Raj Senani
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Personal Information

Date of birth : March 14, 1950
Citizenship : Indian
Marital Status: Married; having one spouse and a daughter

Education

1966	B.Sc from Lucknow University, Lucknow, India
1971	B.Sc. Engg. in Electrical Engg from Harcourt Butler Technological Institute, Kanpur, India
1974	M.E. (Honors) in Electrical Engg from M. N. R. Engineering College, Allahabad, India
1988	Ph.D in Electrical Engineering from M. N. R. Engineering College, Allahabad University, India

Academic Experience

Over 30 years experience of teaching undergraduate and postgraduate students.

July 1975- December 1986	Lecturer in Electrical Engg at M.N.R.Engg College, Allahabad.
January 1987- July 1988	Reader in Electrical Engg at M.N.R.Engg College, Allahabad.
July 1988-May 1990	Assistant Professor in the Department of Electronics and Communication Engg at Delhi Institute of Technology, Delhi.
May 1990- onwards	Professor in the Division of Electronics and Communication Engg at Delhi Institute of Technology, now known as Netaji Subhas Institute of Technology Delhi.

Administrative Experience

- 20 years of administrative experience in the positions of Head, Dean and Institute Director

- Head, Electronics and Communication Engineering Department: 1990-1993, 1997-July, 1998; August 1999- onwards.
- Head, Applied Sciences Department: 1993-1996, Head, School of Applied Sciences, 2007-onwards
- Head, Manufacturing Processes and Automation Engineering Department: 1997-July 1998
- Dean, Research: October 1997-July 1999
- Dean, Academic: 1996-1997
- Dean, Administration: October 1997-July 1999
- Dean, Post Graduate Studies: 1993-1996, August 1999 – August 2001
- Officiating Director, Delhi Institute of Technology, Delhi: on several occasions since 1990
- Officiating Director, Netaji Subhas Institute of Technology on numerous occasions between 1997-2001 and 2003- 2008
- Director, Delhi Institute of Technology, Delhi: 1996-1997
- Director, Netaji Subhas Institute of Technology, May 2003–January, 2004
- Director, Netaji Subhas Institute of Technology, 23rd October 2008-

Research Publications and Citations

Over 30 years experience of conducting as well as supervising research in the areas of Analog Integrated Circuits and Signal Processing.

Over **100 research papers in refereed International Journals** (see Appendix 1).

Research papers have been widely referred (**over 1000 citations**) by other researchers working in similar areas. Several of the works have also been cited in a number of books, for example:

- *C. Toumazou, F. J. Ledge and D. G. Haigh: `Analogue IC Design: the Current mode approach', Peter Peregrinus Ltd (UK). 1990, Chapters 3, 4 and 15).*

- *P.V. Anandamohan, `Current mode VLSI Analog Filters', Birkhauser Boston (USA), 2003, Ch.2, 3, pp. 15-127*

- *Yalcin, JAK Suykens, JPL Vandewalle, Cellular Neural Networks, Multi-Scroll Chaos and Synchronization', World Scientific, 2005.*

- *E Tlelo-Cuautle, MA Duarte-Villaseñor, 'Evolutionary Electronics: Automatic Synthesis of Analog Circuits by GAs', Success in Evolutionary Computation, vol. 92 pp. 165-185, 2008*

Membership of Professional bodies:

- Senior Member IEEE (USA): Member # 80509686
- Life member ISTE (India)

Fellowship of Professional bodies/Academies

- Elected `Fellow' of the National Academy of Sciences, India (NASI) in 2008

Editor-ship of Professional Journals

National

- Honorary Editor, Journal of the Institution of Electronics and Telecommunication Engineering (IETE), India, in the area of Circuits and Systems (1991-1995)

- Honorary Editor, IETE Journal of Research, in the area of Circuits and Systems, 2007-2008

- One of the Editors for IETE Journal on Education, 2008 onwards (earlier a Member of Editorial Board, for the Students Journal of the IETE since 1991)

International

- Associate Editor for the Journal on Circuits, Systems and Signal Processing, Birkhauser Boston (USA), 2003-onwards
  http://www.springer.com/birkhauser/engineering/journal/34?detailsPage=editorialBoard

- One of the Editors for `Scientific Research and Essays'
  http://www.academicjournals.org/SRE/Editors.htm

- One of the Editors for Journal of Electrical and Computer Engineering, Hindawi Publishers, USA.
  http://www.hindawi.com/journals/jece/editors.html

- Guest Editor for special issue of WSEAS Transactions on Electronics (USA) on Modern Electronic Components for Analog Signal Processing and their Applications
  http://www.wseas.us/e-library/transactions/electronics/2008/SI4-Editorial.pdf

Reviewer-ship of Professional Journals

Have acted/ have been acting as Reviewer for the following Journals:

I. International Journals

- IEEE Transactions on Circuits and Systems (USA) Part I: Regular Papers
- IEEE Transactions on Circuits and Systems (USA) Part II: Express Briefs
- International Journal of Circuit Theory and Applications (Ireland)
- Microelectronics Journal (UK)
- International Journal of Electronics (UK)
- IEEE Transactions on Instrumentation and Measurement (USA)
- IET (formerly IEE) Electronics Letters (UK)
- IEE (formerly IEE) Proceedings: Circuits, Devices and Systems (UK)
- Analog Integrated Circuits and Signal Processing (Netherlands)
- IEEE Transactions on Industrial Electronics (USA)
- ELEKTRIK: Turkish Journal of Electrical Engineering and Computer Sciences (Turkey)
- Circuits, Systems and Signal Processing (USA)
- Computers and Electrical Engineering (USA)
- ETRI Journal (Korea)
- HAIT Journal of Science and Engineering (Israel)
- IEICE Transactions on Electronics (Japan)
- IEICE Electronics Express (ELEX) (Japan)
- Journal of Applied Sciences, ANSInet (Pakistan)
- WSEAS Transactions on Electronics (USA)
- IEEE Transactions on Industrial Electronics (USA)
- Integration-the VLSI Journal (USA)
- IEEE Transactions on Very Large Scale Integration (VLSI) Systems (USA)
- Journal of Circuits, Systems and Computers (USA)
- Radio-engineering Journal (Czech Republic)
- IET (formerly IEE): Microwaves, Antennas and Propagation (UK)
- Electrical Engineering Archiv fur Elektrotechnik (Germany)
- Journal of Electrical and Computer Engineering, Hindawi Publishers (USA)

II. National Journals

- IETE Journal of Research (formerly Journal of the IETE) since 1981
- IETE Technical Review since 1988
- Indian Journal of Engineering and Material Sciences (IJEMS) published by National Institute of Science Communication and Information Resources (NISCAIR), New Delhi.
- Journal of the Indian Institute of Science, Bangalore

Reviewer/International Steering Committee member for International Conferences

Have been a Reviewer for a number of International Symposia and Conferences in the areas of Microelectronic Circuits and Systems.

Member of the International Steering Committee of the Asia-Pacific Conference on Circuits and Systems (1997- 2000).

Member of the International Steering Committees of ELECO'2003, ELECO'2005, ELECO2007, ELECO'2009: The Third, Fifth, Seventh and Ninth International Conferences on Electrical and Electronics Engineering, held in Turkey.

Research Guidance

(a) Ph.D supervision (as sole Guide):

Ph.D awarded-

- 1993 D. R. Bhaskar `Realization of a class of Electronically-controllable Signal processing/Signal generation Circuits', University of Delhi
- 2006 S. S. Gupta `Realization of some classes of Linear/Nonlinear Analog Electronic Circuits using Current-mode building blocks', University of Delhi
- 2007 R. K. Sharma `An investigation into some classes of Current-mode Analog Electronic Circuits' University of Delhi
- 2008 Pragati Kumar `Four-terminal-floating-nullors and their applications in Circuit Synthesis and Design', University of Delhi

(b) Ph.D supervision (as co-Guide):

Ph.D awarded-

- 2005 V. K. Singh `Realization of a class of Analog Signal Processing/Signal Generation Circuits' Registered at UP Technical University.

Ph.D work under progress-

- 2008 Kasim Abad Abdalla: `Investigation of a class of Analog circuit synthesis using new building blocks' registered at Jamia Millia Islamia
- 2008 Ms. Rajni : `Acitive-R analog circuit Design using current mode building blocks', registered at Jamia Millia Islamia
- 2008 Dharmesh Srivastava: `Realisation of Single-Capacitance-Controlled-Oscillators for CMOS implementation' , registered at UP Technical University
- 2009 Ashish Gupta: `Signal Process and Signal generation circuits suitable for Analog VLSI employing OTRA', registered at Jamia Millia Islamia
- 2009 Manish Gupta: `New CMOS building blocks and their application in analog filter/oscillator design' registered at Jamia Millia Islamia

Current Teaching and Research Interests

- Circuit Theory
- Signals and Systems
- Active Network Synthesis and Filter Design
- Current Mode Circuits and Signal processing
- Bipolar and CMOS Analog Integrated Circuits
- Chaotic nonlinear circuits
- Log domain and Trans linear Circuits
- Electronic Instrumentation

Have been invariably rated as `Excellent' in all students' feedback reports, since 1993 (the year in which the students' feedback system was introduced in the Institute).

Curriculum Development

Introduced new courses on Advanced Network Synthesis and Filter Design, Linear Integrated Circuits, Circuits and Systems, Bipolar and MOS Analog ICs, CMOS Analog Integrated Circuits for Communication and Signal Processing in various undergraduate and post Graduate programs at M.N.R. Engg College, Allahabad and Delhi Institute of Technology, Delhi: 1975-2008.

Played a key role in developing the new BE (Instrumentation and Control Engg) program as well as in upgrading all earlier existing BE/ME programs at Netaji Subhas Institute of Technology: 1989-2008

As Dean (PG Studies) as well as otherwise, lead a team of faculty members in formulating and initiating a number of new M. Tech. programs in various specialized areas of Electronics and Communication Engg, Computer Engg and Instrumentation and Control Engg as envisaged in the document on the `Profile of the Growth' o f the Institute (1993-2008)

Laboratory Development

Lab-in-charge for the Basic Electrical Engg Lab (1978-1983) and Applied Electronics Lab (1983-1988) at M.N.R Engg College, Allahabad, India.

Established a new Lab namely the `Linear Integrated Circuits' (LIC) Lab. at Delhi Institute of Technology (1989-1998).

Established 'Analog Integrated Circuits Lab-I and II' and 'Analog Signal Processing Research Lab' at NSIT (1998-continuing).

The Lab work makes use of HP 4145B Semiconductor parameter analyzer, HP3562A Dynamic signal analyzer, HP-8751A Network Analyzer, Tektronix 370A programmable Curve Tracer and a number of IEEE-488 programmable equipments. With the use of a variety of Computer platforms and Softwares (such as MicroSim Design Lab (PSPICE), Cadence PSICE, MATLAB etc.) computer-based experimentation forms an integral part of all practical course works being conducted in these Labs which also support the ongoing R and D in the areas of Analog Integrated Circuits and Signal Processing.

Sponsored Projects

(i) AICTE funded project under MODROB Scheme (Development of Advanced Signal Processing Lab) grant of Rs. 10,00,000/-

(ii) AICTE funded project under MODROB Scheme (Development of Digital and Optical Comm. Lab) grant of Rs. 4,00,000/-

Book/Book chapter

Written a chapter entitled 'Electronics Circuits in the book entitled ET-202, Engineering Science-I, Part –B Principles of Electrical Sciences published by Indira Gandhi National Open University 2005

Biographical Listing

Biography included in several international biographical publications such as:

(i) **Marquis' Who's Who, NJ, USA:**

- Marquis' Who's Who in the World 1998 onwards (16th edition onwards)
- Marquis' Who's Who in Finance and Industry 2000 onwards (32nd edition onwards)
- Marquis' Who's Who in Science and Engineering 2003 onwards (7th edition onwards)
- Marquis' Who's Who in Asia (2006 onward)

(ii) **International Biographical Center, Cambridge, England:**

- Outstanding Scholars of the 20th Century (2001)
- Outstanding People of the 20th Century (2000)
- Dictionary of International Biography (29th edition 2001)
- 2000 Outstanding Intellectuals of the 20th Century (2000)
- International Man of the Year (2000/2001)

(iii) **American Biographical Institute, Raleigh, USA:**

- The Contemporary Who's Who (2003-2004 edition)
- Member Research Board of Advisors (Since 2003)
- Consulting Editor of The Contemporary Who's Who (since 2004).

(iv) **Refacimento International, New Delhi:**

- Indo-Asian Who's Who (Vol. II 2003)
- Asian-American Who's Who (Vol. III 2003 and Vol. IV 2004)
- Reference Asia: Asia's Who's Who of Men and Women of Achievement (Revised edition 2003)
- Asia-Pacific Who's Who (Vol. V 2004)
- Asian Admirable Achievers (2006)

Appendix 1

Research Publications of Professor Raj Senani

(Papers published in refereed International Journals)

[1] R. Senani and R. N. Tiwari, 1978, 'New canonic active-RC realization of grounded and floating inductors', ***Proc. IEEE (USA),*** vol. 66, no. 7, pp. 803-804.

[2] R. Senani, 1979, 'Active simulation of inductors using Current Conveyors', ***Electronics Letters, IEE (UK)***, vol. 14, no. 15, pp. 483-484, also see *ibid*, 1978, vol. 15, no. 4, pp. 112-114.

[3] R. Senani, 1978, 'Realization of single resistance-controlled lossless floating inductance' ***Electronics Letters, IEE (UK)***, vol. 14, no. 25, pp. 828-829, also see *ibid*, 1980, vol. 16, no. 4, p. 117.

[4] R. Senani, 1979, 'New canonic sinusoidal oscillator with independent control through a single grounded resistor', ***Proc. IEEE (USA),*** vol. 67, no. 4, pp. 691-692.

[5] R. Senani, 1979, 'New canonic single resistance controlled sinusoidal oscillator using a single Current Conveyor', ***Electronics Letters, IEE (UK),*** vol. 15, no. 18, pp. 568-569.

[6] R. Senani, 1979, 'Novel active-RC circuit for floating inductance simulation', ***Electronics Letters, IEE (UK),*** vol. 15, no. 21, pp. 679-680.

[7] R. Senani, 1979, 'Some observations concerning the methods of filter and oscillator realization using the concept of FDNR', ***Proc. IEEE (USA),*** vol. 67, no. 12, pp. 1665-1666.

[8] R. Senani, 1980, 'Novel circuit implementation of Current Conveyors using an OA and an OTA', ***Electronics Letters, IEE (UK),*** vol. 16, no. 1, pp. 2-3.

[9] R. Senani, 1980, 'Novel sinusoidal oscillator employing grounded capacitors', ***Electronics Letters, IEE (UK)***, vol. 16, no. 2, pp. 62-63; also see *ibid*, 1980, vol. 16, no. 22, p. 863.

[10] R. Senani, 1980, 'Novel active-RC realizations of tunable floating inductors', ***Electronics Letters, IEE (UK),*** vol. 16, no. 4, pp. 154-155.

[11] R. Senani, 1980, 'A new technique for inductance-to-time period conversion using integrated circuit operational amplifiers' ***IEEE Trans. Industrial Electronics and Control Instrumentation (USA),*** vol. IECI-27, no. 1, pp. 36-37.

[12] R. Senani, 1980, 'New tunable synthetic floating inductors', ***Electronics Letters, IEE (UK),*** vol. 16, no. 10, pp. 382-383.

[13] R. Senani, 1981, 'Linear resistance-to-frequency conversion using Integrated circuit operational amplifiers', ***International Journal of Electronics (UK),*** vol. 50, no. 6, pp. 485-491.

[14] R. Senani, 1981, 'Some new synthetic floating inductance configurations', ***Archiv. fur Elektronik und Ubertrangungstechnik (Germany)***, vol. 35, no. 7/8, pp. 307-310.

[15] G. Stoyanov and R. Senani, 1982, 'Comments on New canonic active RC realizations of grounded and floating inductors', ***Proc. IEEE (USA),*** vol. 70, no. 1, pp. 101-103.

[16] R. Senani, 1982;, 'Novel lossless synthetic floating inductor employing a grounded capacitor', ***Electronics Letters, IEE (UK),*** vol. 18, no. 10, p. 413; also see *Erratum, ibid*, August 1982 issue

[17] R. Senani, 1982, 'A class of single-element-controlled sinusoidal oscillators', ***Archiv. fur Elektronik und Ubertrangungstechnik (Germany)***, vol. 36, no. 10, pp. 405-408.

[18] R. Senani**,** 1982, 'New single-capacitor simulations of floating inductors', ***Electrocomponent Science and Technology (UK),*** vol. 10, pp. 7-12.

[19] R. Senani, 1983, 'On the synthesis of a class of immittances and filters using grounded capacitors', ***International J. of Circuit Theory and applications (UK)***, vol. 11, no. 4, pp. 410-415.

[20] R. Senani, 1984, 'Novel application of generalized Current Conveyor', ***Electronics Letters, IEE (UK)***, vol. 20, no. 4, pp. 169-170; also see ibid 1984, vol. 20, no. 8, p. 356, April 1984.

[21] R. Senani, 1984, 'Floating ideal FDNR using only two Current Conveyors', ***Electronics Letters, IEE (UK),*** vol. 20, no. 5, pp. 205-206.

[22] R. Senani, 1985, 'New RC-active oscillator configuration employing unity-gain amplifiers', ***Electronics Letters, IEE (UK),*** vol. 21, no. 20, pp. 889-891.

[23] R. Senani, 1985, 'New types of sine wave oscillators', ***IEEE Transactions on Instrumentation and Measurement (USA)***, vol. IM-34, no. 3, pp. 461-463 and p. 485.

[24] R. Senani, 1985, 'Novel higher order active filter design using Current Conveyors', ***Electronics Letters, IEE (UK),*** vol. 21, no. 22, pp. 1055-1057.

[25] R. Senani, 1986, 'Network transformation for active-RC realization of RLM immittances', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 40, no. 3, pp. 67-70.

[26] R. Senani, 1986, 'On the realization of floating active elements', ***IEEE Transactions on Circuits and Systems (USA),*** vol. 33, no. 3, pp. 323-324.

[27] R. Senani, 1987 'On linear Inductance-Time and related conversions using IC op-amps', ***IEEE Trans. on Industrial Electronics (USA),*** vol. IE-34, no. 2, pp. 292-293.

[28] R. Senani, 1987, 'Network transformations for incorporating non-ideal simulated immittances in the design of active filters and oscillators', ***IEE Proc. Pt. G: Electronic Circuits and Systems (UK)***, vol. 134, no. 4, pp. 158-166.

[29] R. Senani, 1987, 'On the transformation of RC-active oscillators', ***IEEE Trans. on Circuits and Systems (USA)***, vol. CAS-34, no. 9, pp. 1091-1093.

[30] R. Senani, 1987, 'Generation of new two-amplifier synthetic floating inductors', ***Electronics Letters, IEE (UK),*** vol. 23, no. 22, pp. 1202-1203.

[31] R. Senani, 1987, 'A novel application of Four-terminal Floating Nullors', ***Proc. IEEE (USA),*** vol. 75, no. 11, pp. 1544-1546.

[32] R. Senani, 1988, 'Floating immittance realization: The nullor approach', ***Electronics Letters, IEE (UK),*** vol. 24, no. 7, pp. 403-405.

[33] R. Senani and V. Chauhan, 1988, 'Simple approach for generating Active-compensated building blocks', ***Electronics Letters, IEE (UK),*** vol. 24, no. 15, pp. 916-918.

[34] R. Senani, 1988, 'Analysis, synthesis and design of new types of RC-active sinusoidal oscillators: Part I', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 42, no.8, pp. 223-228.

[35] R. Senani, 1988, 'Analysis, synthesis and design of new types of RC-active sinusoidal oscillators: Part II', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 42, no.9, pp. 251-256.

[36] R. Senani and A. K. Banerjee, 1989, 'Linearly tunable Wien bridge oscillator realized with operational transconductance amplifiers', ***Electronics Letters, IEE (UK),*** vol. 25, no. 1, pp. 19-21.

[37] R. Senani, 1989, 'New electronically-tunable OTA-C Sinusoidal Oscillator', ***Electronics Letters, IEE (UK),*** vol. 25, no. 4, pp. 286-287.

[38] R. Senani, 1989, 'Three-op-amp Floating Immittance Simulators: A retrospection', ***IEEE Trans. on Circuits and Systems (USA)***, vol. 36 no. 11, pp. 1463-1465.

[39] R. Senani, M. P. Tripathi, D. R. Bhaskar and A. K. Banerjee, 'Systematic generation of OTA-C Sinusoidal Oscillators', ***Electronics Letters, IEE (UK)***, vol. 26, no. 18, pp. 1457-1459; also see *ibid*, 1991, vol. 27, no. 1, pp. 100-101.

[40] V. K. Singh and R. Senani, 1990, 'New multifunction active filter configuration employing Current Conveyors', ***Electronics Letters, IEE (UK),*** vol. 26, no.21, pp. 1814-1816.

[41] R. Senani, A. K. Banerjee, M. P. Tripathi and D. R. Bhaskar, 1991, 'Some simple Techniques of generating OTA-C Sinusoidal Oscillators', ***Frequenz: Journal of Telecommunications (Germany),*** vol.45, no. 7/8, pp. 177-181.

[42] R. Senani and D. R. Bhaskar, 'Single-op-amp Sinusoidal oscillators suitable for generation of Very Low Frequencies', ***IEEE Trans. on Instrumentation and Measurement (USA),*** vol. 40, no. 4, pp. 777-779 and pp. 794, 800.

[43] R. Senani and D. R. Bhaskar, 1991, 'Realization of Voltage-controlled Impedances', ***IEEE Trans. On Circuits and Systems (USA),*** vol. 38, no. 9, pp. 1081-1086; also see *ibid*, 1992, vol. 39, no. 2, p. 162.

[44] R. Senani and D. R. Bhaskar, 1992, 'A simple configuration for realizing Voltage-Controlled Impedances', ***IEEE Trans. on Circuits and Systems (USA)***, vol. 39, no. 1, pp. 52-59.

[45] R. Senani and V. K. Singh, 'Single-element-controlled Sinusoidal Oscillator employing a single Current Conveyor IC'***, Electronics Letters, IEE (UK)***, vol. 28, no. 4, pp. 414-415 ; also see *ibid*, 1992, vol. 28, no. 9. p. 895.

[46] R. Senani, 1992, 'New Current mode biquad Filter', ***International Journal of Electronics (UK),*** vol. 73, no. 4, pp. 735-742.

[47] R. Senani, 1993, 'Simple Sinusoidal Oscillator using op-amp compensation poles', ***Electronics Letters, IEE (UK),*** vol. 29, no. 5, pp. 452-453.

[48] D. R. Bhaskar and R. Senani**,** 1993, 'New Current Conveyor based Single resistance controlled/voltage-controlled oscillator employing grounded capacitors', ***Electronics Letters, IEE (UK),*** vol. 29, no. 7, pp. 612-614.

[49] D. R. Bhaskar, M. P. Tripathi and R. Senani**,** 1993, 'A class of three-OTA-two-Capacitor Oscillators with non-interacting controls', ***International Journal of Electronics (UK),*** vol. 74, no. 3, pp. 459-463.

[50] R. Senani**,** D. R. Bhaskar and M. P. Tripathi, 1993, 'On the realisation of linear Sinusoidal VCOs', ***International Journal of Electronics (UK),*** vol. 74, no. 5, pp. 727-733.

[51] D. R. Bhaskar, M. P. Tripathi and R. Senani**,** 1993, 'Systematic derivation of all possible Canonic OTA-C Sinusoidal Oscillators', ***Journal of the Franklin Institute (USA)***, vol. 330, no. 5, pp. 885-903.

[52] J. Malhotra and R. Senani**,** 1994, 'Class of floating, generalized positive/negative immittance converters/inverters realized with Operational Mirrored Amplifiers', ***Electronics Letters, IEE (UK),*** vol. 30, no. 1, pp. 3-5.

[53] D. R. Bhaskar and R. Senani, 1994, 'New linearly tunable CMOS-compatible OTA-C oscillators with non-interacting controls', ***Microelectronics Journal (UK)***, vol. 25, pp. 115-123.

[54] R. Senani and J. Malhotra, 1994, 'Minimal realizations of a class of Operational-Mirrored-Amplifier-based floating impedances', ***Electronics Letters, IEE (UK),*** vol. 30, no. 14, pp. 1113-1114.

[55] R. Senani and D. R. Bhaskar, 1994, 'Versatile Voltage-Controlled Impedance Configuration', ***IEE Proceedings Part G: Circuits, Devices and Systems (UK)***, vol. 141, no. 5, pp. 414-416.

[56] R. Senani, 1994, 'On Equivalent forms of Single-Op-Amp Sinusoidal RC Oscillators', ***IEEE Trans. On Circuits and Systems I: Fundamental Theory and Applications (USA),*** vol. 41, no. 10, pp. 617-624.

[57] R. Senani, 1994, 'Realisation of linear voltage-controlled-resistance in floating form' ***Electronics Letters, IEE (UK),*** vol. 30, no. 23, pp. 1909-1911.

[58] R. Senani, 1995, 'Floating GNIC/GNII Configuration realized with only a single OMA', ***Electronics Letters, IEE (UK),*** vol. 31, no.6, pp. 423-425.

[59] R. Senani and V. K. Singh, 1995, 'KHN-equivalent biquad using Current Conveyors', ***Electronics Letters, IEE (UK),*** vol. 31, no. 8, pp. 626-628.

[60] R. Senani, 1995, 'Universal linear voltage controlled impedance configuration', ***IEE Proceedings: Circuits, Devices and Systems (UK)***, vol. 142, no. 3, p. 208.

[61] R. K. Swami and R. Senani, 1995, 'Macromodeling ideal switches for SPICE', ***IEEE Circuits and Devices Magazine (USA)***, vol. 11, no. 4, pp. 8-10.

[62] R. Senani and D. R. Bhaskar, 1996, 'New active-R Sinusoidal VCOs with linear tuning laws', ***International Journal of Electronics (UK),*** vol. 80, no.1, pp. 57-61.

[63] R. Senani and V. K. Singh, 1996, 'Synthesis of Canonic Single Resistance Controlled Oscillators using a single Current-Feedback-Amplifier', ***IEE Proceedings Part G: Circuits, Devices and Systems (UK)***, vol. 143, no. 1, pp. 71-72.

[64] R. Senani, 1996, 'A simple approach of deriving Single-input-multiple-output current Mode biquad filters', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 50, no. 5/6, pp. 124-127.

[65] R. Senani, 1996, 'Alternative modification of the classical GIC structure', ***Electronics Letters, IEE (UK),*** vol. 32, no. 15, p. 1329.

[66] R. Senani and V. K. Singh, 1996, 'Novel Single-Resistance-Controlled Oscillator Configuration using Current Feedback Amplifiers', ***IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications (USA)***, vol. 43, no. 8, pp. 698-700.

[67] R. Senani and S. S. Gupta, 1997, 'Synthesis of Single-Resistance-Controlled Oscillators using CFOAs: Simple State Variable Approach', ***IEE Proc. Part G: Circuits, Devices and Systems (UK)***, vol. 144, no.2, pp. 104-106.

[68] R. Senani and S. S. Gupta, 1997, 'Universal voltage mode/current mode filter realized with Current feedback Op-Amps', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 51, no. 7/8, pp. 203-208.

[69] R. K. Swami and R. Senani, 1997, 'New macromodels of a Switch for SPICE Applications', ***IEEE Transactions on Education (USA)***, vol. 40, no. 4, pp. 273-277.

[70] A. K. Singh and R. Senani, 1998, 'Low-component-count active-only immittances and their application in realizing simple multifunction Biquads', ***Electronics Letters, IEE (UK),*** vol. 34, no. 8, pp. 718-719.

[71] R. Senani and S. S. Gupta, 1998, 'Implementation of Chua's chaotic circuit using current feedback op-amps', ***Electronics Letters, IEE (UK),*** vol. 34, no. 9, pp. 829-830.

[72] S. S. Gupta and R. Senani, 1998, 'State variable synthesis of single-resistance-controlled grounded-capacitor oscillators using only two CFOAs', ***IEE Proceedings: Circuits, Devices and Systems (UK)***, vol. 145, no. 2, pp. 135-138.

[73] R. Senani, 1998, 'Realisation of a class of Analog Signal Processing/Signal Generation Circuits: Novel configurations using current feedback op-amps', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 52, no. 9/10, pp. 196-206.

[74] S. S. Gupta and R. Senani, 1998, 'State variable synthesis of single-resistance-controlled grounded-capacitor oscillators using only two CFOAs: Additional New Realizations', ***IEE Proceedings: Circuits, Devices and Systems (UK)***, vol. 145, no. 6, pp. 415-418.

[75] A. K. Singh, R. Senani and M. P. Tripathi, 1999, 'Low-component-count, high frequency resonators and their applications, using op-amp compensation poles', ***Frequenz: Journal of Telecommunications (Germany),*** vol. 53, no. 7/8, pp. 161-169.

[76] S. S. Gupta and R. Senani, 2000, 'Grounded-capacitor current-mode SRCO: Novel application of DVCCC', ***Electronics Letters, IEE (UK),*** vol. 36, no. 3, pp. 195-196.

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