Ramazan KÖPRÜ, Associate Professor

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1. Education:

Degree	Dept.	University	Year
Ph.D.*	Electronics and Comm. Eng.	Istanbul Technical Univ., Turkey	2009 - 2013
M.Sc.**	Electronics and Comm. Eng.	Istanbul Technical Univ., Turkey	1992 - 1994
B.Sc.	Electronics and Comm. Eng.	Yildiz Technical Univ, Turkey	1987 - 1991
High. School	Electronics Dept.	Haydarpaşa Technical High School, Istanbul, Turkey	1983 - 1987

2. Academic:

Title	Dept.	University	Year
Assoc. Prof.	Electrical-Electronics Eng.	Işık Univ., Turkiye	Apr. 2021 - Present
Assist. Prof.	Electrical-Electronics Eng.	Işık Univ., Turkey	2014 - 2021
Researcher	Electrical-Electronics Eng.	Işık Univ., Turkey	2012 - 2014

* Ph.D. Thesis: “A semi-analytic method to design wideband microwave amplifiers”, Electronics and Communications Eng. Dept., Istanbul Technical University, September 2013, Istanbul/Turkey. GPA: 3.88/4. Advisor: Prof. Dr. Hakan Kuntman.

** MSc. Thesis: “Computer aided high order OTA-C active filters using QUADs”, Electronics and Communications Eng. Dept., Istanbul Technical University, June 1994, Istanbul/Turkey. GPA: 89.66/100. Advisor: Prof. Dr. Ali Nur Gönüleren.

3. Supervised PhD/MSc/BSc Thesis:

3.1. **Title:** Co-Advisor - Ast. Prof. Ramazan Kopru
PhD Dissertation: “*High Performance Tunable Active Inductors for Microwave Circuits*”, by Hadi Ghasemzadeh Momen,
Istanbul Technical University, Electronics and Communications Engineering Dept., Turkey, Graduation date September 2016.

3.2 **Title:** Advisor - Assoc. Prof. Ramazan Kopru

MSc Thesis (cont.): "*Time-Domain High Speed ADC Circuits*", by Moaamen Magdy Abdelrazek Mohamed, Işık University/Graduate School, Electrical-Electronics Eng.Dept., Turkiye, Started January 2024.

3.3 **Title:** Advisor - Assoc. Prof. Ramazan Kopru
MSc Thesis (cont.): "*Biomimetic Robot with Embedded Control*", by Faisal Ali Hasan Baqutyan, Işık University/Graduate School, Electrical-Electronics Eng.Dept., Turkiye, Started January 2024.

3.4 **Title:** Advisor - Assoc. Prof. Ramazan Kopru
MSc Thesis (cont.): "*Electronic Circuit Design Based On Neural Networks*", by Feras Abou Allil, Işık University/Graduate School, Electrical-Electronics Eng.Dept., Turkiye, Started September 2024.

3.5 **Title:** Advisor - Ast. Prof. Ramazan Kopru
BSc Graduation Project: "*Design and Implementation of Raspberry PI/Arduino Controlled Wireless Power Transfer Based on Cross-Coupled LC Power Oscillator*", Işık University, Electrical-Electronics Engineering Dept., 2019-20 fall.

4. Published Journal Papers (SCI, SCI Expanded, EI & Ulakbim):

Published Journal Papers (SCI, SCI Expanded) – Part I

4.1 Yarman, B. S., **Köprü, R.**, Kumar, N. and Prakash, C. (2014). "High Precision Synthesis of a Richards Immitance via Parametric Approach". *IEEE Transactions on Circuits and Systems I, Regular Papers*, Vol. 61, No. 4, pp. 1055-1067, 2014.

4.2 **Köprü, R.**, Kuntman, H. and Yarman, B. S. (2013). "Novel approach to design ultra wideband microwave amplifiers: normalized gain function method". Vol. 22, No. 3, pp. 672-686, September 2013, *Radioengineering*.

4.3 Nesimoğlu, T., Aydın, Ç., Atilla, D. Ç., **Köprü, R.**, and Yarman, B. S. (2013). "An Eclectic Approach to Design Tunable Amplifiers". *RFMiCAE. International Journal of RF and Microwave Computer-Aided Engineering*, Vol. 23, issue 4, p.444-451, Wiley Periodicals Inc.

4.4 **Kopru, R.**, Kılınç, S., Aydın, Ç., Atilla, D. Ç., Karakuş, C., Yarman, B. S. (2014). "Ultra Wideband Matching Network Design for a V-Shaped Square Planar Monopole Antenna", *International Journal of Microwave and Wireless Technologies*, Cambridge Univ. Press, published online on august 13-2014, volume 6, issue 06, pp. 555-564.

4.5 **Kopru, R.**, Kuntman, H., Yarman, B. S. (2014). "On Numerical Design Technique of Wideband Microwave Amplifiers Based on GaN Small-Signal Device Model", *Analog Integrated Circuits and Signal Proccessing, Springer*, Vol. 81, No. 1, pp. 71-87, published online on july 13, 2014.

4.6 **R. Köprü**, "FSRFT: Fast Simplified Real Frequency Technique Via Selective Target Data Approach for Broadband Double Matching", *IEEE Transactions on Circuits and Systems II, Express Briefs*, Vol. 64, No. 2, pp. 141-145, Feb. 2017.

4.7 Cagatay Aydın, Doğu Çağdaş Atilla, **Ramazan Köprü**, Sedat Kılınç, Cahit Karakuş, Sıddık Yarman, "A Design Technique of 50 Ohm Terminated Bandpass Matching Network and Its Implementation to a Y-Shaped Monopole Antenna Matching", *Analog Integrated Circuits and Signal Proccessing, Springer*, published online, June 2, 2016.

4.8 H.G. Momen, M. Yazgi, **R. Kopru** and A. Naderi, "Design of a New Low Loss Fully CMOS Tunable Floating Active Inductor", *Analog Integrated Circuits and Signal Proccessing, Springer,* published online 27 june 2016, DOI: 10.1007/s10470-016-0784-3.

4.9 H.G. Momen, M. Yazgi, **R. Kopru**, "Low-loss active inductor with independently adjustable self-resonance frequency and quality factor parameters", *Integration, the VLSI Journal, Elsevier,* accepted on 30 dec. 2016 and in-press, DOI: 10.1016/j.vlsi.2016.12.014.

4.10 H.G. Momen, M. Yazgi, **R. Kopru**, A. Naderi Saatlo**.** "An accurate CMOS interface small capacitance variation sensing circuit for capacitive sensor applications", *Circuits, Systems and Signal Processing (CSSP),* published online 8 Sep. 2017. DOI 10.1007/s00034-017-0657-8.

Published Journal Papers (ESCI-Emerging Sources Citation Index):

4.11 Binboga Siddik YARMAN, Ahmet AKSEN, **Ramazan KOPRU**, Narendra KUMAR, Cagatay AYDIN, Dogu Cagdas ATILLA, Prakash CHACKO, "Computer Aided Darlington Synthesis of an All Purpose Immittance Function", *IU-JEEE Istanbul University Journal of Electrical and Electronıcs Engıneering (Electrica, ISSN:* 2619-9831*)*, Vol. 16, No. 1, pp. 2027-2037, 2016.

Published Journal Papers (Tubitak Ulakbim Index of Turkey):

4.12 **Ramazan Kopru**, "FSRFT Based Broadband Double Matching via Passband Extremums Determination", *BAJECE Balkan Journal of Electrical and Computer Engineering,* Vol. 6, No. 3, July 2018, pp. 165-171, DOI: 10.17694/bajece.421266.

Published Journal Papers (SCI, SCI Expanded) – Part II

4.13 **Ramazan Kopru**, "Termination Transformation Theorem for Microwave Power Transfer Networks", *Journal of Circuits, Systems and Computers*, World Scientific Publishing Company, published online on June 3, 2019, pp. 1-20, vol. 29, issue. 3 (2020), doi: 10.1142/S0218126620500437, https://doi.org/10.1142/S0218126620500437

5. Published International Conference Papers:

5.1 **Köprü, R.,** Aydın, Ç., Atilla, D. Ç., Karakuş, C., and Yarman, B. S. (2013). "Wideband Matching Network Design For A V-Shaped Square Monopole Antenna Using Real Frequency Technique". MMS2013 13th Mediterranean Microwave Symposium, The Lebanese-Institute of Technology, Saida, Lebanon, September 2-5.

5.2 Çağatay Aydın, Doğu Çağdaş Atilla, Oğuzhan Kızılbey, **Ramazan Köprü**, Tayfun Nesimoğlu, B. S. Yarman (2013). "Design and Investigation of 12-50 Ohm Tunable Microstrip Impedance Transforming Filter", MMS2013 13th Mediterranean Microwave Symposium, The Lebanese-Institute of Technology, Saida, Lebanon, September 2-5.

5.3 **Köprü, R.**, Kuntman, H. And Yarman, B. S. (2013). "A Novel Method to Design Wideband Power Amplifier for Wireless Communication". ISCAS2013, IEEE International Symp. On Circuits and Sytems, May 19-23 Beijing, China.

5.4 Atilla, D. Ç., Aydın, Ç., **Köprü, R.**, Nesimoğlu, T. And Yarman, B. S. (2013). "A Tunable Inductance Topology to Realize Frequency Tunable Matching Networks and Amplifiers". ISCAS2013, IEEE International Symposium on Circuits and Systems, May 19-23 Beijing, China.

5.5 **Köprü, R.**, Kuntman, H. And Yarman, B. S. (2012). "Design of an ultra wideband microwave amplifier using simplified real frequency technique". MMS2012 12th

Mediterranean Microwave Symposium, Doğuş University, Istanbul (Turkey), September 2-5.

5.6 **R. Köprü**, H. Kuntman, B. S. Yarman, (2013). "2W Wideband Microwave PA Design for 824-2170 MHz Band Using Normalized Gain Function Method", ELECO 2013, 8th International Conference on Electrical and Electronics Engineering, Bursa/Turkey, Nov. 28-30 2013.

5.7 A. N. Gönüleren, **R. Kopru**, H. Kuntman, (1995). "Multiloop Feedback Bandpass OTA-C Filters Using Quads", ECCTD'95 European Conference on Circuit Theory and Design, 27-31 August 1995, Istanbul, Turkey.

5.8 **Kopru, R.**, Aydın, Ç., Yarman, B. S. (2014). "Bandpass network function realization in Richards domain and its application to UWB patch antenna matching", submitted to *SIU-2014 (Signal Processing and Communications Applications Conference*), Trabzon/Turkey, April 23-25, 2014, p. 713-717, http://siu2014.ktu.edu.tr/index.html.

5.9 **Ramazan Köprü**, Sedat Kılınç, Ahmet Aksen, Bekir Binboğa Sıddık Yarman, "Design and Implementation of Wideband Microwave Amplifiers Based on Normalized Gain Function", BenMAS2014, 2014 IEEE Benjamin Franklin Symposium on Microwave and Antenna Sub-Systems, Radar, Telecommunications, and Biomedical Applications, September 27, 2014, Philadelphia, Pennsylvania, USA, http://www.benmas2014.org/

5.10 Sedat Kılınç, **Ramazan Köprü**, Bekir Binboğa Sıddık Yarman, "Design and Realization of Wideband Matching Networks in Richards Domain", BenMAS2014, 2014 IEEE Benjamin Franklin Symposium on Microwave and Antenna Sub-Systems, Radar, Telecommunications, and Biomedical Applications, September 27, 2014, Philadelphia, Pennsylvania, USA.

5.11 Binboğa Sıddık Yarman, Ahmet Aksen, **Ramazan Köprü**, Cagatay Aydın, Cagdas Atilla, "Computer Aided High Precision Darlington Synthesis for Real Frequency Matching", BenMAS2014, 2014 IEEE Benjamin Franklin Symposium on Microwave and Antenna Sub-Systems, Radar, Telecommunications, and Biomedical Applications, September 27, 2014, Philadelphia, Pennsylvania, USA.

5.12 C. Karakuş, E. Bolcal, Ç. Aydın, D. Ç. Atilla, **R. Köprü**, B. S. Yarman, "Analysis of EM Sources Behavior in Closer Proximity", MMS2012 12th Mediterranean Microwave Symposium, Doğuş University, Istanbul (Turkey), September 2-5.

5.13 C. Karakuş, D. Ç. Atilla, Ç. Aydın, **R. Kopru**, B. S. Yarman, "Design of data communication antennas for high speed trains", MMS2012 12th Mediterranean Microwave Symposium, Doğuş University, Istanbul (Turkey), September 2-5.

5.14 **Ramazan Köprü**, Sedat Kılınç, Ahmet Aksen, B. S. Yarman. (2014). "Unit element bandpass filter design via simplified real frequency technique for UWB microstrip patch antenna", MMS2014 14th Mediterranean Microwave Symposium, Marrakech, Morocco, Dec. 12-14.

5.15 Sedat Kılınç, **Ramazan Köprü**, Ahmet Aksen, B. S. Yarman. (2014). "Mixed element wideband microwave amplifier design via simplified real frequency technique", MMS2014 14th Mediterranean Microwave Symposium, Marrakech, Morocco, December 12-14.

5.16 D. Ç. Atilla, Çağatay Aydın, Tayfun Nesimoğlu, **Ramazan Köprü**, Ahmet Aksen, B. S. Yarman. (2014). "Design of tunable amplifier using digital capacitors", MMS2014 14th Mediterranean Microwave Symposium, Marrakech, Morocco, December 12-14.

5.17 B. S. Yarman, Ahmet Aksen, **Ramazan Köprü**, Çağatay Aydın, D. Ç. Atilla (2014). "A high precision cascade synthesis technique for real frequency matching involving Brune and Darlington type-C cections", IEEE MMS2014 14th Mediterranean Microwave Symposium, Marrakech, Morocco, December 12-14. 2014.

5.18 **R. Kopru**, C. Aydin, D. C. Atilla, S. Kilinc, B. S. Yarman, "Wideband Bandpass Filter Design for X band Horn Antenna via Numerical Techniques", IEEE MMS2015 15th Mediterranean Microwave Symposium, Lecce, Italy, Nov. 30-Dec. 2, 2015.

5.19 C. Aydin, D. C. Atilla, C. Karakus, **R. Kopru**, B. S. Yarman, "Transformerless Bandpass Matching Network Design for Y-Shaped Monopole Antenna", 9th International Conference on Electrical and Electronics Engineering, ELECO 2015, Bursa, Turkiye, November 26-28, 2015.

5.20 Hadi Ghasemzadeh Momen, Metin Yazgi, **Ramazan Kopru**, "Designing a New High Q Fully CMOS Tunable Floating Active Inductor Based on Modified Tunable Grounded Active Inductor", 9th International Conference on Electrical and Electronics Engineering, ELECO 2015, Bursa, Turkiye, November 26-28, 2015.

5.21 Hadi Ghasemzadeh Momen, Metin Yazgi, **Ramazan Kopru**, "A Low Loss, Low Voltage and High Q Active Inductor with Multi-Regulated Cascade Stage for RF Applications", IEEE ICECS International Conference on Electronics, Circuits and Systems, Cairo, Egypt, December 6-9, 2015.

5.22 H. Y. Amin, S. Ozoguz, **R. Kopru**, B. S. Yarman, "Distributed wideband power amplifier using reactive coupled line feedback structure", 2nd Int. Conf. On Knowledge-Based Engineering and Innovation (KBEI), Nov. 5-6, 2015, Iran Univ. Of Science and Technology, Tehran, Iran. Pp. 91-84.

5.23 H.G. Momen, M. Yazgi, **R. Kopru** and A. Naderi, "A New High Performance CMOS Active Inductor", *TSP 2016-39th International Conference on Telecommunications and Signal Processing (TSP) – IEEE R8,* June 27-29 2016, Vienna, Austria, pp. 291-294.

5.24 H.G. Momen, **R. Kopru**, "A Method for Low-Pass Filter Designing by Commensurate Transmission Lines", *TSP 2016-39th International Conference on Telecommunications and Signal Processing (TSP) – IEEE R8,* June 27-29 2016, Vienna, Austria.

5.25 H.G. Momen, M. Yazgi, **R. Kopru** and A. Naderi, "CMOS High-Performance UWB Active Inductor Circuit", *PRIME 2016-12th Conference on PhD Research in Microelectronics and Electronics*, June 27-30 2016, Lisbon, Portugal.

5.26 **R. Kopru**, D. Ç. Atilla, Ç. Aydin, S. Kilinc, B. S. Yarman, "Design and realization of 8-12 GHz cascaded unit element microstrip filter for X-band", IEEE MMS2016 16th Mediterranean Microwave Symposium, Abu Dhabi, UAE, November 14-16. 2016.

5.27 **R. Kopru,** "Noise Measurement in Opamp Active RC Cascade Amplifiers Using Wavelet Denoising", INSI2019 – I. International Science and Innovation Congress, pp. 601-607, 26-28 aug. 2019, Denizli/Turkey.
https://drive.google.com/file/d/1aZhI9_Ahgl-2Vlv3BnAt2gXUVk_y7r00/view

5.28 **R. Kopru,** "Simple Macro-Model of BJT Switch to Simulate Low Power Highly Efficient Class-E Power Amplifiers for Wireless Power Transfer", ISASTECH2019 – ISASTECH2019 – The 1st International Symposium On Automotive Science And Technology, 5-6 sep. 2019, Ankara/Turkey, http://isastech.org/

5.29 **R. Kopru,** "Broadband Matching of PA-to-PCB Interconnection for X-band Wireless Power Transfer", PGSRET2019 – 5th International Conference on Power Generation Systems and Renewable Energy Technologies, 26-27 aug. 2019, Istanbul Technical University, Istanbul/Turkey, doi: 10.1109/PGSRET.2019.8882695
https://ieeexplore.ieee.org/document/8882695

6. Published National Conference Papers:

6.1 **R. Köprü**, H. Kuntman, A. Aksen, B. S. Yarman, (2013). "Kablosuz Haberleşme İçin Yeni Bir Genişband Mikrodalga Yükselteç Tasarım Yöntemi", ASELSAN* Haberleşme Teknolojileri Çalıştayı, Kasım. 18-19 2013, Ankara, Türkiye.
* ASELSAN T.A.Ş. : Turkish Army Defence Electronic Industries, Turkey: www.aselsan.com.tr

6.2 D. Ç. Atilla, Ç. Aydın, T. Nesimoğlu, **R. Köprü**, A. Aksen, B. S. Yarman (2013). Ayarlanabilir Mikrodalga Uyumlaşma Devresi ve Yükselteç Tasarımı. ASELSAN Haberleşme Teknolojileri Çalıştayı, Kasım. 18-19 2013, Ankara, Türkiye.

6.3 **Ramazan Köprü**, Sedat Kılınç, Bekir Binboğa Sıddık Yarman, "Matching Network Design for Microstrip Patch Antenna Using Real Frequency Techniques", URSI 2014, International Union of Radio Science, National General Assembly, Aug. 28-30, 2014, Firat University, Elazig, Turkey, http://www.ursi.org.tr/

6.4 Sedat Kılınç, **Ramazan Köprü**, Bekir Binboğa Sıddık Yarman, "Synthesis of a wideband impedance matching network in Richards domain with commensurate transmission lines", URSI 2014, International Union of Radio Science, National General Assembly, Aug. 28-30, 2014, Firat University, Elazig, Turkey.

7. Research Projects:

7.1 *Senior Researcher:* "Development of Semi-Analytic Techniques to Design Wideband Microwave Amplifiers and an Amplifier Production". Tubitak ARDEB project code 112E238, Apr. 2013 – Oct. 2015. (Tubitak: The Scientific and Technological Research Council of Turkey).

7.2 *Project Director:* "Development of Design and Synthesis Package for Microwave Circuits With Optimum Topology Using Unit Elements", Tubitak TEYDEB project code 7141399, Jan. 2015 – June 2016.

7.3 *Project Director:* "Wideband Microwave Patch Antenna and Matching Network Design Using Numerical Methods". Işık University BAP project code 14B703, Jan. 2015 – Jan. 2017. (BAP: Scientific Research Projects Unit).

7.4 *Senior Researcher:* "Design of wideband microwave amplifiers using semi-analytic methods", Istanbul University BAP project 18549, Nov. 2011-Nov. 2014.

7.5 *Project Director:* "Development of Wideband Microwave Amplifier Design Package and Amplifier Production", supported by 'Science, Industry and Technology Ministry of Turkey' and 'Istanbul Teknopark A.Ş. Incubator Center,'. Project code 029473, April 2014 – June 2015.

7.6 *Analog Design Team Leader (PAVOTEK A.Ş.):* "ASELSAN HEWS Program LİAS (Laser Warning Receiver) Project", Nov. 2006 – July 2009, PAVO A.Ş. Electronic Design and Manufacture (LİAS Project subcontractor company). This Project has been completed and

currently in mass production, pls. see https://www.aselsan.com.tr/tr/cozumlerimiz/elektro-optik-sistemler/hava-platformu-elektro-optik-sistemleri/lias-lazer-ikaz-alici-sistemi

7.7 *Project Researcher and Director:* "Unit element Microwave Circuit Synthesis and Its Applications", Mar. 2021 – Nov. 2022, Isik University BAP (Scientific Researches Program) Office.

8. Scientific and Professional Membership:

Institute of Electrical Electronics Engineers (IEEE).

9. Awards and Honours:

- MSc. Scholarship (1992-1994), from Erdemir Iron and Steel Works TAŞ., Kdz. Eregli, Turkey.

- Exempted from PhD entrance exam to the Dept. of Electrical & Electronics Engineering in Istanbul Technical University as an exceptionally graduated MSc student from the same univ. (1995).

10. Courses Taught

10.1 Undergrad Courses* Taught (lecturer):

Code	Course Name
ELEC2205	Electrical Circuits
ELEC3305	Electronics
ELEC4102	High Voltage Techniques
ELEC4902	BSc. Graduation Project
ELEC4901	Intro. To Design Projects
ELEC4404	Microcontroller Based Sys. Design And Control
ELEC4403	Digital Electronics
ELEC2202	Circuit Theory-II
ELEC2201	Circuit Theory-I
EE404	Energy Distribution Systems
EE353	Signals and Systems
EE339	Fund. of Electrical and Electronics Engineering
EE3303	Electronics Lab.
EE224	Electric Circuits Lab.

* Işık University Electrical-Electronics Engineering Dept.

10.2 PhD Course* Taught (as assistant lecturer):

Course Name: Advanced Topics in Electronics.
Microwave theory and techniques to design broadband impedance matching networks and amplifiers using RFTs -Real Frequency Techniques-. (Fall & Spring-2012, Fall & Spring-2013, Spring-2014).
* Istanbul Technical University, Electronics and Communications Engineeering Dept.

11. Journal (SCI/SCI-Exp.) Paper Reviews

11.1 International Journal of Microwave and Wireless Technologies (SCI-Exp.), (1-2014, 1-2015)
11.2 Turkish Journal of Electrıcal Engıneering & Computer Sciences (SCI-Exp.), (3-2015, 1-2016, 2-2019)
11.3 IEEE Transactions on Circuits and Systems I, Regular Papers (SCI), (1-2016, 1-2017, 2-2018, 1-2019, 3-2020)

11.4 International Journal of Electronics Letters (SCI-Exp.), (1-2015)
11.5 IEEE Transactions on Circuits and Systems II, Express Briefs (SCI), (1-2016, 1-2017, 1-2018)
11.6 Microelectronics International (SCI-Exp.), Emerald Group Publishing, (1-2017, 1-2020)
11.7 DEÜ (Dokuz Eylül Univ.) Fen ve Mühendislik Dergisi, (1-2017)
11.8 AEU-International Journal of Electronics and Communications (SCI-Exp.), (1-2017)
11.9 International Journal of Electronics (SCI), (1-2017, 1-2019)
11.10 Analog Integrated Circuits and Signal Processing-ALOG (SCI), (1-2018)
11.11 IEEE Access (SCI-Exp.), (2-2018, 3-2019)
11.12 Journal of Circuits Systems and Computers (SCI-Exp.), (2-2018, 1-2019, 1-2020)
11.13 Neural Computing and Applications (SCI-Exp.), (1-2018, 1-2019, 1-2020)
11.14 International Journal of Circuit Theory and Applications (SCI-Exp.), (1-2018)
11.15 Mugla J of Sci and Tech, (1-2020)
11.16 Total of 13 International SCI/SCIE reviews in 2021 and 2022, (5-2021), (8-2022)
11.17 Total of 8 International SCI/SCIE reviews in 2023
Total: 54 (SCI/SCIE), 4 (Turkiye).

12. Other Reviewer Activities

12.1 **Project Evaluation Referee:** "13*th* Innovativity and Creativity Awards", TESID (Turkish Electronics Industrialists Association), Jan. 2015, Istanbul, Turkey.
12.2 **Panelist**: '2016-1-New Generation Network Technologies 1st Panel', TUBITAK EEEAG – Electrical, Electronics, Informatics and Research Group, Ankara, Turkey.
12.3 **Project Evaluation Referee** for**:** "Determination and Compensation of Mutual Couplings in Massive MIMO Antennas of 5G Systems", (Project ID:215E316, Nov.15, 2017-Nov.15, 2019), TUBITAK 1003 Project, EEEAG – Electrical, Electronics, Informatics and Research Group, Ankara, Turkey (cont.)

13. Conference Tasks

13.1 **Session Chairman:** Session LA3-High Frequency Electronics in ELECO 2015, 9th International Conference on Electrical and Electronics Engineering, Bursa, Turkiye, Nov. 26-28, 2015.
13.2 **Member of the Technical Committee**: EMC 2013-2. National EMC (Electromagnetic Compatibility) Conference, September 9-11, 2013, IŞIK University, Maslak, Turkey.
13.3 **Technical Program Committee Member (TPCM):** MMS-2018, Mediterranean Microwave Symposium, to be held in Istanbul, Turkey.
13.4 **Session Chairman:** PGSRET2019 - 5th International Conference on Power Generation Systems and Renewable Energy Technologies, 26-27 aug. 2019, Istanbul Technical University, Istanbul/Turkey

14. Foreign Language (English)

14.1 School of Foreign Languages for Master Preperation - Level: Upper-B (77.50/100), Istanbul Technical University, Gumussuyu Campus, Istanbul, Turkey, 1991-1992.
14.2 YDS fall-2016 - Level: Upper-B (86.25/100), Nationwide Foreign Language Exam organized by YOK (Higher Education Council of Turkey)

15. Other Professional Documents/Books

15.1 Ramazan Köprü, "ASELSAN** HEWS Program LWR (Laser Warning Receiver) Sensor Unit Band I-II and Band III-IV Card Sub Systems Detailed Design Document", 115 and 60 pages, October 2007, Pavotek Electronic Design and Manufacture Inc., http://www.pavotek.com.tr * This project has been completed and currently in production stage, please see: https://www.aselsan.com.tr/tr/cozumlerimiz/elektro-optik-sistemler/hava-platformu-elektro-

optik-sistemleri/lias-lazer-ikaz-alici-sistemi **ASELSAN: Turkish Army Defence Electronic Industries.

aselsan "Reliable Technology"
ASELSAN A.Ş. is a Turkish Armed Forces Foundation company.

LIAS - Laser Warning Receiver System

ASELSAN > Capabilities > Electro Optic Systems

LIAS is aa advanced threat warning system to detect, classify, identify and give warning of hostile laser threats aiming on the platform, in a very short time with high sensitivity. LIAS can activate the countermeasure systems available on the platform either directly or via a host computer.

LIAS is designed to detect almost all types of laser threats available in the world military inventory. Laser Range Finders (LRF), Laser Designators (LD) and Laser Beam Riders (LBR) threats operating on various optical bands can be detected by the system.

	16. Skills	level
1	Matlab, Mathematica, Microwave Sim. (MWO, ADS, HFSS), PSpice, Proteus, LTspice XVII.	good
2	VNA (Network Analyser), Spectrum Analyser, NVNA (Non-Linear Network Analyser, Agilent PNA-X, ITU VLSI and RF Labs.)	good, good, beginner.
3	Microwave circuit prototyping on FR4 and RT5870	good
4	Wideband microwave amplifier design using GaN transistor (Triquint, Cree) model (Modelithics) and prototyping.	expert
5	Wideband microwave filter, matching network design, lumped and distributed synthesis techniques in Matlab, microwave amplifier design (theory, simulation, production), X-band cascaded UE filter design/production, patch antenna.	expert
6	Optimization methods (Matlab): lsqnonlin, fminsearch, fmincon, particle-swarm optimizations (PSO), Levenberg-Marquardt.	good
7	Embedded system hw/sw design (Atmel 8052, Philips 80C51XA-16 bit, TI MSP430, PIC, Silabs, Motorola) for 1 phase/3-phase electricity meters, 1 to 100 kVA low-medium-high power UPS (uninterruptible power supply) control hw/sw,. smart home using Zigbee, personnel attendance system using proximity cards, computer and microcontroller based high voltage corona discharge system for plastic industry.	expert
8	Project development using Arduino/Raspberry PI Model 3B+	good

17. Research Interests

- Broadband matching theory and techniques using Real Frequency Techniques (RFTs).
- Microwave lumped and distributed domain filter/matching network design
- Wideband microwave FFGA (Feedback Flat Gain Amp.) design procedure using RFTs.
- Matlab coding for wideband microwave amplifier and matching network design using nonlinear optimization algorithms: Search, gradient and Particle-Swarm optimization methods
- Wideband microwave power amplifier design based on nonlinear behavioral models (X-Parameters) of GaN transistors (Cree, Triquint) and prototyping activities.
- "FSRFT-Fast Simplified Real Frequency Technique" and its applications to design RF/microwave filters, matching networks, linear/power amplifiers.
- Military spec low-noise analog design with discrete high speed opamps, comparators and laser detectors and prototyping for using in laser signal detection and post-processing.
- Power electronics: embedded hw/sw design for UPSs, computer and microcontroller based corona discharge control system design, digitally controlled High Voltage generators and supplies.
- Cross-Coupled LC Power Oscillator for Wireless Power Transfer.

- Future interests: Nanotechnology (nano, atomic transistors), RF/microwave/mmWave MMICs.

18. Some Past Professional Experience

ERDEMIR TAS. (*7000)	Electronics and Instrumentation Engineer, Distributed Control Systems, PLCs, X-ray thickness measurement systems, CIM (capacity improvement and modernization) project (the largest Iron and Steel Company of Turkey, (1994-1996).
PAVO AS. (*250)	Team Leader of Analog Design Engineering Div. in Laser Warning Receiver System (Aselsan LIAS project), (2006-2010)

* Shows the number employee in the company.

19. Book Chapters (in Turkish)

19.1 **R. Köprü**, "Bemes - Birim eleman mikrodalga devrelerinde giriş empedansı sentezi için bir algoritma (Turkish)", Geleceğin Dünyasında Bilimsel ve Mesleki Çalışmalar 2019 Mühendislik ve Doğa Bilimleri, pp. 220-238, ISBN: 978-605-327-988-4, Ekim 2019, EKİN Basım Yayın Dağıtım.
https://drive.google.com/file/d/1DCsHzirK2kDWEfrKRBqmeUZYA7XbjB6L/view

19.2 **R. Köprü**, "Bemes birim eleman sentez algoritmasına dayalı mikrodalga filtre tasarım programı (Turkish)", Geleceğin Dünyasında Bilimsel ve Mesleki Çalışmalar 2019 Mühendislik ve Doğa Bilimleri, pp. 239-261, ISBN: 978-605-327-988-4, Ekim 2019, EKİN Basım Yayın Dağıtım.
https://drive.google.com/file/d/1DCsHzirK2kDWEfrKRBqmeUZYA7XbjB6L/view

20. Courses Attended During the MSc and PhD

PhD Courses

1 Advanced Linear Integrated Circuit Design
2 Mathematical Methods in Electrical Engineering
3 RF Microelectronics
4 Advanced Topics in Electronics*
5 MOSFET Modeling and Analog Circuit Design with BSIM3
6 Modeling of Semiconductor Devices and Circuits
7 RF Circuit Design
8 Wavelet Theory and Its Applications

MSc Courses

1 Computer Aided Analysis of Electrical Circuits
2 Active Network Synthesis
3 Advanced Microprocessor Systems
4 Probability and Stochastic Processes
5 Digital Signal Processing
6 Sensitivity and Tolerance Analysis
7 Microprocessors

* *The course is related to Microwave Theory and Techniques based on RFT-Real Frequency Techniques (numerical and optimization based design of broadband matching networks for ultra wideband microwave filters, impedance matching networks and amplifiers).*

	21. Awarded Certificates
21. 1	Awarded as the Reviewer of the "Internatıonal Journal of Circuit Theory and Applications*", July 16, 2019.
21.2	Awarded with the certificate of review contribution for the "AEÜ-International Journal of Electronics and Communications", May 2017.
21.3	Awarded with the certificate of review contribution for the "Materials Today: Proceedings", Jul-Oct.2022.
21.4	Awarded with the certificate of review contribution for the "MicroElectronics Journal", Apr-Oct.2020.