

GÜLLÜ KIZILTAŞ ŞENDUR

Associate Professor, Faculty of Engineering and Natural Sciences

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- Education** **University of Michigan** **Ann Arbor, MI**
Ph. D. in Mechanical Engineering ***Sep'98–May'03***
Thesis Co-Supervisors: Professor Noboru Kikuchi and Professor John L. Volakis
- Topology optimization of high frequency EM applications via Solid Isotropic Material with Penalization (SIMP) method.
- Course Highlights:** Design Optimization, FEM in Mechanical Engineering and Electromagnetics, Theory of Solid Continua, Antenna Design, Making Decision under Uncertainty, Homogenization Design Method for Structures, Materials, and Mechanisms
- Middle East Technical University** **Ankara, TURKEY**
M.Sc. in Mechanical Engineering ***Sep'95 - May'98***
Thesis Co-Supervisors: Professor Tuna Balkan and Professor Bilgin Kaftanoglu
- Computer aided analysis and optimal design of automotive brakes and clutches for enhanced transmission system performance
- Course Highlights:** Variational Methods, Computer Aided Design, Tribology, Numerical Methods, Fracture Mechanics, Linear Programming
- Middle East Technical University** **Ankara, TURKEY**
B.Sc. in Mechanical Engineering ***Sep'91 - Aug'95***
- Design and construction of a single source driven floating machine to pick up a submerged object under the water and place it aside
- Course Highlights:** Mechanical Design, Finite Element Analysis, Dynamics of Machinery, Pipeline Engineering, Gas Dynamics, Engineering Economics
- Honors** **Young Scientist Award**, the Turkish Academy of Sciences, 2008
Graduating Class Teaching Award, Sabanci University, 2008
CAREER Award, supported by TUBITAK, 2007-10
Marie Curie International Reintegration Grant, EU 6th Framework, 2006
Student Fellowship, 7th US National Congress on Computational Mechanics, 2003
Best Paper Award, Applied Computational Electromagnetics Society (ACES), 2002
Nomination, Marian Sarah Parker women leadership award, University of Michigan, 2002
Distinguished Leadership Award, College of Engineering, University of Michigan, 2001
Peer Woman Advisor, University of Michigan, 2000-2003
PhD Fellowship, Mechanical Engineering Department, University of Michigan, 1998
Graduate Fellowship, The Scientific and Technical Research Council of Turkey, 1998
Undergraduate Fellowship, Turkish Council of Higher Education, 1990-1995

- Experience Sabancı University, FENS, Mechatronics Program** **Istanbul, Turkey**
Associate Professor **Sept. 2012– present**
Assistant Professor **Sept. 2005–present**
Sabancı University Nanotechnology and Application Center
- Supervising graduate/undergraduate students on:
 - Design and fabrication of novel composite substrates for biomedical, electromagnetic and mechatronics applications
 - 3D composites of Multi-material magneto-dielectrics
 - Ceramic-Polymer Composites for tissue engineering
 - Domain-specific design of mechatronics systems
 - Topology optimization and modeling of large scale and/or multi-disciplinary coupled systems.
 - Teaching undergraduate/graduate courses
 - Program Coordinator
- University of Michigan, EECS Dept., Radiation Lab.** **Ann Arbor, MI**
Post Doctoral Research Fellow **May'03– Aug'05**
- Continued research on design, analysis and fabrication of miniaturized novel antennas for UHF frequencies
 - Investigated high-contrast material behavior to improve antenna radiation characteristics for network-centric future military platforms
 - Coordinated design (Radiation Lab.), testing (ElectroScience Lab.) and fabrication teams (Material Science Department) at the University of Michigan and the Ohio State University
- Ohio State University, ECE Dept., ElectroScience Lab.** **Columbus, OH**
Post Doctoral Research Fellow **May '03– Aug '05**
- Designed non-intuitive VHF frequency conformal antennas with superior performance (ultra-wideband) on engineered meta-material substrates (ONR Project)
- University of Michigan, ME Dept.** **Ann Arbor, MI**
Graduate Student Research Assistant **1998– 2003**
- Proposed the first topology optimization method for electromagnetic applications
 - Developed the first integrated material and conductor shape topology design algorithm for electromagnetic applications
 - Designed 3D dielectric material topologies for a band-pass spectral filter working in THz region (Knoll Atomic Power Laboratory Project)
 - Studied and fabricated innovative, non-intuitive 3D dielectric material distributions for miniaturized antenna bandwidth enhancements (DARPA Project)
 - Performed an exact sensitivity analysis for complex-valued EM performance functions
 - Automated the optimal design process for synthesizing new materials with customized properties
 - Worked on size, shape and material optimization algorithms for RF applications (NSF project)

- Integrated a full wave finite element code (FE-BI) with sequential linear programming (SLP) optimizer in FORTRAN

Middle East Technical University, ME Dept.
Graduate Student Research Assistant

Ankara, TURKEY
1995– 1998

- Optimally designed size and material combinations of automotive brakes and clutches for maximum power transmission performance and minimum size requirement
- Developed an optimization design algorithm using the Powell Method and developed user-interface in C++ for the integrated power transmission design of a FIAT truck
- Studied thermal failure modes of friction type brakes and clutches and the temperature and pressure dependence of standard friction material pairs

Funded Research (PI/Supervisor)

- “Proof of Principle of Energy Storage in Coherent Quantum Systems”, Lockheed Martin Corporate Engineering Technology, USA (2014-2015), 150,000 \$
- “Design and Fabrication of Ceramic-Polymer based Composite Material Substrates for Conformal Antenna Applications,” TUBITAK, (2013-2015), 324,887 TL
- “Material Microstructure Synthesis of Conformal Low Loss Electromagnetic Materials,” TUBA, (2008-2011), 60,000TL
- “Design and Fabrication of Artificial Dielectric Composites via Topology Optimization for Antenna Performance Enhancements,” TUBITAK, (2006-2009), 194,826 TL
- “Optimal design and fabrication of electromagnetic metamaterials for millimeter and microwave applications,” EU-6th Framework MC-IRG, (2006-2008), 80,000 Euro

Funded Research (Researcher)

- “Micro-CT tomography: 3D imaging of the painting support and paint; investigation of internal structure and layers of drawings, changes of figures/motifs-Looking through Osman Hamdi Bey Paintings”, Merryll Lynch, Researcher, (2005-2017), Budget: 70000 \$
- “Tissue Engineering using multi-functional scaffolds with stem cells,” Sabanci University Internal Grant, PI: Bahattin Koc, (2012-2015), Budget: 151,600 TL
- “Sabancı University Nanotechnology Research and Application Center (SU-NAC),” DPT, PI: Kemal Inan, (2009-2013), Budget: 27,000,000 TL
- “Modeling, Design, and Manufacturing of Nano-Optical Systems,” TUBITAK, PI: Kursat Sendur, (2009-2012), Budget: 261,791 TL
- “Robot Assisted Rehabilitation System,” TUBITAK, PI: Volkan Patoglu, (2007-2010), Budget: 306,305 YTL
- “Conformal Antenna, Array Analysis and Design using Novel Electronic Materials,” MURI-AFOSR, PI: John L. Volakis, (2004-2009) Budget: 5,232,000\$
- “Ultra-Wideband Conformal Antennas,” ONR, PI: John L. Volakis, (2004-2005), Budget: 500,000\$
- “Metamaterials Design,” DARPA, PI: Prof. John W. Halloran, (2001-2005), Budget: 5,000,000\$
- “Design of a Thermophotovoltaic Filter,” KAPL-Lockheed Martin, PI: John L. Volakis, (2000-2001), Budget: 250,000\$

Courses Taught

Sabanci University, FENS, Mechatronics

Istanbul, Turkey
Sept. '05–present

- ME 412/512 Introduction to the Finite Element Method
- EE 518 Multi-Disciplinary Design Optimization
- ENS 204 Mechanics
- ME 301 Mechanical Systems I
- ME 408 Mechatronics System Design
- ME 411 Mechanical System Design

Service

Member:

- The American Society of Mechanical Engineers (ASME)
- The Institute of Electrical and Electronics Engineers (IEEE)
- The American Ceramic Society (ACerS)
- Danish Center for Applied Mathematics and Mechanics (DCAMM)

Reviewer:

- IEEE Transactions on Microwave Theory and Techniques
- Institution of Engineering and Technology Electronic Letters
- IEEE Transactions on Antennas and Propagation
- ASME Journal of Mechanical Design
- Journal of the American Ceramic Society
- Computer Methods in Applied Mechanics and Engineering

List of Publications

Book Chapters

G. Kiziltas and S. Koulouridis, “Antenna Design and Optimization using FE-BI Methods” in Frequency Domain Hybrid Finite Element Methods in Electromagnetics, ISBN: 1598290800, MC Publishers, 2006

M. Cakmakci, **G. Kiziltas** and U. Durak, "Simulation-based engineering", in Guide to Simulation-Based Disciplines: Advancing Our Computational Future, M. Saurabh, U. Durak, and T. Oren (eds.), NY, USA: Springer International Publishing, July 2017

G. Kiziltas and M. S. Aydin, “Use of micro-CT in Computational Material Design and Fabrication Studies”, in Micro-computed Tomography (micro-CT) in Medicine and Engineering, K. Orhan (ed.), NY Springer Nature (to be published in January 2019)

G. Kiziltas, M. Papila, B. Yilmaz and K. Bilge, “Challenges in Micro-CT characterization of composites”, in Micro-computed Tomography (micro-CT) in Medicine and Engineering, K. Orhan (ed.), NY Springer Nature, (to be published in January 2019)

Journal Articles

1. **G. Kiziltas**, “Design and Fabrication of Three Dimensional Multi-Dielectrics for a Miniaturized UHF SATCOM Antenna,”, *in preparation for IEEE Transactions on Microwave Theory and Techniques*.

2. F. Gul Ince, M. G. Eskin, I. Sacligil, **G. Kiziltas**, "Fabrication of Flexible Low-loss Polymer/Ceramic Composites with Anisotropic Dielectric Behavior via Freeze Casting," *in preparation for the Journal of European Ceramic Society*.
3. A. Kamadan, **G. Kiziltas**, V. Patoglu, "Coupled Optimal Design and Control of Series-Elastic and Adaptive Impedance Actuators," *in preparation for IEEE Transactions on Robotics*.
4. H. Yigit, M. G. Eskin and **G. Kiziltas**, "Effective material modeling of electromagnetic nano-metamaterials using homogenization based topology optimization," *in preparation for Journal of Computational Physics*.
5. B. Yilmaz, K. Bilge, G. Başer, **G. Kiziltas**, M. Papila, "Investigation of yarn number driven architecture and tensile behavior of Glass fiber Non-Crimp Fabric (NCF) Composites: A two scale perspective analysis based on micro-CT characterization," *in preparation for Composites Part B*.
6. O. Sayginer and **G. Kiziltas**, "Design and Fabrication of Textured Conformal Antennas via Tape Casting," *IEEE Transactions of Antennas and Propagation (under review)*.
7. A. E. Bayrak and **G. Kiziltas**, "Level-set based topology optimization of a patch antenna," *Journal of Computational Physics (under review)*
8. A. Kamadan, **G. Kiziltas**, and V. Patoglu, "A Unified Design Selection Framework for System-Optimal Compliant Actuation," *Robotica (under review with minor revisions, April 2018)*.
9. I. Berkun and **G. Kiziltas**, "Optimization of Dry Powder Deposition Parameters for Production of Large Substrates using Functionally Graded Ceramics", *International Journal of Applied Ceramic Technology*, February 2018. <https://doi.org/10.1111/ijac.12887>
10. A. Kamadan, **G. Kiziltas**, and V. Patoglu, "Co-Design Strategies for Optimal Variable Stiffness Actuation," *Journal of the IEEE/ASME Transactions on Mechatronics*, Vol. 22, Nr.6, 2017, pp. 2768-2779.
11. A. Yılmaz, D. Helvacioğlu-Yigit, C. Gür, H. Ersev, **G. Kiziltas**, E. Avcu, C. Baydemir, and P. V. Abbott, "Evaluation of dentin defect formation during retreatment with hand and rotary instruments: a micro-CT study", *Scanning*, Vol.2, 2017, pp. 1-7.
12. G. Tansık, E. Kilic, M. Beter, B. Demiralp, **G. Kiziltas**, N. Can, H. Ozkan, E. Ergul, M.O Guler, and A. B. Tekinay, "A glycosaminoglycan mimetic peptide nanofiber gel as an osteoinductive scaffold", *Biomaterials Science*, Vol. 4, Nr. 9, 2016, pp. 1328-1339.
13. S. Sarıdag, Serkan and D. Helvacioğlu-Yigit, M. Özcan, E. Avcu, and **G. Kiziltas**, "Micro-computerized tomography analysis of cement voids and pull-out strength of glass fiber posts luted with self-adhesive and glass-ionomer cements in the root canal", *Journal of Adhesion Science and Technology*, Vol.30, Nr.14, 2016, pp. 1585-1595.
14. D. Helvacioğlu-Yigit, A. Yılmaz, **G. Kiziltas Sendur**, O. S. Aslan, and P. V. Abbott, "Efficacy of reciprocating and rotary systems for removing root filling material: a micro-computed tomography study", *Scanning*, Vol.36, Nr.6, 2014, pp. 576-581.

15. **G. Kiziltas** and Y. El-Kahlout, "An Effective Interpolation Scheme for Multi-Resonant Antenna Response Functions: Bulirsch-Stoer Algorithm with Generalized Neville Path and Adaptive Sampling", *IET Microwaves, Antennas and Propagation Journal*, Vol. 5, Nr. 15, 2011, pp. 1849–1856.
16. El-Kahlout Y. and **G. Kiziltas**, "Inverse Synthesis of electromagnetic materials using homogenization based topology optimization," *Journal of Progress in Electromagnetic Research*, Vol. 115, 2011, pp. 343-380.
17. Y. El-Kahlout and **G. Kiziltas**, "Rational Interpolation Scheme Based on Bayesian Classifiers for Multi-Resonance Response of RF Devices", *IET Microwaves, Antennas and Propagation Journal*, Vol. 5, Nr. 5, 2011, pp. 576-582.
18. E. Masazade, R. Rajagopalan, P.K.Varshney, C. K. Mohan, **G. K. Sendur**, and M.Keskinoz, "A Multiobjective Optimization Approach to Obtain Decision Thresholds for Distributed Detection in Wireless Sensor Networks", *IEEE Transactions on Systems Man and Cybernetics, Part B: Cybernetics*, Vol. 40, Nr. 2, 2010, pp:444-457.
19. E. Ogut, **G. Kiziltas**, and K. Sendur, "Circularly polarized localized near-field radiation at the nanoscale", *Appl. Phys. B*, Vol. 99, 2010, pp: 67-74.
20. K. Erbatur, M. Ünel, **G. Kızıltas**, A. Şabanoviç, A. Onat, U. Seven, E. Taşkiran, Ö. Koca and M. Yılmaz, "Design and control of the humanoid robot SURALP", *Turkish Journal of Electrical Engineering and Computer Sciences*, Dec. 2009.
21. S. Koulouridis, **G. Kiziltas**, Y. Zhou, D. Hansford, and J. L. Volakis, "Polymer – Ceramic Composites for Microwave Applications: Fabrication and Performance Assessment", *IEEE Transactions on Microwave Theory and Techniques*, Vol 54, Nr: 12, Dec. 2006, pp:4202-4208.
22. Y. Zhou, S. Koulouridis, **G. Kiziltas**, and J. L.Volakis, "A Novel 1.5" Quadruple Antenna for Tri-Band GPS Applications", *Antennas and Wireless Propagation Letters (AWPL)*, Volume: 5, Nr: 1, Dec. 2006, pp:224-227.
23. J. L. Volakis, G. Mumcu, K. Sertel, C.-C. Chen, M. Lee, B. Kramer, D. Psychoudakis and **G. Kiziltas**, "Antenna Miniaturization using Magnetic Photonic and Degenerate Band Edge Crystals", *IEEE Antennas and Propagation Magazine*, Volume: 48, Nr: 5, Oct. 2006, pp: 12-28.
24. Y. Koh, J. W. Halloran, **G. Kiziltas**, D. Psychoudakis, and J. L. Volakis, "Thermoplastic Green Machining for Textured Dielectric Substrate for Broadband Miniature Antenna," *Journal of American Ceramic Society*, Vol. 88, Nr: 2, 2005, pp: 297-302.
25. **G. Kiziltas**, J. L. Volakis and N. Kikuchi, "Design of a frequency selective structure with inhomogeneous substrates as a thermo-photovoltaic filter," *IEEE Transactions on Antennas and Propagations*, Vol: 53, Nr: 7, 2005, pp 2282-2289.
26. **G. Kiziltas**, N. Kikuchi, J. L. Volakis and J. Halloran, "Dielectric material optimization for electromagnetic applications using SIMP," *Archives of Computational Methods in Engineering*, Vol: 11, Nr: 4, 2004, pp: 355-388.

27. **G. Kiziltas**, D. Psychoudakis, J. L. Volakis and N. Kikuchi, "Topology design optimization of dielectric substrates for bandwidth improvement of a patch antenna," *IEEE Transactions on Antennas and Propagation*, Vol: 51, Nr: 10, Oct. 2003, pp: 2732 – 2743.

Conference Articles

1. **G. Kiziltas Sendur**, "Electromagnetic metamaterial design using finite element based optimization technique: a case study for a SATCOM antenna," EUSIPCO 2017, 25th European Signal Processing Conference, Workshop on Creative Design and Advanced Manufacturing: An Emerging Application Area for Signals and Systems, Sept. 2, 2017 Chios, Greece
2. A. Kamadan, **G. Kiziltas** and V. Patoglu, "A systematic analysis of spring symmetry on optimality of antagonistic variable stiffness actuation, " IEEE International Conference on Intelligent Robots and Systems, Sept. 2017, Art. No. 8206459, pp. 5687-5693.
3. O. Sayginer and **G. Kiziltas**, "Integrated topology optimization of volumetric antenna substrates and conductor surfaces for broadband microstrip patch antennas", IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, USA: IEEE (Institute of Electrical and Electronics Engineers), July 2017
4. O. Sayginer and **G. Kiziltas**, "Fabrication of functionally graded ceramic- polymer dielectrics via freeze casting for RF applications", IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, USA: IEEE (Institute of Electrical and Electronics Engineers), July 2017
5. A. Yilmaz, D. Helvacioğlu-Yigit, C. Gur, H. Ersev, **G. Kiziltas**, E. Avcu, C. Baydemir, and P. V. Abbott, "Micro-CT evaluation of dentine defect formation during re-treatment with hand and rotary instruments", 17th Biennial European Society of Endodontology Congress, 0143-2885 (Print) 1365-2591 (Online): Wiley, January 2016, 114-114
6. B. Imanlou and **G. Kiziltas**, "A topology optimized model based on the level-set method incorporating angiogenesis for porous bone scaffolds," 4th TERMIS World Congress, Sept. 08-11, Boston, USA, 2015, pp.347-348.
7. **G. Kiziltas**, "Design of Artificial Metmaterials with Desired Multi-physical Properties Using Topology Optimization," IEEE International Symposium on Antennas and Propagation and URSI CNC/USNC Joint Meeting, Vancouver, July 19-25, 2015.
8. S. Saridag, D. Helvacioğlu-Yigit, E. Avcu, **G. Kiziltas** and M. Ozcan, "Pull-out strength of different diameter fiber reinforced posts to different type self-adhesive luting cements," Turkish Dental Association 21. International dentistry congress, May 28-30, Istanbul, Turkey, 2015
9. A. Kamadan, **G. Kiziltas**, and V. Patoglu, "Co-Design Strategies for a Variable Stiffness Actuator," 2014 Turkish Autonomous Robotics Conference, METU, Nov. 2014, Ankara, Turkey.

10. D. Helvacioğlu-Yigit, A. Yilmaz, **G. Kiziltas-Sendur**, O. Aslan, P.V. Abbott, "Efficacy of Reciprocating and Rotary Systems for root filling removal, " IADR PER 2014, 7th Meeting of the Pan European Region, 10 September- 13 September, 2014, Dubrovnic, Croatia.
11. H. Yigit, M. G. Eskin, and **G. Kiziltas**, "Topology Optimization based Inverse Synthesis of Spectral 3D Metamaterials", 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, Tennessee, USA, July 6-12, 2014.
12. O. S. Aslan and **G. Kiziltas**, "Computational Design of Tissue Scaffolds for Cartilage Repair via the Level-Set Method," Proceedings of the 11th world Congress of the International Cartilage Repair Society, 2013
13. O. S. Aslan and **G. Kiziltas**, "Topology Optimization of Porous Scaffold Architectures Incorporating Culture Conditions for Tissue Engineering," Proceedings of the TERMIS-EU Conference, 2013
14. O. S. Aslan and **G. Kiziltas**, "Computational Design of Tissue Scaffolds via the Level-Set Method," Proceedings of the TERMIS-EU Conference, 2013
15. H. Yigit and **G. Kiziltas**, "Level-set based Topology Optimization of MM-Wave Large Aperture Lens Designs," Proceedings of the 2013 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting in Orlando, Florida, USA, July 7-12, 2013
16. M. G. Eskin and **G. Kiziltas**, "Design of lossy metamaterials using inverse topology optimization," Proceedings of the 2013 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting in Orlando, Florida, USA, July 7-12, 2013
17. F. Ince and **G. Kiziltas**, "A new fabrication technique for the development of flexible mosaic substrates for conformal RF devices," Proceedings of the 2013 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting in Orlando, Florida, USA, July 7-12, 2013
12. N. Basaran and **G. Kiziltas**, "Fabrication of polymer-ceramic composite bone scaffolds with controlled multi-scale porosity", Proceedings of the TERMIS Annual Meeting, 2012, Hoboken, NJ, USA: Wiley-Blackwell, September, 35, 2012
13. **G. Kiziltas** and N. Basaran, "Level set based design optimization framework for active scaffolds", Proceedings of the TERMIS Annual Meeting, Hoboken, NJ, USA: Wiley-Blackwell, September, 392, 2012.
14. **G. Kiziltas**, "Novel Antenna Designs Using Level-Set Based Topology Optimization," 2012 IEEE AP-S International Symposium on Antennas and Propagation and 2012 USNC/CNC/URSI Meeting, Chicago, USA, 2012.
18. Y. El-Kahlout and **G. Kiziltas**, "Design of Non-Reciprocal Magnetic Photonic Crystals Using a Formal Material Synthesis Approach", 2010 IEEE AP-S International

Symposium on Antennas and Propagation and 2010 USNC/CNC/URSI Meeting, Toronto, Canada, 2010.

19. A.E.Bayrak and **G. Kiziltas**, “Topology Optimization of a Patch Antenna Using the Level-Set Method” , 2010 IEEE AP-S International Symposium on Antennas and Propagation and 2010 USNC/CNC/URSI Meeting, Toronto, Canada, (2010).
20. M. Doğan, G. Kiziltas and, F. Ustuner, “Optimization of aperture coupled microstrip patch antennas,” Progress In Electromagnetics Research Symposium PIERS 2010 in Cambridge, USA, 2-6 July, 2010
21. E. Ogut, **G. Kiziltas**, and K. Sendur, “Obtaining circularly polarized optical spots beyond the diffraction limit using plasmonic nano-antennas”, in *Excitons and Plasmon Resonances in Nanostructures II* , edited by A.O. Govorov, A.L. Rogach, Z.M. Wang, J.-K. Wang, V.M. Shalaev (Mater. Res. Soc. Symp. Proc. Volume 1208E, Warrendale, PA, 2010), 1208-O21-02.
22. E. Ogut, **G. Kiziltas**, and K. Sendur, “Circularly polarized localized near-field radiation at the nanoscale”, IEEE LEOS Annual Meeting, Piscataway, New Jersey, USA: IEEE Photonics Society, October 2009, 160-161.
23. K. Erbatur, M. Ünel, **G. Kızıltas**, A. Şabanoviç, A. Onat, U. Seven, E. Taşkiran, Ö. Koca and M. Yılmaz, “SURALP: a new full-body humanoid robot platform”, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2009), USA, October 2009
24. K. Erbatur, M. Ünel, **G. Kızıltas**, A. Şabanoviç, A. Onat, U. Seven, E. Taşkiran, Ö. Koca and M. Yılmaz, “İnsansı robot platformu SURALP”, Kemalettin Erbatur (ed.), in: Otomatik Kontrol Türk Milli Komitesi (Turkish National Committee of Automatic Control), Otomatik Kontrol Ulusal Toplantısı (Automatic Control National Meeting),Istanbul: Yıldız Technical University, October 2009.(in Turkish)
25. Y. El-Kahlout and **G. Kiziltas**, “Optimally Designed Microstructures of Electromagnetic Materials via Inverse Homogenization”, IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting in Charleston, South Carolina, USA, June 01-05, 2009 (**Student Paper Finalist**)
26. Y. El-Kahlout and **G. Kiziltas**, “Systematic Synthesis Framework for Novel Electromagnetic Materials”, 8th World Congress on Structural and MultiDisciplinary Optimization, Lisbon, Portugal, June 1-5, 2009.
27. I. Berkün and **G. Kiziltas**, “A Multiobjective Optimization Framework for Nano-Antennas via Normal Boundary Intersection (NBI) Method”, IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting in Charleston, South Carolina, USA, June 01-05, 2009
28. Z. Taşdemir and **G. Kiziltas**, “Flexible Ceramic-Polymer Composite Substrates for Miniaturized RF Applications via Tape Casting”, IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting in Charleston, South Carolina, USA, June 01-05, 2009

29. Z. Taşdemir and **G. Kiziltas**, “Flexible Ceramic-Polymer Composite Substrates with Spatially Variable Dielectrics for Miniaturized RF Applications”, MRS Spring Meeting, San Fransisco, CA, USA, April 13- 17, 2009
30. O. Karabasoglu and **G. Kiziltas**, “Comparative Analysis of Approximation Methods in Electromagnetic Design”, 12th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference, Victoria, British Columbia, Canada, September 10-12, 2008
31. K. Erbatur, U. Seven, E. Taşkıran, O. Koca, **G. K. Sendur**, M. Unel, A. Sabanovic, and A. Onat, “SURALP-L – İnsansı Robot Platformu Bacak Modülü (SURALP-L – Humanoid Robot Platform Leg Module),” in: Otomatik Kontrol Türk Milli Komitesi (Turkish National Committee of Automatic Control), Otomatik Kontrol Ulusal Toplantısı (Automatic Control National Meeting), ITU, Istanbul, 2008. (in Turkish)
32. Y. El-Kahlout, **G. Kiziltas**, “Microstructure Design of Artificial Magnetodielectrics via Topology Optimization”, 2008 IEEE International Symposium on Antennas and Propagation, San Diego, CA, USA July 5-12, 2008
33. Y. El-Kahlout, **G. Kiziltas**, “Global Design Optimization of Complex Electromagnetic Devices via Efficient Frequency Response Interpolations”, 2008 IEEE International Symposium on Antennas and Propagation, San Diego, CA, USA July 5-12, 2008
34. I. Berkun, **G. Kiziltas**, “Effects of Multi-Ceramics Processing Conditions on Loss and Microstructure of Artificial Magneto-Dielectric Composites”, 2008 IEEE International Symposium on Antennas and Propagation, San Diego, CA, USA July 5-12, 2008
35. O. Karabasoglu, **G. Kiziltas** “Optimization Using Surrogate Models in Materials-Based Electromagnetic Design” Progress In Electromagnetics Research Symposium PIERS 2008 in Cambridge, USA, 2-6 July, 2008
36. **G. Kiziltas**, M.Keskinoz, E. Masazade, R. Rajagopalan and P.K.Varshney, “Evaluation of Local Decision Thresholds for Distributed Detection in Wireless Sensor Networks using Multiobjective Optimization”, 42nd Asilomar Conference on Signals, Systems and Computers, USA: IEEE, July 2008.
37. M. F. Akşit, **G. Kiziltas Sendur**, C. Akcan, İ. Kandemir, “Optimization scheme for a small cross-flow hydro turbine runner”, 13th International Conference On Applied Mechanics And Mechanical Engineering - AMME-13, Cairo, Egypt: Military Technical College, May 2008.
38. R. Unal, **G. Kiziltas** and V. Patoglu, “Multi-criteria Design Optimization of Parallel Robots”, in the Proceedings of IEEE International Conference on Cybernetics and Intelligent Systems and IEEE International Conference on Robotics, Automation and Mechatronics, CIS -RAM 2008
39. **G. Kiziltas**, I. Berkun, and Z. Tasdemir, “Low-loss Dielectric Ceramic and Polymer Composites for Integrated Electronics”, MRS Spring Meeting, San Fransisco, CA, USA, March 24- 28, 2008

40. K. Sendur, O. Karabasoglu, E. Baran, and **G. Kiziltas**, "Optimization of Plasmonic Nano-Antennas", MRS Spring Meeting, San Fransisco, CA, USA, March 24- 28, 2008
41. R. Unal, **G. Kiziltas** and V. Patoglu, "A Multi-criteria Design Optimization Framework for Haptic Interfaces," in the Proceedings of IEEE Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems, Haptics Symposium 2008, March 13-14, Reno, Nevada, USA
42. O. Karabasoglu and **G. Kiziltas**, "Design optimization of artificial magneto-dielectrics for RF applications," 1st International Congress on Advanced Electromagnetic Materials in Microwaves and Optics, October 22-26, Rome, Italy, 2007
43. S. Z. Nergiz and **G. Kiziltas**, "Dry Powder Deposition for Fabrication of Electromagnetic Devices Using Textured. Dielectric and Magnetic Ceramics," Material Science and Technology Conference and Exhibition, Sept 16-10, 2007, Detroit, Michigan, USA, 2007
44. Y. E Kahlout and **G. Kiziltas**, "An Efficient Optimization Framework for Material and Conductor Designs of Antennas," International Conference on Electromagnetics in Advanced Applications, September 14-17, Torino, Italy, 2007
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