

CURRICULUM VITAE

Dr Panagiotis Varzakas

Professor

Contact

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A. Education

-June 1992 – March 1999: PhD in Communications Engineering, University of Athens, Dept. of Physics, Laboratory of Electronics, Project title: "*Spectral efficiency of multiple-access methods in cellular mobile radio systems*"

-September 1989–March 1993: Master in Communications Engineering, University of Athens, Department of Physics and Informatics

- September 1985-September 1989 : BSc. in Physics, University of Athens, Greece.

Final year project on: "*Space and Satellite Communications*".

B. Scientific Experience

1. TEACHING EXPERIENCE

June 1992 –October 1998:

-Research and Teaching Assistant:

University of Athens, Dept. of Physics, Laboratory of Electronics:

Laboratory of Electronics, Department of Physics, University of Athens, (course: "Laboratory of Telecommunications", "Laboratory of Electronics", "Laboratory of Waves and Optics")

-September 2000 to August 2002: University of Pireas, Department of Technology Education and Digital Systems (courses: "Wireless Communications", "Queueing Theory and Simulation", "Mobile Computers and Systems")

-September 1990- June 2005:

-University of Athens, (Master in Communications Engineering) (course: "*Analog and Digital Communications*")

-Technological Educational Institute of Pireas (T.E.I of Pireas), Department of Computing Systems, (course: "Laboratory of Telecommunications", "Laboratory of Digital circuits and Microprocessors", "Laboratory of Electronics")

-*Assistant Professor*, Technological Educational Institute of Lamia (T.E.I of Lamia), Department of Electronics (courses: "Laboratory of Electronics Measurements", "Laboratory of Digital Systems", "Laboratory of Logical Circuits")

- September 2000-September 2002:

Assistant Professor:

University of Pireas, Department of Technology and Digital Systems, Courses: "Wireless Communications", "Queueing Systems and Simulation", "Mobile Computing and Communications Systems"

-Communications Corps of the Greek Army (courses: "Antennas", "Telephony", "Electrology", "Mobile Telephony")

- *Assistant Professor:*

September 2005-October 2012: Technological Educational Institute of Lamia (T.E.I of Lamia), Department of Electronics (courses: "Laboratory of Coding and Information Theory", "Telecommunications", "Coding and Information Theory", "Transmission of Electromagnetic waves", "Introduction to Communications Systems", "Mobile and Satellite Communications")

Associate Professor:

-October 2012-November 2016:

Associate Professor:

Technological Educational Institute of Lamia (T.E.I of Lamia), Department of Electronics (courses: "Laboratory of Coding and Information Theory", "Telecommunications", "Coding and Information Theory", "Transmission of Electromagnetic waves", "Introduction to Communications Systems", "Mobile and Satellite Communications", "Digital Communications")

October 2014-July 2015, October 2017-July 2018, October 2018-July 2019:

Hellenic Open University, course: "Modern networks and Services"

-November 2016-January 2019:

Professor:

Technological Educational Institute of Steras Elladas Lamia (T.E.I of Stereas Elladas), (courses: "Laboratory of Coding and Information Theory", "Telecommunications", "Coding and Information Theory", "Transmission of Electromagnetic waves", "Introduction to Communications Systems", "Mobile and Satellite Communcaations", "Digital Communcaations")

January 2019-19/8/2020:

Professor:

General Department of Lamia, University of Thessaly (courses: "Laboratory of Coding and Information Theory", "Information Theory and Codes", "Information Theory and Data Coding", "Laboratory of Digital Telecommunications", "Digital Telecommunications", "Antennas and Wireless Transmission", "Cryptography")

October 2019-July 2020, October 2020-July 2021, October 2021-July 2022, October 2022-July 2023

Hellenic Open University, course: "Digital Systems"

20/8/2020- to today:

Department of Computer Science and Telcommunications, Lamia, University of Thessaly.

2. PROFESSIONAL EXPERIENCE

-September 1999 to August 2000: Communications Engineer: COSMOTE S.A Mobile Communications: Network Management Center (NMC) and Base Station Subsystem (BSS group)

-March 1996 -March 1997: Communications Corps of the Greek Army (national service): During my national service I served at the Communications Corps of the Greek Army. My work involved the operation and supervision of a node of the "Hermes" military telecommunications network. ("Hermes" is a nationwide wireless network of fixed and mobile stations, part of the pan-european advanced telecommunication infrastructure of NATO)

-7/2002-7/2003: Senior Researcher: OTE S.A. Project title: "Study of 3G Mobile Systems" ((IMT2000-UMTS)

-2/10/2009-1/10/2010: Brunel University West London, School of Engineering and Design, Electronic and Computer Engineering και Technological Educational Institute of Thessaloniki, *MSc Wireless Communication Systems*, EE5517 Workshop, Assignment 2.2 WLAN "Simulation Planning and analyzing WLAN using OPNET".

D. List of Publications

1. INTERNATIONAL SCIENTIFIC JOURNALS

- [1] **P.Varzakas**, Capacity Estimation for a DS-CDMA System in Nakagami-m Fading", *WSEAS Transactions on Communications*, Volume 21, pp.31-33, 2022
- [2] **P.Varzakas**, "Estimation of optimum antennas number of a spread spectrum MIMO system under signal fading", *WSEAS Transactions on Computers*, Volume 18, pp. 281-284, 2019.
- [3] **P.Varzakas**, "On the Radio Capacity of a Spread Spectrum Cognitive Radio System", *WSEAS Transactions on Communications*, Volume 18, pp. 179-184, 2019.
- [4] **P.Varzakas**, "On the Optimum Power Allocation in a Cellular DS/FFH-CDMA System", *WSEAS Transactions on Communications*, Volume 14, pp. 50-53, 2015.
- [5] **P.Varzakas**, "On the Statistics of the Channel Capacity for a DS/FFH-CDMA System", *WSEAS Transactions on Communications*, Volume 13, pp. 494-499, 2014.
- [6] **P.Varzakas**, "Spectral Efficiency Comparison of TDMA and DS-CDMA in Cellular Mobile Radio Systems", *WSEAS Transactions on Communications*, vol. 13, pp. 195-200, 2014.
- [7] **P.Varzakas**, "MC/DS-CDMA Versus SC/DS-CDMA in Mobile Radio: Spectral Efficiency Approach", *WSEAS Transactions on Communications*, Issue 6, vol. 12, pp. 241-250, June 2013.
- [8] **P.Varzakas**, "Optimum processing gain for a hybrid direct sequence/slow frequency hopping code division multiple access cellular system over Rayleigh fading channels: the direct sequence/slow frequency hopping code division multiple access case", *International Journal of Communication Systems*, vol. 25, no.8, pp.1034-1043, Aug. 2012.
- [9] **P.Varzakas**, "Channel Capacity per user in a Power and Rate Adaptive Hybrid DS/FFH-CDMA Cellular System over Rayleigh Fading Channels", *International Journal of Communication Systems*, vol. 25, no.7, pp.943-952, July 2012.
- [10] **P.Varzakas**, "On the Optimum Processing Gain for an Hybrid DS/FFH-CDMA Cellular System over Rayleigh Fading Channels", *International Journal of Communication Systems*, vol.24, no.7, pp.902-910, July 2011.
- [11] **P.Varzakas**, "Radio Capacity Estimation of single-cell Spread Spectrum MIMO and Adaptive Rate DS/FFH-CDMA Systems under Rayleigh Fading Conditions", *The Mediterranean Journal of Electronics and Communications* vol. 6, no.4, pp. 113-119, 2010.
- [12] **P.Varzakas**, "Analytical Mathematical Expression for the Channel Capacity of a Power and Rate Simultaneous Adaptive Cellular DS/FFH-CDMA System in a Rayleigh Fading Channel", *International Journal of Electronics and Communication Engineering*, vol. 4, no.8, pp. 1293-1296, 2010.
- [13] **P.Varzakas**, "Optimal distance Estimation in Cellular DS/SFH-CDMA System under Rayleigh Fading", *The Mediterranean Journal of Electronics and Communications*, vol. 5, no.1, pp. 13-17, 2009.
- [14] **P.Varzakas**, "Information-Theoretic Comparison of Fading Channel Capacity for CDMA and DS-CDMA in a Rayleigh Fading Environment", *WSEAS Transactions on Communications*, Issue 2, vol. 7, pp. 52-57, Feb. 2008.
- [15] **P.Varzakas**, "Optimal SIR for an hybrid cellular DS/SFH CDMA system", *International Journal of Communication Systems*, vol. 21, no.5, pp. 549-557, May 2008.

- [16] **P.Varzakas**, "Optimization of an OFDM Rayleigh fading system", *International Journal of Communication Systems*, vol.20, pp. 1-7, Jan.2007.
- [17] **P.Varzakas**, "Average Channel Capacity for Rayleigh Fading Spread Spectrum MIMO systems", *International Journal of Communication Systems*, vol. 19, pp. 1081-1087, Dec.2006.
- [18] **P.Varzakas** and G.S.Tombras, "Spectral Efficiency of a Single Cell Multi-Carrier DS-CDMA System in Rayleigh Fading", *Journal of the Franklin Institute-Engineering and Applied Mathematics*, 343, pp. 295-300, 2006.
- [19] **P.Varzakas** and G.S.Tombras, "Spectral efficiency of a cellular MC/DS-CDMA system in Rayleigh fading", *International Journal of Communication Systems*, vol.18, no.8, pp. 795-801, Oct.2005.
- [20] N.C.Sagias, **P.Varzakas**, G.S.Tombras and G.K.Karagiannidis, "Spectral Efficiency for Selection Combining RAKE receivers over Weibull Fading Channels", *Journal of the Franklin Institute-Engineering and Applied Mathematics*, 342, pp. 7-13, 2005.
- [21] **P.Varzakas**, "Optimal Radio Capacity for An Hybrid DS/SFH CDMA System in Cellular Radio", *IEE Electronics Letters*, vol. 40, no. 7, pp. 440-442, 1 April 2004.
- [22] N.C.Sagias, **P.Varzakas**, G.S.Tombras and G.K.Karagiannidis, "Average Channel Capacity for Generalized Selection Combining RAKE Receivers", *European Transactions on Communications*, vol. 15, no.5, pp.497-500, Sept/Oct. 2004.
- [23] **P.Varzakas** and G.S.Tombras, "Optimal Hop number of an adaptive hybrid DS/FFH CDMA in Rayleigh fading", *IEE Electronics Letters*, vol.39, no.6, pp. 557-558, March 2003.
- [24] **P.Varzakas** and G.S.Tombras, "Spectral efficiency of adaptive hybrid DS/FFH-CDMA in Rayleigh fading", *IEE Electronics Letters*, vol.39, no.1, pp. 145-147, January 2003.
- [25] **P.Varzakas** and G.S.Tombras, "Average channel capacity for RAKE receivers", *IEE Electronics Letters*, vol.38, no.10, pp. 475-476. 9th May 2002.
- [26] **P.Varzakas** and G.S.Tombras, "Spectral efficiency for a hybrid DS/FH CDMA system in cellular mobile radio", *IEEE Transactions on Vehicular Technology*, vol. 50, no.6, pp. 1321-1327, Nov. 2001.
- [27] **P.Varzakas** and G.S.Tombras, "Spectral efficiency of DS-CDMA in cellular mobile radio", *International Journal of Communication Systems*, vol. 10, pp. 247-252, 1997.
- [28] **P.Varzakas** and G.S.Tombras, "Comparative estimate of user capacity for FDMA and DS-CDMA in mobile radio", *International Journal of Electronics*, vol. 83, no.1, pp. 133-144, July 1997.

2. INTERNATIONAL SCIENTIFIC CONFERENCES

- [1] **P.Varzakas**, "Statistics of the Channel Capacity in a Cellular DS/FFH-CDMA Rayleigh Fading System", Proceedings of the 2013 International Conference on Electronics and Communication Systems (ECS 2013), pp. 131-135, Rhodes Island, Greece, July 16-19, 2013.
- [2] **P.Varzakas**, "Optimizing Power Allocation in a Cellular DS/FFH-CDMA System under Rayleigh Fading, Proceedings of the 2013 International Conference on Electronics and Communication Systems (ECS 2013), pp. 127-130, Rhodes Island, Greece, July 16-19, 2013.
- [3] **P.Varzakas**, "Estimation of Radio Capacity of a Spread Spectrum Cognitive Radio Rayleigh Fading System", ACM Proceedings of the 17th Pan-Hellenic Conference on Informatics with international participation, pp. 63-66, Sept. 19-21, 2013, Thessaloniki, Greece.
- [4] **P.Varzakas**, "Analytical Mathematical Expression for the Channel Capacity of a Power and Rate Simultaneous Adaptive Cellular DS/FFH-CDMA System in a Rayleigh Fading Channel", *Proceedings of the 2010 International Conference on Communication and Information Technologies* (ICCIT 2010), Paris, France, pp. 1413-1417, 28-30 July 2010.
- [5] **P.Varzakas**, "Closed-form expression for the optimum antennas number of a spread spectrum MIMO system under rayleigh fading conditions", *Proceedings of the 13th WSEAS International Conference on Communications*, Rodos, Greece, pp. 56-59, 23-25 July 2009.
- [6] **P.Varzakas**, "Optimum Radio Capacity Estimation of a Single-Cell Spread Spectrum MIMO System under Rayleigh Fading Conditions", *Proceedings of the 2009 International Conference on Communications Systems and Technologies* (ICCST'09), Oslo, Norway, pp. 212-215, 29-31 July 2009 .
- [7] **P.Varzakas**, "Optimizing Processing Gain of a Cellular DS/FFH-CDMA Rayleigh Fading System", *Proceedings of the 10th IEEE International Symposium on Spread Spectrum Techniques and Applications* (ISSSTA 2008), Creating New Dimensions in the Wireless World, Bologna, pp. 523-527, Italy, 25-28, August 2008.
- [8] **P.Varzakas**, "Optimal radio capacity of a rayleigh fading single-cell spread spectrum MIMO system", *International Conference on Telecommunications, (ICT 2008)*, St. Petersburg, pp. 1-5, 16-19 June 2008.
- [9] **P.Varzakas**, "Average Channel Capacity for a Power and Rate Adaptive DS/FFH CDMA Cellular System", to *Proceedings of Fifth International Symposium on Communications Systems, Networks and Digital Signal Processing* (CSNDSP' 06), pp. 92-95, Patras University Conference Centre, 19-21 July 2006, Greece.
- [10] **P.Varzakas**, "Optimal distance estimation for the Spectral Efficiency of an Hybrid Cellular DS/SFH CDMA System", *Proceedings IEEE International Symposium on Circuits and Systems* (ISCAS 2006), pp. 1359-1361, 21-24 May 2006, Kos, Greece.

- [11] **P.Varzakas**, "Optimal radio capacity for an adaptive Hybrid DS/FFH-CDMA system in Rayleigh fading", *First IEEE International Symposium on New Frontiers in Dynamic Spectrum Access, (IEEE DYSpan 2005)*, pp. 642-644, 8-11 November 2005, Baltimore, USA.
- [12] **P.Varzakas** and G.S.Tombras, "Spectral efficiency for an adaptive hybrid DS/FFH-CDMA system in a Rayleigh fading channel", *Proceedings of the 5th European Workshop on Mobile/Personal Satcoms, (EMPS 2002)*, 25-26 September 2002, pp.139-145, Baveno-Stresa, Lake Maggiore, Italy.
- [13] **P.Varzakas** and G.S.Tombras, "Estimation of spectral efficiency for MC/DS-CDMA in cellular systems", *Proceedings of the Communications Symposium 2000 IEEE Benelux Chapter on Vehicular Technology and Communications, (IEEE-SVTC)*, pp. 60-66, IMEC, Leuven, 19 Oct. 2000.
- [14] **P.Varzakas** and G.S.Tombras, "Spectral efficiency for TDMA and Direct-Sequence CDMA in cellular systems", *Proceedings of the 7th International Conference on Advances in Communications and Control: TELECOMMUNICATIONS/SIGNAL PROCESSING (COMCON 7)*, 28 June-2 July 1999, Athens, Greece.
- [15] D.E.Ventzas, P.Tsitsipis, K. Kalovrektis and **P.Varzakas**, "Microcontroller Control for an Electro-pneumatic Manipulator", *Proceedings of the EURICSON'98 Third European Robotics, Intelligent Systems & Control Conference-SOFTCOM'98 IMACS/IFAC International Symposium on Soft Computing in Engineering Applications*, 1998.
- [16] **P.Varzakas** and G.S.Tombras, "Spectral efficiency for FDMA and Direct-Sequence CDMA in mobile radio", *Proceedings of the 6th International Conference on Advances in Communications and Control: TELECOMMUNICATIONS/SIGNAL PROCESSING (COMCON 6)*, pp. 847-853, June 1997, Corfu, Greece.
- [17] **P.Varzakas** and G.S.Tombras, "Comparative estimation of FDMA and CDMA channel capacity in a Rayleigh fading channel", *Proceedings of the International Symposium on 3rd Generation Infrastructure and Services, (3GIS)*, pp. 139-143, 2 -3 July 2001, Athens, Greece.
- [18] **P.Varzakas** and G.S.Tombras, "Spectral efficiency for FDMA and DS-SS-CDMA in cellular systems", *Proceedings of the 9th IEEE International Symposium on Personal, Indoor and Mobile Radio communications, (PIMRC'98)*, vol. III, pp. 1121-1125, 9-11 September 1998, Boston, U.S.A.
- [19] **P.Varzakas** and G.S.Tombras, "Estimation of spectral efficiency for hybrid DS/FH CDMA in cellular mobile radio", *Proceedings of the International Conference on Telecommunications (ICT'98)*, vol. II, pp. 22-26, 22-25 June 1998, Chalkidiki, Greece.
- [20] **P.Varzakas** and G.S.Tombras, "Estimation of Spectral Efficiency of Direct-Sequence Code Division Multiple Access in Mobile Radio", *Proceedings of the International Workshop on Mobile Communications, (IWMC'96)*, pp. 184-188, Thessaloniki, Greece, 19-20 September 1996.

E. AWARDS

1. Chairman of Seccion: *Communications: Wireless & Optical Communications, 13th WSEAS International Conference on Communications*, Rodos, Greece, 23-25 July 2009.
2. Member of Editorial Board: *The Mediterranean Journal of Electronics and Communications*.
3. Seccion Chair: *2010 International Conference on Communication and Information Technologies (ICCIT 2010)*, Paris, France, 28-30 July 2010.
4. Reviewer in *IEEE Transactions on Vehicular Technology* (IEEE Vehicular Technology Society).
5. Reviewer in *IEEE Transactions on Mobile Computing* (IEEE Computer Society).
6. Reviewer in *The Journal of The Franklin Institute-Engineering and Applied Mathematics*.
7. Reviewer in *International Journal of Communications Systems*.
8. Reviewer in *IEEE Transactions on Wireless Communications* (IEEE Communications Society).
9. Reviewer in *European Transactions on Telecommunications*
10. Reviewer in *IEEE region 8 Conference, IEEE Africon' 07*, 26-28 Sept. 2007, Windhoek, Namibia.
11. Reviewer in *IEEE Signal Processing Letters* (IEEE Signal Processing Society).
12. Reviewer in *American Computing Conference 2008 (ACC'08)*, MIT, Cambridge, USA, April 21-23, 2008.
13. Reviewer in *IEEE GLOBECOM 2008 Wireless Communications Symposium*, New Orleans, LA, USA, 30 Nov.-4 Dec. 2008.
14. Reviewer in *The Mediterranean Journal of Electronics and Communications* .
15. Reviewer in *IEEE Communications Letters* (IEEE Communications Society).
16. Reviewer in *Telecommunications Systems Journal*.
17. Reviewer in *IET (IEE) Electronics Letters (Institution of Engineering and Technology, IET)*.
18. Reviewer in *WSEAS American Conference on Applied Mathematics (AMERICAN-MATH'10)*, University of Harvard, Cambridge, USA, 27-29 Jan.2010.
19. Reviewer in *IEEE International Conference on Communications-Wireless Communications Symposium (ICC 2010)*, 23-27 May 2010, Cape Town, South Africa.
20. Reviewer in *Wireless Communications and Mobile Computing*.
21. Reviewer in *WSEAS Transactions on Systems*.
22. Reviewer in *2011 IEEE Symposium on Computers & Informatics (ISCI 2011)*, Kuala Lumpur, Malaysia, 20-22 March 2011.

23. Reviewer in *WSEAS Transactions on Communications*.
24. Reviewer in *Micro & Nano Letters Institution of Engineering and Technology (IET)*
25. *Invitation* for evaluation of new Serbian national projects proposals.
26. Reviewer in *2011 IEEE International RF and Microwave Conference (RFM)*, 12 Dec-14 Dec. 2011 Negeri Sembilan, Malaysia.
27. Reviewer in *Journal of Electromagnetic Waves and Applications (JEMWA)*.
28. Reviewer in *2011 IEEE Student Conference on Research and Development (SCORED 2011)*.
29. Reviewer in *10th WSEAS Int. Conf. on DATA NETWORKS, COMMUNICATIONS, COMPUTERS (DNCOCO_'11)* Catania, Sicily, Italy, November 3-5, 2011.
30. Reviewer in *2012 IEEE Business, Engineering & Industrial Applications Colloquium (BEIAC 2012)*, Kuala Lumpur, Malaysia on 7 – 8 April 2012.
31. Reviewer in *2012 IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE 2012)*, 11 Dec-13 Dec 2012, Melaka, Malaysia.
32. Reviewer in *2012 IEEE Conference on Open Systems (ICOS 2012)*.
33. Reviewer in *2012 IEEE Symposium on Industrial Electronics & Applications (ISIEA 2012)*, Bandung, Indonesia on 23–26 September 2012.
34. Reviewer in *2012 IEEE Asia-Pacific Conference on Applied Electromagnetics*.
35. Reviewer in *ETRI Journal (Electronics and Telecommunications Research Institute, ETRI Daejeon, South Korea)*.
36. Reviewer in *18th IEEE international Conference on Digital Signal Processing (DSP 2013)*, 1-3 July 2013, Santorini, Greece.
37. Reviewer in *2013 IEEE Symposium on Wireless Technology and Applications (ISWTA 2013)*, Sept. 22–25, 2013, Kuching, Malaysia.
38. Reviewer in *2013 IEEE 24th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'13)*, Sept. 8-11, London, UK.
39. Reviewer in *Wireless Networks (2013)*.
40. Reviewer in *Micro and Nano Letters (2013)*.
41. Reviewer in *Progress In Electromagnetics Research (PIER) (2013)*.
42. Reviewer in *Scientific Research and Essays (SRE) (2014)*.
43. Reviewer in *2014 IEEE Symposium on Wireless Technology and Applications (ISWTA 2014)*, 2014, Malaysia.
44. Reviewer in *2014 International Conference on Computer, Communication, and Control Technology (I4CT'2014)*, 02-04 Sep 2014, Langkawi, Malaysia.
45. Reviewer in *The 4th International conference on Consumer Electronics, Communications and Networks (CECNet 2014) Dec. 20th-22nd, 2014, Beijing, China*.
46. Reviewer in *IEEE Wireless Communications Letters (2014)*.
47. Reviewer in *IET (IEE) Electronics Letters (Institution of Engineering and Technology, IET) (2014, 2015)*.
48. Reviewer in *Progress In Electromagnetics Research (PIER) (2014, 2015)*
49. Reviewer in *IEEE ICC 2015-Ad-Hoc and Sensor Networking Symposium (IEEE Communications Society) 8-12 June 2015, London, UK*.
50. Reviewer in *IET Communications (2016)*.
51. Reviewer in *Advances in Science, Technology and Engineering Systems Journal (ASTESJ) (2016, 2017)*.
52. Reviewer in *China Communications (2017)*.
53. Reviewer in *International Journal of Wireless Communications and Mobile Computing (2017)*.
54. Reviewer in *International Journal of Communication Systems (2017)*.
55. Reviewer in *The 7th International Conference on Electronics, Communications and Networks (CECNet 2017)*, 24-27 Nov. 2017, Thailand.
56. Reviewer in *IEEE Asia Pacific Microwave Conference (APMC)*, Kuala Lumpur, Malaysia November 13–16, 2017.
57. Reviewer in *IEEE Access (2017)*.
58. Reviewer in *European Transactions on Telecommunications (2018)*.
59. *International Journal of Communication Systems (2018)*.
60. Reviewer in *Progress In Electromagnetics Research (PIER B) (2018)*.
61. Reviewer in *IET Microwaves, Antennas and Propagation (2018, 2019)*.
62. Reviewer in *IET (IEE) Electronics Letters (Institution of Engineering and Technology, IET) (2018)*.
63. Reviewer in *Advances in Science, Technology and Engineering Systems Journal (2018)*.
64. Reviewer in *Transactions on Emerging Telecommunications Technologies (2018)*.
65. Reviewer in *Second International Conference on Advanced Computational and Communication Paradigms (ICACCP 2019)*, February 25-28 2019, SMIT, Sikkim.
66. Reviewer in *The Smart Cities Symposium 2019 (SCS'19)*, The Institution of Engineering and Technology, UK, University of Bahrain, 24-26 March 2019.
67. Reviewer in *2019 Fifth International Conference on Image Information Processing (ICIIP)*, November 15-17, 2019, Jaypee University of Information Technology, Shimla, India.
68. Reviewer in *The 6th International Workshop on Mobile Applications 2019 (MobiApps 2019)*, 26-28 August 2019, Istanbul, Turkey.

69. Reviewer in IET Optoelectronics (2019).
70. Reviewer in IET The Journal of Engineering (2019).
71. Reviewer in IET Communications (2019).
72. Reviewer in Journal of Electrical and Computer Engineering (Hindawi) (2019)
73. Reviewer in IET Circuits, Devices & Systems (2019).
74. Reviewer in IET Signal Processing (2020)
75. Reviewer in Transactions on Emerging Telecommunications Technologies (2020)
76. Reviewer in 2020 IEEE 31st Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2020), 31 August-3 September 2020 // Virtual Conference.

F. CROSS-REFERENCES (CITATIONS)

Total number of Citations (Cross References): 159 (145 by Scopus).

G. RESEARCH INTERESTS: My current research interests include, wireless systems, multiple access techniques, spread spectrum systems, information theory, channel capacity, MIMO systems, cryptography, optimization and diversity techniques for cellular mobile radio systems and wireless optical systems.