and Hyperbolic PDE's by the Method-of-Lines Approach," *Proc. Simulation'77*, Montreux, Switzerland, pp. 144-148.

110. Cellier, F.E., P.G. Grepper, D.F. Rufer, and J. Tödtli (1977), "Educational Aspects of Development and Application of a Subprogram-Package for Control," *Proc. IFAC Symposium Trends in Automatic Control Education*, Barcelona, Spain, pp. 151-159.
111. Cellier, F.E. and A.E. Blitz (1976), "GASP-V: A Universal Simulation Package," *Proc. 8th AICA Congress on Simulation of Systems*, Delft, The Netherlands, pp. 391-402.
112. Cellier, F.E. (1976), "Macro-Handler for Simulation Packages Using MLI," *Proc. 8th AICA Congress on Simulation of Systems*, Delft, The Netherlands, pp. 515-521.
113. Cellier, F.E. and D.F. Rufer (1975), "Algorithm Suited for the Solution of Initial Value Problems in Engineering Applications," *Proc. Simulation'75*, Zurich, Switzerland, pp. 160-165.
114. Cellier, F.E. and B.A. Ferroni (1974), "Modular Digital Simulation of Electro/Hydraulic Drives Using CSMP," *Proc. 1974 Summer Computer Simulation Conf., Vol. 1*, Houston, TX, pp. 510-514.

Summer Schools:

1. Cellier, F.E. (2008), "Modelado matemático de sistemas físicos," Universidad Nacional de Rosario, Argentina, February 4-15, 2008.
2. Cellier, F.E. (2007), "Simulación de sistemas continuos y a tramos," Universidad de Valladolid, Spain, June 25-28, 2007.
3. Cellier, F.E. (2007), "Modelado matemático de sistemas físicos," Universidad Politécnica de Madrid, Spain, March 11-14, 2007.
4. Cellier, F.E. (2006), "Simulación de modelos híbridos," Universidad Nacional de Educación a Distancia, Madrid, Spain, September 11-15, 2006.
5. Cellier, F.E. (2001), "Modelado orientado a objetos de sistemas físicos," IFAC, La Manga del Mar Menor, Spain, June 11-15, 2001.
6. Cellier, F.E. (1996), "Metodología para el Desarrollo de Modelos Dinámicos Complejos," Universidad Nacional de Educación a Distancia, Ávila, Spain, July 17, 1996.
7. Cellier, F.E. (1996), "Sistemas de Gran Tamaño: Desarrollo, Depuración y Mantenimiento," Universidad Nacional de Educación a Distancia, Ávila, Spain, July 18, 1996.

8. Cellier, F.E. (1993), “Una Metodología Unificada para el Modelado de Sistemas Físicos: Gráficos de Ligaduras no Lineales y Jerárquicos,” Universidad Nacional de Educación a Distancia, Ávila, Spain, July 7, 1993.
9. Cellier, F.E. (1993), “Modelado y Simulación de Sistemas Continuos a Tramos,” Universidad Nacional de Educación a Distancia, Ávila, Spain, July 9, 1993.

PHD DISSERTATIONS:

Dissertation Advisor or Co-advisor:

1. Soto, M. (2010), *Building an Artificial Cerebellum Using a System of Distributed Q-Learning Agents*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
2. Zimmer, D. (2010), *Equation-based Modeling of Variable Structure Systems*, Dept. of Computer Science, ETH Zurich, Switzerland.
3. McBride, R.T. (2005), *System Analysis Through Bond Graph Modeling*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
4. Mirats, J. (2001), *Qualitative Modeling of Complex Systems by Means of Fuzzy Inductive Reasoning: Variable Selection and Search Space Reduction*, Tecnologies Avançades de la Producció, Universitat Politècnica de Catalunya, Barcelona, Spain.
5. Hild, D. (2000), *Discrete Event System Specification (DEVS) Distributed Object Computing (DOC) Modeling and Simulation*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
6. López, J. (1999), *Time Series Prediction Using Inductive Reasoning Techniques*, Organització i Control de Sistemes Industrials, Universitat Politècnica de Catalunya, Barcelona, Spain.
7. de Albornoz, A. (1996), *Inductive Reasoning and Reconstruction Analysis: Two Complementary Tools for Qualitative Fault Monitoring of Large-Scale Systems*, Llenguatges i Sistemes Informàtics, Universitat Politècnica de Catalunya, Barcelona, Spain.
8. Sarjoughian, H.S. (1995), *Inductive Modeling of Discrete-Event Systems: A TMS-Based Non-Monotonic Reasoning Approach*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
9. Mugica, F. (1995), *Diseño Sistemático de Controladores Difusos Usando Razonamiento Inductivo*, Llenguatges i Sistemes Informàtics, Universitat Politècnica de Catalunya,

Barcelona, Spain.

10. Pan, Y.D. (1994), *Fuzzy Adaptive Recurrent Counter-propagation Neural Networks: A Tool for Efficient Implementation of Qualitative Models of Dynamic Processes*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
11. Roddier, N. (1994), *Global Optimization via Neural Networks and D.C. Programming*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
12. Nebot, A. (1994), *Qualitative Modeling and Simulation of Biomedical Systems Using Fuzzy Inductive Reasoning*, Llenguatges i Sistemes Informàtics, Universitat Politècnica de Catalunya, Barcelona, Spain.
13. Chi, S.D. (1991), *Modeling and Simulation for High Autonomy Systems*, Dept. of Electrical & Computer Engineering, University of Arizona, Tucson, AZ.
14. Rimvall, C.M. (1986), *Man-Machine Interfaces and Implementational Issues in Computer-Aided Control System Design*, Swiss Federal Institute of Technology, ETH Zurich, Switzerland.

External Dissertation Committees:

1. Bruun, K. (2009), *Bond Graph Modelling of Fuel Cells for marine Power Plants*, Norwegian Institute of Technology, Trondheim, Norway.
2. Schweiger, C. (2008), *Objektorientierte Modellierung und Echtzeitsimulation von Kraftfahrzeug-Antriebssträngen*, Universität der Bundeswehr, München, Germany.
3. Richard, P.-Y. (2008), *Approches fondées sur des modèles énergétiques pour l'analyse formelle et la commande des systèmes non linéaires hybrides (Habilitation)*, Université de Rennes I, Rennes, France.
4. Martín, C. (2007), *Modelado Orientado a Objetos de Laboratorios Virtuales para la Educación en Control Automático*, Universidad Nacional de Educación a Distancia, Madrid, Spain.
5. Hinojosa, V. H. (2007), *Pronóstico de Demanda de Corto Plazo en Sistemas de Suministro de Energía Eléctrica Utilizando Inteligencia Artificial*, Universidad Nacional de San Juan, San Juan, Argentina.
6. Acosta, J. (2006), *Aprendizaje de Particiones Difusas para Razonamiento Inductivo*, Universitat Politècnica de Catalunya, Barcelona, Spain.
7. Yebra, L. (2006), *Modelado Orientado a Objetos de Colectores Cilindro-Parabólicos con Modelica*, Universidad Nacional de Educación a Distancia, Madrid, Spain.

8. Aguiló, I. (2001), *Contribució a l'Estudi del Coneixement Qualitatiu d'una Base de Regles*, Universitat de les Illes Balears, Las Palmas, Spain.
9. Diaz, A. (2000), *A Composable Simulation Environment to Support the Design of Mechatronic Systems*, Carnegie-Mellon University, Pittsburgh, PA.
10. van Welden, D. (1999), *Induction of Predictive Models for Dynamical Systems via Data Mining*, Rijksuniversiteit Gent, Belgium.
11. Hüllermeier, E. (1996), *Reasoning About Systems Based on Incomplete and Uncertain Models*, Universität Paderborn, Germany.
12. Reger, K. (1996), *Konzeption und Realisierung der Konfigurierbarkeit universeller Simulationssysteme*, Universität Passau, Germany.
13. Sørli, J.A. (1996), *On Grey-box Model Definition and Symbolic Derivation of Extended Kalman Filters*, Kungliga Tekniska Högskolan, Stockholm, Sweden.
14. Suda, M. (1995), *Computersimulation und graphische Darstellung physikalischer Vorgänge: Klassische und quantenmechanische Vorgänge (Habilitation)*, Technische Universität Wien, Austria.
15. Hamaïdi, L. (1995), *Application de la simulation hybride à la commande de procédés batch*, Université Pierre et Marie Curie Paris 6, France.
16. Edibe, B. (1995), *Modélisation et simulation des systèmes dynamiques par les bond graphs : application aux systèmes mécaniques poly-articulés*, Université de Rennes 1, France.
17. Kettenis, D.L. (1994), *Issues of Parallelization in Implementation of the Combined Simulation Language COSMOS*, Technische Universiteit Delft, The Netherlands.
18. Bujakiewicz, P. (1994), *Maximum Weighted Matching for High Index Differential Algebraic Equations*, Technische Universiteit Delft, The Netherlands.
19. Uhrmacher, A. (1992), *EMSY – Ein Modellierungskonzept für ökologische und biologische Systeme unter besonderer Berücksichtigung ihrer dynamischen Veränderung*, Universität Koblenz-Landau, Germany.

GRANTS:

1. Cellier, F.E., J. Buhmann, W. Hammer, and J. Allmeling (2011), *Real-time Simulation and Control of Physical Systems Based on State Quantization*, CTI Project, Swiss National Science Foundation, CHF 255.000, 3 years.

2. Cellier, F.E. (2009), *OpenProd: Open Model-driven Whole-product Development and Simulation Environment*, ITEA-2 Project, European Union, CHF 210.000, 3 years.
3. Cellier, F.E. and W. Gander (2007), *Development of a General Modeling Methodology for Variable Structure Systems*, Swiss National Science Foundation, CHF 89.075, 2 years.
4. Gander, W., F.E. Cellier, and J. Waldvogel (2005), *New Methods for Quadrature*, Scopes, Swiss National Science Foundation, CHF 53.620, 3 years.
5. Cellier, F.E. (2003), *Quality Metric for Controller Design*, fixed-price contract, Raytheon, \$24.000, 1 year.
6. Cellier, F.E. (2001), *On the Use of Virtual Instruments in the Animation of Simulation Results*, consulting contract, MathWorks, \$10.500, 6 months.
7. Cellier, F.E. (2000), *Smart Product Modeling for Physical System Design*, fixed-price contract, Raytheon, \$25.000, 1 year.
8. Cellier, F.E. (1999), *Modeling and Simulation Methodologies*, consulting contract, Programa de Reforma de la Educación Superior, Argentina, \$6.000, 6 weeks.
9. Cellier, F.E. (1997), *Control Cognitivo de Sistemas de Ingeniería a Gran Tamaño*, research contract, Ministerio de Educación y Cultura, Spain, \$8.500, 4 months.
10. Wilburn, B., L. Taylor, J. de France, E. Zajac, F.E. Cellier, and L.C. Schooley (1997), *Predicting Future Technological Developments in Telecommunication*, research contract, Dept. of Defense, Maryland Procurement Office, \$80.000, 1.5 years.
11. Tharp, H.S., F.E. Cellier, B. Moore, and T. Valente (1996), *Gyroscopic Camera Control for Shooting Movies from a Helicopter*, fixed-price contract, Flying Pictures, \$120.000, 6 months.
12. Wilburn, B., L. Taylor, J. de France, E. Zajac, F.E. Cellier, and L.C. Schooley (1995), *Predicting Future Technological Developments in Telecommunication*, research contract, Dept. of Defense, Maryland Procurement Office, \$56.500, 1.5 years.
13. Cellier, F.E. (1995), *Fusing Symbolic and Numerical Algorithms for Intelligent Control of Dynamic Processes – A Simulation Approach*, research contract, Ministerio de Educación y Cultura, Spain, \$11.000, 4 months.
14. Cellier, F.E. (1993), *Fuzzy Inductive Reasoning*, research contract, Generalitat de Catalunya, Spain, \$20.000, 4 months.
15. Schooley, L.C., F.E. Cellier, B.P. Zeigler, and F.Y. Wang (1992), *High Autonomy*

- Control of a Martian Oxygen Extraction Plant*, research contract, NASA, \$210.000, 2 years.
16. Schooley, L.C., F.E. Cellier, and B.P. Zeigler (1991), *Automation and Control of an Oxygen Extraction Plant*, research contract, NASA, \$120.000, 1.5 years.
 17. Schooley, L.C. and F.E. Cellier (1990), *Simulation of an Oxygen Production Plant*, research contract, NASA, \$61.500, 1 year.
 18. Cellier, F.E. (1989), *Simulation of Marginally Stable Circuits Using BBSPICE*, research contract, Burr Brown, \$20.000, 1 year.
 19. Cellier, F.E. (1989), *Curvature Sensing and Adaptive Control of an Active Telescope Mirror*, research contract, Kaman Aerospace, \$10.500, 6 months.
 20. Galloway K.F. and F.E. Cellier (1989), *Simulation of Total Dose Radiation Effects for Power-Integrated-Circuit High Voltage Power Device Breakdown*, research contract, AT&T, \$122.000, 3 years.
 21. Cellier, F.E. (1988), *Curvature Sensing*, research contract, Kaman Aerospace, \$17.000, 1 year.
 22. Sundareshan, M.K., F.E. Cellier, and T.L. Williams (1988), *Design of an Undergraduate Control Laboratory*, teaching contract, Hughes, \$75.000, 3 years.
 23. Zeigler, B.P., J.W. Rozenblit, and F.E. Cellier (1988), *Design of a Simulation Environment for Laboratory Management by Robot Organizations*, NASA, \$394.000, 3 years.
 24. Galloway, K.F., F.E. Cellier, R.D. Schrimpf, and J. Hohl (1987), *Simulation of the Effects of Ionizing Radiation on Power MOSFET Breakdown*, research contract, Defense Nuclear Agency, \$450.000, 4 years.
 25. Schooley, L.C., F.E. Cellier, and D. Schultz (1987), *Tele-science Test Bed Pilot Program for the Forthcoming US Space Station*, research contract, NASA, \$281.000, 2 years.
 26. Cellier, F.E. (1985), *Development of a High-Voltage Bipolar Device Simulator*, research contract, Burr Brown, \$107.000, 4 years.
 27. Cellier, F.E. (1985), *Maintenance and Enhancement of Burr Brown's Spice Simulator*, consulting contract, Burr Brown, \$45.000, 7 years.

HONORS AND AWARDS:

1. Cellier, F.E. (2011), SCS McLeod Founder's Award for Distinguished Service to the

Profession.

2. Cellier, F.E. (2011), Elected Life-time Member of SATW, the Swiss Academy of Technical Sciences.
3. Cellier, F.E. (2006), Elected Life-time Member of the Gelehrte Gesellschaft von Zürich.
4. Cellier, F.E. (2005), Award for best free Modelica library, received for Modelica Bond Graph Library at 4th International Modelica Conference, Hamburg, Germany.
5. Cellier, F.E. (2004), Elected Fellow of SCS, the Society for Modeling and Simulation International.
6. Cellier, F.E. (1996), Silver Medal of the City of Lille, France, for Contributions to Modeling and Simulation Methodologies.
7. Cellier, F.E. (1979), Silver Medal of ETH Zurich, Switzerland, for PhD Dissertation: *Combined Continuous/Discrete Continuous System Simulation by Means of Digital Computers: Techniques and Tools.*
8. Cellier, F.E. (1967), 4th Price Mathematics, Schweizer Jugend forscht, Basel, Switzerland, for submission: *Zerlegung von Rechtecken in inkongruente Quadrate.*

CONFERENCE ORGANIZATIONS:

1. *EOOLT, 4th Intl. Workshop on Equation-based Object-oriented Modeling Languages and Tools*, Zurich, Switzerland, September 2011, Conference Chair.
2. *EOOLT, 3rd Intl. Workshop on Equation-based Object-oriented Modeling Languages and Tools*, Oslo, Norway, October 2010, Conference Co-Chair.
3. *SCS 9th Intl. Conf. on Bond Graph Modeling and Simulation*, Orlando, FL, April 2010, General Chair.
4. *AGSME, Mission Earth – Modeling and Simulation for a Sustainable Future*, Zurich, Switzerland, January 2009, Conference Co-Chair.
5. *EOOLT, 2nd Intl. Workshop on Equation-based Object-oriented Languages and Tools*, Paphos, Cyprus, July 2008, Conference Co-Chair.
6. *EOOLT, 1st Intl. Workshop on Equation-based Object-oriented Languages and Tools*, Berlin, Germany, July 2007, Conference Co-Chair.
7. *SCS 8th Intl. Conf. on Bond Graph Modeling and Simulation*, San Diego, CA, January 2007, Program Chair.

8. *SCS 7th Intl. Conf. on Bond Graph Modeling and Simulation*, New Orleans, LA, January 2005, Program Chair.
9. *SCS Western Simulation Multi-conference*, New Orleans, LA, January 2005, Executive Chair.
10. *SCS Western Simulation Multi-conference*, San Diego, CA, January 2004, Exhibition Chair.
11. *SCS 6th Intl. Conf. on Bond Graph Modeling and Simulation*, Orlando, FL, January 2003, General Chair.
12. *SCS Western Simulation Multi-conference*, Orlando, FL, January 2003, Executive Chair.
13. *SCS Western Simulation Multi-conference*, San Antonio, TX, January 2002, Executive Chair.
14. *SCS Western Simulation Multi-conference*, Phoenix, AZ, January 2001, General Chair.
15. *AI, Simulation, and Planning in High Autonomy Systems*, Tucson, AZ, March 2000, Co-general Chair.
16. *SCS Western Simulation Multi-conference*, San Diego, CA, January 2000, Executive Chair.
17. *SCS 3rd Intl. Conf. on Qualitative Information, Fuzzy Systems, and Neural Networks in Simulation*, Warsaw, Poland, June 1999, General Chair.
18. *SCS 4th Intl. Conf. on Bond Graph Modeling and Simulation*, San Francisco, CA, January 1999, Program Chair.
19. *SCS Western Simulation Multi-conference*, San Francisco, CA, January 1999, Executive Chair.
20. *SCS Western Simulation Multi-conference*, San Diego, CA, January 1998, Program Chair.
21. *SCS Western Simulation Multi-conference*, Phoenix, AZ, January 1997, General Chair.
22. *SCS 2nd Intl. Conf. on Qualitative Information, Fuzzy Systems, and Neural Networks in Simulation*, Budapest, Hungary, June 1996, General Chair.
23. *SCS Western Simulation Multi-conference*, San Diego, CA, January 1996, Program Chair.

24. *SCS 2nd Intl. Conf. on Bond Graph Modeling and Simulation*, Las Vegas, NV, January 1995, General Chair.
25. *SCS 1st Intl. Conf. on Qualitative Information, Fuzzy Systems, and Neural Networks in Simulation*, Barcelona, Spain, June 1994, General Chair.
26. *IEEE/IFAC Joint Symposium on Computer-aided Control System Design*, Tucson, AZ, March 1994, General Chair.
27. *SCS 1st Intl. Conf. on Bond Graph Modeling and Simulation*, San Diego, CA, January 1993, Program Chair.
28. *SCS Conf. on Languages for Continuous System Simulation*, San Diego, CA, January 1986, General Chair.
29. *Advanced Information Processing in Simulation*, Zurich, Switzerland, December 1983, Organizing Chair.
30. *IASTED Simulation'80 Conference*, Interlaken, Switzerland, June 1980, Program Chair.
31. *9th IMACS Congress on Simulation of Systems*, Sorrento, Italy, September 1979, Editorial Committee.
32. *IASTED Simulation'77 Conf.*, Montreux, Switzerland, June 1977, Program Chair.
33. *IASTED Simulation'75 Conf.*, Zurich, Switzerland, June 1975, Organizational Chair.

EDITORIAL BOARDS:

- 2002 - current *Simulation: Transactions of the Society for Modeling and Simulation International*, Sage Publishing, Editorial Advisory Board
- 2002 - current *Systems Analysis, Modeling, Simulation*, Taylor & Francis, Editorial Board
- 2002 - current *J. of General Systems*, Taylor & Francis, Editorial Board
- 1999 - 2001 *Systems Analysis, Modeling, Simulation*, Gordon & Breach, Editorial Board
- 1998 - 1999 *Transactions of the Society for Computer Simulation International*, SCS Publishing, Editorial Advisory Board
- 1997 - current *Computación y Sistemas*, Revista Iberoamericana de Computación, Assoc. Editor
- 1996 - 1997 *Transactions of the Society for Computer Simulation International*, SCS Publishing, Associate Editor
- 1995 - current *Mathematical & Computer Modeling of Dynamical Systems*, Swets & Zeitlinger, Editorial Board
- 1991 - 1997 *J. of Systems Engineering*, Springer-Verlag London, Editorial Board
- 1991 - 1996 *Simulation*, SCS Publishing, Assoc. Editor for Qualitative Simulation
- 1985 - 1990 *Simulation*, SCS Publishing, Assoc. Editor for Comp.-aided Design Software

1984 - 1989 *Systems Analysis, Modeling, Simulation*, Akademie-Verlag Berlin, Editorial Board
1981 - 1984 *Simulation*, SCS Publishing, Assoc. Editor for Comp.-assisted Modeling
1980 - current *Intl. J. of Modeling and Simulation*, IASTED Publishing, Assoc. Editor.
1979 - 1985 *IMACS TC3 Newsletter*, Editor-in-Chief

ADMINISTRATIVE EXPERIENCE:

2004 - 2006 Society for Modeling and Simulation International, President
2003 - 2004 Computer Engineering Program, University of Arizona, ABET Liaison
2002 - 2004 ECE Department, University of Arizona, Director of Undergraduate Studies
2002 - 2004 Society for Modeling and Simulation International, Senior Vice President
1998 - 2002 Society for Computer Simulation International, Vice President of Conferences
1997 - 2000 Computer Engineering Program, University of Arizona, Computer Group Chair
1997 - 1998 Computer Engineering Program, University of Arizona, ABET Liaison
1992 - 1998 Society for Computer Simulation International, Member of the Board of Directors
1982 - 1983 Electrical Engineering Dept., ETH Zurich, Switzerland, Responsible for
Departmental Computer Center (VAX 11/780)
1981 - 1983 Electrical Engineering Dept., ETH Zurich, Switzerland, Computer Committee
Chair
1981 - 1982 Computer Science Dept., ETH Zurich, Switzerland, Member of Steering
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