

Marco Gilli

Curriculum Vitæ

Name: Marco Gilli Date of birth: July,
11-th, 1965. Place of birth: Torino,
Italy. Home address: Corso Trapani,
215
I-10141 -Torino, Italy Telephone: +39-011-
338742. Citizenship: Italian

Current position: Deputy Rector and Professor of Electrical Engineering First
Faculty of Engineering Politecnico di Torino (Technical University of Torino) Corso
Duca degli Abruzzi, 24 -I-10129 Torino, Italy. Telephone: +39-011-5646302/6396/4096
Fax: +39-011-5646399/4099 email: marco.gilli@polito.it, prorettore@polito.it

Education: PhD in Electronics Engineering (Politecnico di Torino, Torino -Italy).
Languages: Italian (native), English (fluent), French (spoken). Research Interest:
Nonlinear Circuits and Systems.
Neural Networks Theory and Applications.
Cellular Neural Networks. Electromagnetic
Compatibility.

Professional (Research and Teaching) Experience

- October 2005 -Present: Deputy Rector of the Politecnico di Torino (responsible for Academic Affairs).
- April 2002 -September 2005: Vice Dean of the First Faculty of Engineering of the Politecnico di Torino (From October 2003 to September 2005, he was responsible for the Graduate School of the First Faculty of Engineering).
- October 2000 -Present: Full Professor of Electrical Engineering at the First Faculty of Engineering of the Politecnico di Torino (with tenure since October 2003). He teaches courses on Electrical Engineering and Circuit Theory for undergraduate students and courses on Nonlinear Circuits and Systems for graduate and doctoral students.
- November 1998 -September 2000: Associate Professor of Electrical Engineering at the First Faculty of Engineering of the Politecnico di Torino. He taught courses on Electrical Engineering and Circuit Theory for undergraduate students and on Nonlinear Circuits and Systems for graduate students.
- November 1991 -October 1998: Assistant Professor of Electrical Engineering at the First Faculty of Engineering of the Politecnico di Torino. He was teaching Assistant for courses on Electrical Engineering and Circuit Theory for undergraduate students. He taught courses on Nonlinear Circuits and Systems for graduate students.
- April 1992 and May 1993: Scholar Visitor, Nonlinear Electronics Laboratories, University of California -Berkeley, USA.

- September 1994, September 1996, and November 1998: Scholar Visitor, Analogic and Neural Computing Laboratories -Computer and Automation Institute, Hungarian Academy of Sciences.
- September 1999, September 2000, September 2001, September 2002, September 2003, September 2004, January 2006: Visiting Professor, Helsinki University of Technology (Socrates Course on Nonlinear Circuits).
- May 2002, April 2003, October 2004, October 2005, October 2006: Visiting Professor, Hungarian Academy of Science and Peter Pazmany University -Budapest (Socrates Course on Nonlinear Circuits).
- August-September 2002: Visiting Research Professor, Analogic and Neural Computing Laboratories -Computer and Automation Institute, Center of Excellence of the Hungarian Academy of Sciences.

Professional Activities for the Scientific Community

- Editor in Chief, International Journal of Circuit Theory and Applications, 2006 -Present.
- Associate Editor, IEEE (Institute of Electrical and Electronics Engineers) Transactions on Circuits and Systems-I, Area: Chaos and bifurcations, 2002-2003.
- Associate Editor, IEEE Transactions on Circuits and Systems-I, Area: Nonlinear Circuits and Systems, 1999-2001.
- Chair, North-Italy Chapter of the IEEE Circuits and Systems Society (CAS), 2001-Present.
- Distinguished Lecturer of the IEEE Circuits and Systems Society, 2002-2003. Title: On the Application of Spectral Techniques to the Study of the Global Dynamics of Regular Nonlinear Arrays.
- Member of the Board of Governors of the IEEE Circuits and Systems Society, 2006-2008.
- Track Co-Chair, for General and Nonlinear Circuits and Systems at the IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2004), Hiroshima, Japan.
- Track Co-Chair, for Cellular Nonlinear Networks at the IEEE International Symposium on Circuits and Systems (ISCAS 2006), Kos, Greece.
- Track Co-Chair, for Cellular Nonlinear Networks at the IEEE International Symposium on Circuits and Systems (ISCAS 2007), New Orleans, USA.
- Track Chair, for Cellular Nonlinear Networks at the IEEE International Symposium on Circuits and Systems (ISCAS 2008), Seattle, USA.
- Track Co-Chair, for Nonlinear Circuits and Systems at the European Conference on Circuit Theory and Design (ECCTD 2007), Seville, Spain.
- Special Session Chairman at the IEEE International Workshop on Cellular Neural Networks and their Applications (2004), Budapest, Hungary.
- Member (Secretary, 2004-2005; Chair Elect, 2006; Chair, 2007-2008) of the Technical Committee on Cellular Neural Networks and Array Computing of the IEEE Circuits and Systems Society.

- Member of the Technical Committee on Nonlinear Circuits and Systems of the IEEE Circuits and Systems Society.
- Member of the Organizing Committee of the XIV European Conference on Circuit Theory and Design, Stresa (Italy), 1999.
- President of the Italian Society of Chaos and Complexity, 2005 - Present.
- President of the Microsoft Innovation Center at the Politecnico di Torino, 2007 - Present.
- Member of the Board of Governors of the Human Genetic Foundations (Consortium among Compagnia di San Paolo, University of Torino and Politecnico di Torino) , 2007 -Present.
- Member of the Scientific Committee:
 - International Symposium on Circuits and Systems, 2006, 2007, 2008.
 - European Conference on Circuit Theory and Design, 1999, 2001, 2003, 2005, 2007.
 - IEEE International Workshop on Cellular Nonlinear Networks and their Applications, 2004, 2005, 2006, 2008.
- Andreoni Prize (1990): Best graduate student in Electronics Engineering. Awarded by the Association of Engineers and Architects of the Politecnico di Torino.
- Best paper Awards: International Journal of Circuit Theory and Applications (1994 and 2004).
- Ravani-Pellati-Rotary Club Torino Prize (1998): Awarded by the Academy of Science of Torino to an Italian citizen, for contributions to the progress of Physics and in particular of Electrical Engineering (in occasion of the centenary of the death of the Italian scientist Galileo Ferraris).
- Fellow of the IEEE for Contributions to stability properties and global dynamic behavior in cellular nonlinear networks (2005).

Publications

Dr. Marco Gilli is author or co-author of approximately 150 scientific publications in International Journals and in the Proceedings of International Conferences.

International Journals (Single author)

- 1 M. Gilli, "Strange attractors in delayed cellular neural networks," IEEE Transactions on Circuits and Systems: Part I, vol. 40, no. 11, pp. 849-853, November 1993.
- 2 M. Gilli, "Stability of cellular neural networks and delayed cellular neural networks with non-positive templates and non-monotonic output functions," IEEE Transactions on Circuits and Systems: Part I, vol. 41, no. 8, pp. 518-528, August 1994.
- 3 M. Gilli, "A spectral approach for chaos prediction in delayed cellular neural networks," International Journal of Bifurcation and Chaos, vol. 5, no. 3, pp. 869-875, June 1995.
- 4 M. Gilli, "Investigation of chaos in large arrays of Chua's circuits, via a spectral technique," IEEE Transactions on Circuits and Systems: Part I, vol. 42, no. 10, pp. 802-806, October 1995.
- 5 M. Gilli, "Analysis of periodic oscillations in finite-dimensional CNNs, through a spatio-temporal harmonic balance technique," International Journal of Circuit Theory and Applications, vol. 25, no. 4, pp. 279-288, July 1997.
- 6 M. Gilli, "Design of stable cellular neural networks," IEE Electronics letters, vol. 35, no. 12, pp. 986-987, June 1999.

International Journals (Co-author)

7. V. Daniele, M. Gilli, and E. Viterbo, "Diffraction of a plane wave by a strip grating," Electromagnetics, vol. 10, pp. 245-269, 1990.
8. P. Camurati, M. Gilli, P. Prinetto, and M. Sonza Reorda, "Model checking and graph theory in sequential ATPG," Dimacs, Series in Discrete Mathematics and Theoretical Computer Science, vol. 3, pp. 505-517, 1991.
9. P. P. Civalleri, M. Gilli, and L. Pandolfi, "On stability of cellular neural networks with delay," IEEE Transactions on Circuits and Systems: Part I, vol. 40, no. 3, pp. 157-165, March 1993.
10. P. P. Civalleri and M. Gilli, "On the dynamic behavior of two-cell cellular neural networks," International Journal of Circuit Theory and Applications, vol. 21, no. 5, pp. 451-471, September 1993.
11. P. P. Civalleri and M. Gilli, "Some dynamic phenomena in delayed cellular neural networks," International Journal of Circuit Theory and Applications, vol. 22, no. 2, pp. 77-105, March 1994.
12. G. Ghione M. Gilli, and R. D. Graglia, "Steady-state analysis of nonlinear dispersive planar electromagnetic structures under periodic excitations," COMPEL -The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, vol. 13, Supplement A, pp. 249-256, May 1994.

13. G. Ghione, M. Gilli, and R. D. Graglia, "Fast steady-state algorithms for the analysis of nonlinear dispersive distributed planar electromagnetic structures excited by periodic waveforms," *IEEE Transaction on Magnetics*, vol. 30, no. 5, pp. 3172-3175, September 1994.
14. P. P. Civalleri and M. Gilli, "Global dynamic behavior of a three cell connected component detector CNN," *International Journal of Circuit Theory and Applications*, vol. 23, no. 2, pp. 117-135, March 1995.
15. M. Gilli and V. Daniele, "Low frequency diffraction by a planar junction of a metallic and a wire-mesh halfplane," *IEEE Transactions on Electromagnetic Compatibility*, vol. 37, no. 3, pp. 343-357, August 1995.
16. P. P. Civalleri and M. Gilli, "Circuit models for linear and nonlinear waves," invited to the "Special issue on nonlinear waves, patterns and spatio-temporal chaos in dynamic arrays", *IEEE Transactions on Circuits and Systems: Part I*, vol. 42, no. 10, pp. 578-582, October 1995.
17. P. P. Civalleri and M. Gilli, "A spectral approach to the study of propagation phenomena in CNN's," *International Journal of Circuit Theory and Applications*, vol. 24, no. 1, pp. 37-47, January 1996.
18. V. Daniele, M. Gilli, and S. Pignari, "EMC prediction model of a single wire transmission line crossing a circular aperture in a planar screen," *IEEE Transactions on Electromagnetic Compatibility*, vol. 38, no. 2, pp. 117-126, May 1996.
19. V. Daniele, M. Gilli, and S. Pignari, "Spectral theory of a semi-infinite transmission line over a ground plane," *IEEE Transactions on Electromagnetic Compatibility*, vol. 38, no. 3, pp. 230-236, August 1996.
20. M. Gilli and G. M. Maggio, "Predicting chaos through an harmonic balance technique: an application to the time-delayed Chua's circuit," *IEEE Transactions on Circuits and Systems: Part I*, vol. 43, no. 10, pp. 872-874, October 1996.
21. P. P. Civalleri and M. Gilli, "Practical stability criteria for cellular neural networks," *IEE Electronics Letters*, vol. 33, no. 11, pp. 970-971, May 1997.
22. F. Bonani, M. Gilli, I. Maio, and M. Biey, "Qualitative analysis of the dynamics of the timedelayed Chua's circuit," *IEEE Transactions on Circuits and Systems: Part I*, vol. 44, no. 6, pp. 486-500, June 1997.
23. M. Gilli, P. P. Civalleri, T. Roska, and L. O. Chua, "Analysis of time-varying cellular neural networks for quadratic global optimization," *International Journal of Circuit Theory and Applications*, vol. 26, no. 2, pp. 109-126, January 1998.
24. F. Bonani and M. Gilli, "Analysis of stability and bifurcations of limit cycles in Chua's circuit through the harmonic balance approach," *IEEE Transactions on Circuits and Systems: Part I*, vol. 46, no. 8, pp. 881-890, August 1999.
25. P. P. Civalleri and M. Gilli, "On stability of cellular neural networks," invited in the *Journal of VLSI Signal Processing*, Kluwer Academic Publisher, vol. 23, no. 2/3, pp. 429-435, November 1999.

26. L. Galleani, M. Biey, M. Gilli, and L. Lo Presti, "Analysis of chaotic signal in the time-frequency plane," *Journal of Signal Processing*, (Special issue on nonlinear signal processing), MYU, vol. 4, no. 1, pp. 29-36, January 2000.
27. V. Daniele, M. Gilli, and R. D. Graglia, "Alternative representation of dyadic Green's functions for circular cylindrical cavities with applications to the EMC characterization of space station modules," *Radio Science*, vol. 35, no. 2, pp. 621-637, March 2000.
28. M. Biey, M. Gilli, I. Maio, and A. Premoli, "Fast and accurate analysis of one-dimensional arrays of dynamic PWL cells," *International Journal of Circuit Theory and Applications*, vol. 29, no. 5, pp. 455-467, September 2001.
29. M. Biey, P. Checco, and M. Gilli, "Complex dynamic phenomena in space invariant cellular neural networks," *IEEE Transactions on Circuits and Systems: Part I.*, vol. 49, no. 3, pp. 340345, March 2002.
30. M. Gilli and P. P. Civalleri, "Template design methods for cellular neural networks," *International Journal of Circuit Theory and Applications.*, vol. 30, no. 2, pp. 211-230, March 2002.
31. M. Gilli, T. Roska, L. O. Chua, and P. P. Civalleri, "CNN dynamics represents a broader class than PDEs," *International Journal of Bifurcation and Chaos*, vol. 12, no. 10, pp. 2051-2068, October 2002.
32. M. Biey, P. Checco, and M. Gilli, "Bifurcation and chaos in CNNs," *Journal of Circuits Systems and Computers*, vol. 12, no. 4, pp. 417-433, August 2003.
33. F. Corinto and M. Gilli, "Comparison between the Dynamic Behavior of Chua-Yang and Full-Range Cellular Neural Networks," *International Journal of Circuit Theory and Applications*, vol. 31, no. 5, pp. 423-441, September 2003.
34. F. Corinto and M. Gilli, "On stability of cellular neural networks with polynomial interactions," *International Journal of Neural Systems*, vol. 13, no. 6, pp. 379-385, December 2003.
35. P. P. Civalleri and M. Gilli, "On dissipative two-state quantum cells and cellular networks," *International Journal of Circuit Theory and Applications*, vol. 32, no. 2, pp. 79-90, March-April 2004.
36. M. Gilli, F. Corinto and P. Checco, "Periodic oscillations and bifurcations in cellular nonlinear networks," *IEEE Transactions on Circuits and Systems: Part I.*, vol. 51, no. 5, pp. 948-962, May 2004.
37. M. Gilli, M. Biey, and P. Checco, "Equilibrium analysis of cellular neural networks," *IEEE Transactions on Circuits and Systems: Part I.*, vol. 51, no. 5, pp. 903-912, May 2004.
38. P. P. Civalleri, M. Gilli, and M. Bonnin, "Basic concepts of quantum systems versus classical networks," *International Journal of Circuit Theory and Applications*, vol. 32, no. 5, pp. 383-405, October-November 2004.
39. P. P. Civalleri and M. Gilli, "On state equations of two-level quantum systems in a thermal environment," *International Journal of Circuit Theory and Applications*, vol. 32, no. 6, pp. 609614, November-December 2004.

40. M. Gilli, M. Bonnin, and F. Corinto, "On global dynamic behavior of weakly connected oscillatory networks," *International Journal of Bifurcation and Chaos*, vol. 15, no. 4, pp 1377-1393, April 2005.
41. M. Bonnin, M. Gilli, P. P. Civalleri, "A mixed time-frequency approach for the analysis of a hysteretic oscillator," *IEEE Transactions on Circuits and Systems-Part II*, vol. 52, no. 9, pp. 525-529, September 2005
42. I. Petras, M. Gilli "Complex dynamics in one-dimensional cellular neural networks," *International Journal of Circuit Theory and Applications*, vol. 34, pp. 3-20, January -February 2006.
43. F. Corinto, M. Biey, and M. Gilli, "Non-linear coupled CNN models for multiscale image analysis," *International Journal of Circuit Theory and Applications*, vol. 34, no. 1, pp. 77-88, January -February 2006.
44. P. P. Civalleri, M. Gilli, and M. Bonnin, "Equivalent circuits for small signal performance of spin particles," *International Journal of Circuit Theory and Applications*, vol. 34, no. 2, pp. 165-182, March -April 2006.
45. V. Lanza, M. Bonnin, and M. Gilli, "On the application of the describing function technique to the bifurcation analysis of nonlinear systems," *IEEE Transactions on Circuits and Systems -Part II*, vol. 54, no. 4, pp. 343-347, April 2007.
46. P. P. Civalleri, M. Gilli, and M. Bonnin, "Equivalent circuits for two-state quantum systems," *International Journal of Circuit Theory and Applications*, Vol. 35, no. 3, pp. 265-280, May -June 2007.
47. V. Lanza, F. Corinto, M. Gilli, and P. P. Civalleri, "Analysis of nonlinear oscillatory network dynamics, via time-varying amplitude and phase variables," *International Journal of Circuit Theory and Applications*, Vol. 35, no. 5/6, pp. 623-644, November -December 2007.
48. M. Bonnin, F. Corinto, and M. Gilli, "Bifurcations, stability and synchronization in delayed oscillatory networks," *International Journal of Bifurcation and Chaos*, vol. 17, no. 11, pp. 4033-4048, November 2007.
49. F. Corinto, M. Bonnin, and M. Gilli, "Weakly connected oscillatory networks for associative and dynamic memories," *International Journal of Bifurcation and Chaos*, vol. 17, no. 12, pp. 4365-4379, December 2007.
50. M. Bonnin, M. Gilli, and F. Corinto, "Periodic oscillations in weakly connected cellular nonlinear networks," *IEEE Transactions on Circuits and Systems -Part I*, vol. 55, no. 6, pp. 1671-1684, July 2008.
51. P. P. Civalleri, M. Gilli, and M. Bonnin, "The harmonic balance analysis of open quantum systems," *International Journal of Bifurcation and Chaos*, in press, 2008.
52. F. Corinto, V. Lanza, and M. Gilli, "Spiral waves in bio-inspired oscillatory networks," *International Journal of Circuit Theory and Applications*, vol. 36, no. 5-6, pp. 555-571, July -September 2008.
53. V. Lanza, F. Corinto, and M. Gilli, "On the study of cellular neural networks via amplitude and phase dynamics," *Neural Networks*, vol. 21, no. 2-3, pp. 122-129, March-April 2008.

International Conferences

1. P. Camurati, M. Gilli, P. Prinetto, and M. Sonza Reorda, "Proving Finite State Machines correct with an automaton-based method," IEEE First Great Lakes Symposium on VLSI, pp. 255-258, Kalamazoo, (MI -USA), February-March 1991.
2. P. Camurati, M. Gilli, A. R. Meo, P. Prinetto, and M. Sonza Reorda, "Comparing ATPGs for synchronous sequential circuits," Fifth European Computer Conference, pp. 224-228, Bologna (Italy), May 1991.
3. P. Camurati, M. Gilli, P. Prinetto, and M. Sonza Reorda, "The product machine and implicit enumeration to prove FMSs correct," Advanced Research Workshop on Correct Hardware Design Methodologies, pp. 51-62, Torino (Italy), June 1991.
4. V. Daniele and M. Gilli, "Low frequency electromagnetic penetration of loaded apertures: a canonical case," IEEE Antennas and Propagation Society International Symposium, pp. 1567-1570, Chicago (USA), July 1992.
5. V. Daniele, M. Gilli, and R. E. Zich, "Analysis of planar wire-mesh shields, loaded by general anisotropic and/or chiral stratified structures. Part I," IEEE Antennas and Propagation Society International Symposium, pp. 2014-2017, Chicago (USA), July 1992.
6. V. Daniele, M. Gilli, and R. E. Zich, "Analysis of planar wire-mesh shields, loaded by general anisotropic and/or chiral stratified structures. Part II," IEEE Antennas and Propagation Society International Symposium, pp. 2018-2021, Chicago (USA), July 1992.
7. P. P. Civalieri and M. Gilli, "Some stability properties of cellular neural networks with delay," IEEE Second International Workshop on Cellular Neural Networks and their Applications, pp. 94-99, Munich (Germany), October 1992.
8. V. Daniele, M. Gilli, and R. E. Zich, "Low frequency characterization of planar wire-mesh shields loaded by general bianisotropic stratified structures," Tenth International Zurich Symposium and Technical Exhibition on Electromagnetic compatibility, pp. 605-610, Zurich (Switzerland), May 1993.
9. M. Gilli, "A Lyapunov function approach to the study of the stability of cellular neural networks," IEEE International Symposium on Circuits and Systems, pp. 2584-2587, Chicago (USA), May 1993.
10. P. P. Civalieri and M. Gilli, "On dynamic behavior of cellular neural networks with delay," invited to the XI European Conference on Circuit Theory and Design, pp. 687-692, Davos (Switzerland), September 1993.
11. G. Ghione, M. Gilli, and R. D. Graglia, "Numerical techniques for the electromagnetic analysis of planar layered non-linear structures," Joint Third International Conference on Electromagnetics in Aerospace Applications and Seventh European Electromagnetic Structures Conference, pp. 395-398, Torino (Italy), September 1993.
12. G. Ghione, M. Gilli, and R. D. Graglia, "Fast steady-state algorithms for the analysis of nonlinear distributed electromagnetic structures excited by periodic waveforms," Ninth Compumag Conference on the Computation of Electromagnetic Fields, pp. 612-613, Miami (USA), November 1993.

13. M. Biey, F. Bonani, M. Gilli, and I. Maio, "On the effects of the capacitor in the delayed Chua's circuit," International Symposium on Nonlinear Theory and its Applications, pp. 803-806, Hawaii (USA), December 1993.
14. M. Gilli, "Chaos from a time-delayed cellular neural network," IEEE Second International Workshop on Nonlinear Dynamics of Electronic Systems, pp. 9-14, Krakow (Poland), July 1994.
15. V. Daniele, M. Gilli, and S. Pignari, "Electromagnetic coupling by a loaded multi-conductor transmission line through an aperture in an infinite metallic screen in presence of a ground plane," International Symposium on Electromagnetic Compatibility, pp. 847-852, Rome (Italy), September 1994.
16. M. Gilli, "A spectral approach for studying and predicting chaos in delayed cellular neural networks," International Symposium on Nonlinear Theory and its Applications, pp. 57-60, Kagoshima (Japan), October 1994.
17. V. Daniele, M. Gilli, and S. Pignari, "Scattering matrix characterization of an externally excited transmission line passing through a metallic screen," International Symposium on Electromagnetic Compatibility, pp. 270-273, Sao-Paulo (Brazil), December 1994.
18. P. P. Civalleri and M. Gilli, "Propagation phenomena in cellular neural networks," IEEE Third International Workshop on Cellular Neural Networks and their Applications, pp. 327-332, Rome (Italy), December 1994.
19. P. P. Civalleri and M. Gilli, "A topological description of the state space of a cellular neural network," IEEE Third International Workshop on Cellular Neural Networks and their Applications, pp. 115-120, Rome (Italy), December 1994.
20. V. Daniele M. Gilli, and S. Pignari, "Equivalent circuit representation of a transmission line crossing a circular aperture in a semi-infinite metallic screen," Eleventh International Zurich Symposium and Technical Exhibition on Electromagnetic Compatibility, pp. 99-104, Zurich (Switzerland), March 1995.
21. V. Basile, V. Daniele, M. Gilli, and R. D. Graglia, "EM noise interference inside a non-absorbing cavity," Eleventh International Zurich Symposium and Technical Exhibition on Electromagnetic Compatibility, pp. 369-374, Zurich (Switzerland), March 1995.
22. M. Gilli, "A spectral approach for studying spatio-temporal chaos," IEEE International Symposium on Circuits and Systems, pp. 251-254, Seattle (USA), May 1995.
23. P. P. Civalleri and M. Gilli, "A spectral approach for studying propagation phenomena and chaos in large array of nonlinear circuits," invited to the XII European Conference on Circuit Theory and Design, pp. 1141-1144, Istanbul (Turkey), August 1995.
24. F. Bonani, M. Gilli, I. Maio, and M. Biey, "Influence of the parasitics on the time-delayed Chua's circuit," Eighth Mediterranean Electrotechnical Conference, pp. 443-446, Bari (Italy), May 1996.
25. F. Bonani, M. Gilli, I. Maio, and M. Biey, "Effects of the capacitor on the time-delayed Chua's circuit dynamics," IEEE Fourth International Workshop on Nonlinear Dynamics of Electronics Systems, pp. 447-452, Seville (Spain), June 1996.

26. M. Gilli, "A harmonic balance approach for the qualitative analysis of limit cycles occurring in CNNs," IEEE Fourth International Workshop on Cellular Neural Networks and their Applications, pp. 133-138, Seville (Spain), June 1996.
27. P. P. Civalleri and M. Gilli, "Combinatorial topology and qualitative dynamics in cellular neural networks," IEEE Fourth International Workshop on Cellular Neural Networks and their Applications, pp. 191-195, Seville (Spain), June 1996.
28. M. Gilli, P. P. Civalleri, T. Roska, and L. O. Chua, "Global optimization through time-varying cellular neural networks," IEEE Fourth International Workshop on Cellular Neural Networks and their Applications, pp. 417-422, Seville (Spain), June 1996.
29. P. P. Civalleri and M. Gilli, "Equilibrium and stability analysis of cellular neural networks," IEEE International Symposium on Circuits and Systems, pp. 569-572, Hong Kong, June 1997.
30. V. Daniele and M. Gilli, "A spectral technique for the steady-state analysis of switched distributed networks," IEEE International Symposium on Circuits and Systems, pp. 993-996, Hong Kong, June 1997.
31. M. Biey, M. Gilli, A. Premoli, and I. Maio, "Fast and accurate time-domain analysis of 1D arrays of Chua's oscillators," IEEE Fifth International Workshop on Nonlinear Dynamics of Electronics Systems, pp. 358-363, Moscow (Russia), June 1997.
32. P. P. Civalleri and M. Gilli, "Analysis of the dynamics of neural networks composed of large arrays of nonlinear cells," invited to the Fifteenth World Congress on Scientific Computation, Modelling and Applied Mathematics, pp. 271-276, Berlino (Germany), August 1997.
33. P. P. Civalleri and M. Gilli, "On the relation between equilibrium points and limit cycles in one dimensional CNNs," XIII European Conference on Circuit Theory and Design, pp. 157-161, Budapest (Hungary), September 1997.
34. P. P. Civalleri and M. Gilli, "Analysis of periodic and chaotic oscillations in one-dimensional arrays of Chua's circuits," XIII European Conference on Circuit Theory and Design, pp. 353-358, Budapest (Hungary), September 1997.
35. P. P. Civalleri and M. Gilli, "Analysis of CNN dynamics through spatio-temporal spectral techniques," invited to the International Symposium on Intelligent Systems, pp. 147-152, Reggio Calabria (Italy), September 1997.
36. P. P. Civalleri and M. Gilli, "A harmonic balance technique for the analysis of periodic attractors and their bifurcations in cellular neural networks," IEEE Fifth International Workshop on Cellular Neural Networks and their Applications, pp. 106-111, London (UK), April 1998.
37. V. Daniele, M. Gilli, and R. D. Graglia, "Alternative representation of dyadic Green's functions for circular cylindrical cavities," invited to the IEEE International Symposium on Electromagnetic Theory, pp. 654-656, Thessaloniki (Greece), May 1998.
38. A. Premoli, M. Biey, M. Gilli, and I. Maio, "A computer program for accurate time-domain analysis of 1D arrays of Chua's oscillators," IEEE International Symposium on Circuits and Systems, Monterey (CA-USA), June 1998.

39. M. Gilli, G. M. Maggio, and P. Kennedy, "An approximate analytical approach for predicting period doubling in the Colpitts oscillator," IEEE International Symposium on Circuits and Systems, Monterey (CA-USA), June 1998.
40. P. P. Civalleri and M. Gilli, "Analysis of nonlinear dynamic arrays, through spatial mode decomposition," IEEE International Symposium on Circuits and Systems, vol. V, pp. 310-313, Orlando (Florida -USA), June 1999.
41. F. Bonani and M. Gilli, "An harmonic balance approach to bifurcation analysis of limit cycles," IEEE International Symposium on Circuits and Systems, vol. V, pp. 310-313, Orlando (Florida -USA), vol. VI, June 1999.
42. L. Galeani, M. Biey, M. Gilli, and L. Lo Presti, "Analysis of chaotic signals in the time-frequency plane," IEEE Nonlinear Signal and Image Processing, Antalya (Turkey), 1999.
43. F. Bonani and M. Gilli, "A harmonic-balance based method for computing Floquet's multipliers in Lur'e systems," IEEE Seventh International Workshop on Nonlinear Dynamics of Electronics Systems, pp. 13-16, Bornholm (Denmark), July 1999.

44. M. Gilli, "Template design methodologies and tools," Design Automation Day on Cellular Visual Microprocessor -XIV European Conference on Circuit Theory and Design, pp. 113-125, Stresa (Italy), September 1999.
45. F. Bonani and M. Gilli, "A spectral approach to the computation of Floquet's multipliers for the bifurcation analysis of limit cycles," XIV European Conference on Circuit Theory and Design, pp. 345-348, Stresa (Italy), September 1999.
46. L. Galleani, M. Biey, M. Gilli, and L. Lo Presti, "Time-frequency analysis of chaotic waveforms from Chua's oscillator", XIV European Conference on Circuit Theory and Design, pp. 1231-1234, Stresa (Italy), September 1999.
47. P. P. Civalleri and M. Gilli, "A rigorous algorithm for template design in stable cellular neural networks," invited to the IEEE International Symposium on Nonlinear Theory and its Applications, pp. 407-410, Hawaii (USA), November-December 1999.
48. M. Gilli, "Characterization of space-mode chaos in arrays of nonlinear circuits through space mode decomposition," invited to the IEEE International Symposium on Nonlinear Theory and its Applications, pp. 645-648, Hawaii (USA), November-December 1999.
49. M. Gilli and P. P. Civalleri, "Template design methods for binary cellular neural networks," IEEE Sixth International Workshop on Cellular Neural Networks and their Applications, Catania (Italy), May 2000.
50. P. P. Civalleri and M. Gilli "Analysis and design of cellular neural networks, through a space-time spectral approach decomposition," IEEE International Symposium on Circuits and Systems, vol. II, pp. 394-396, Geneva (Switzerland), May 2000.
51. M. Gilli and P. P. Civalleri, "A HB technique for the classification of periodic and chaotic attractors in one-dimensional arrays of Chua's circuits," IEEE International Symposium on Nonlinear Theory and its Applications, Dresda (Germany), September 2000.

52. V. Daniele, M. Gilli, and S. Grivet-Talocia, "A Laplace transform technique for wedge shaped isorefractive regions," International Conference on Mathematical Methods in Electromagnetic Theory, pp. 673-675, Kharkov (Ukraine), September 2000.
53. M. Biey, P. Checco, M. Gilli, and P. P. Civalleri, "Complex dynamics in Cellular Neural Networks," IEEE International Symposium on Circuits and Systems, vol. III, pp. 45-48, Sidney (Australia), May 2001.
54. P. P. Civalleri and M. Gilli, "CNN analogic wave algorithms: template design methods," invited to the XV European Conference on Circuit Theory and Design, vol. II, pp. 25-28, Espoo (Finland), August 2001.
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