

CURRICULUM VITAE

A. Personal



Name&Surname: Erol KURT

Affiliation: Prof. Dr.

Place &Date of Birth: Unye (Turkey) / 19 Dec 1975

Nationality: Turkish

Present Status: Prof. Dr.

Marital Status: Married (w. 2 children)

Present Working Address: Gazi University, Faculty of Technology, Department of Electrical&Electronics Engineering, 06500 Teknikokullar, ANKARA, TURKEY

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1. Further Education

- **Ph. D. (Sep 2001 - Jul 2004)**
Field: Computational Fluid Dynamics
Institution: University of Bayreuth, Institute of Physics, Bayreuth/Germany
Doctoral Thesis: Pattern Formation in Rotating Fluid Systems under Magnetic Fields
Keywords: Pattern formation, fluid, cylindrical annulus, Ekman-Couette layer, shear, Lorenz force, Coriolis force, convection, instability, bifurcation
Adviser: Prof. Dr. Werner Pesch
- **M. Sc. (Sep 1998 - Apr. 2001)**
Field: Materials Science
Institution: Gazi University, Institute of Science&Technology Ankara / Turkey
M.Sc. Thesis: Crystallographic and Kinetic Properties of Austenite-Martensite Transformation in Fe-8.64%Mn-5.50%Cu Alloy
Keywords: Martensite, phase transition, alloys, x-ray, electron microscopy, Mössbeuer spectroscopy, entalphi
Adviser: Prof. Dr. İrfan Akgün
- **B. Sc. (Sep. 1994-Apr. 1998)**
Field: Dynamic Systems
Institution: Gazi University, Faculty of Education, Department of Physics Ankara / Turkey
Res. Proj. for Undergrad.: A New Paradigm: Chaos
Keywords: Chaos, turbulence, bifurcation, self-organization, chaotic electrical circuits
Adviser: Prof. Dr. Rahmi Yagbasan

2. Job Experiences

- **Prof. Dr. (June 2013 - ...)** at Gazi University, Dep. Elec.&Electr. Engineering, Technology Faculty, Ankara/ Turkey
- **Assoc. Prof. Dr. (Sep 2011 - 2013)** at Gazi University, Technology Faculty, Ankara/ Turkey
- **Assoc. Prof. Dr. (Oct 2009 - 2011)** at Gazi University, Faculty of Technical Education Ankara/ Turkey
- **Researcher (Nov 2006 – Oct 2009)** at Turkish Atomic Energy Authority, SANAEM, R&D Dep. Fusion Div. Ankara/ Turkey
- **Res.&Teach. Assist. (Sep 2001 - Sep 2004)** at Institute of Physics, University of Bayreuth, Bayreuth/ Germany
- **Res.&Teach. Assist. (Jan 1999 - Mar 2001)** at Gazi University, Faculty of Arts & Sciences, Department of Physics Ankara/ Turkey

3. University Courses Taught

- **As a teaching assistant** in *Solid State, Quantum Physics , Electronic Lab, Quantum Physics Lab* and *Optical Physics Lab.* in (Jan 1999-Jul 2001) at Gazi University, Faculty of Arts & Sciences, Department of Physics.
- **As a teaching assistant** in *Hydrodynamics* and *Electrodynamics* in (Mar 2002-Sep 2004) at the Institute of Physics, University of Bayreuth, Germany.
- **As an Assoc. Prof. Dr** in Electromagnetic Field Theory I, Electromagnetic Field Theory II, Introduction to Electrical Engineering, Informatics I, C++ Programming, Logical Circuits, Nonlinear Electromagnetic Circuits, Fortran Programming.
- **As an Prof. Dr** in Electromagnetic Field Theory I, Electromagnetic Field Theory II, Introduction to Electrical Engineering, Fortran Programming, C++ Programming, Chaos in Electrical Systems

Relevant Skills

- **Language:** TOEFL(Computer Based):240 (2004), ÜDS(national English test): 92/100
- **Computational Skills:** Numerical Methods: Finite element Method, Newton Integration Method, Galerkin Method, 3th - 4th Order Runge-Kutta Integration Method, Bisection Methods, Shooting Method, Adams-Bashfort Time Integration, FFT, Data Clustering, Electric and magnetic machine design w. Maxwell and Superfish package programme, MathLab, Comsol
- **Operating Systems:** LINUX, UNIX, DOS
- **Computer Languages:** Fortran 77, Fortran 90, Q-Basic, W-Basic, UNIX Shell Scripting, C++

- **Programs:** Microsoft Office Suite, Maple, Mathematica, X-Farbe Contour, SPSS, MathCad, xmgr, Adobe Photoshop, Image Pro-Plus, MathLab, Pspice.
- **Typesetting:** LATEX, HTML, PostScript & PDF tools
- **Experimental Skills:** CR39 detector diagnostics, Lattice type and parameter evaluation from *x-ray* diffraction and *electron microscopy* pattern. Determination of the magnetic and kinetic properties of alloys by using *Mössbauer spectroscopy* and *Differential Thermal Analysis* (DTA), Langmuir Probe measurement, plasma diagnostics, IR-visible plasma spectrometry, Atmospheric plasma studies, Generator characteristics testing
- **Languages:** Turkish(*native*), English(*fluent*), German(*elementary*)

G. Grants

- A 4-year grant from European Graduate College at University of Bayreuth for doctoral study.
- A research Grant from the joint Turkish-German institutions (TUBITAK-DFG) for 50 days in Bayreuth University-Physics Institute, (Germany).
- A research grant for 1 week in Almeria Solar Research Center (Spain).
- A teaching grant for 2 weeks to Turkish-Krgysistan Manas University (Krgysistan)

H. Publications

a) Publications* in Journals (SCI and SCI-extended):

1. N. Bizon, E. Kurt, “Performance analysis of the tracking of the global extreme on multimodal patterns using the Asymptotic Perturbed Extremum Seeking Control scheme”, *Int. J. Hydrogen Energy*, 42(28), pp. 17645-17654, (2017)
2. E. Çelik, H. Gör, N. Öztürk, E. Kurt, “Application of artificial neural network to estimate power generation and efficiency of a new axial flux permanent magnet synchronous generator”, *Int. J. Hydrogen Energy*, 42(28), pp. 17692-17699, (2017)
3. E. Zulueta, E. Kurt, Y. Uzun, J.M. Lopez-Guede, “Power control optimization of a new contactless piezoelectric harvester”, *Int. J. Hydrogen Energy*, 42(28), pp. 18134-18144, (2017)
4. E. Kurt, N. Bizon, N. Altın, B. Akın, “Preface to the special issue on “The 4th European Conference on Renewable Energy Systems (ECRES 2016), 28–31 August 2016, Istanbul, Turkey””, *Int. J. Hydrogen Energy*, 42(28), pp. 17559-17560, (2017)

* Publications have taken lots of references from different authors and scientists. They can be seen in SCI.

5. B. Dursun, E. Kurt, H. Kurt, "Energy distributions and radiation emissions in an inertial electrostatic confinement (IEC) device under low and moderate magnetic fields", *Int. J. Hydrogen Energy*, 42(28), pp. 17874-17885, (2017)
6. N. Güler, E. Irmak, H. Gör, E. Kurt, "An inverter design for a new permanent magnet synchronous generator", *Int. J. Hydrogen Energy*, 42(28), pp. 17723-17732, (2017)
7. E. Kurt, F. Cottone, Y. Uzun, F. Orfei, M. Mattarelli, D. Özhan, "Design and implementation of a new contactless triple piezoelectrics wind energy harvester", *Int. J. Hydrogen Energy*, 42(28), pp. 17813-17822, (2017)
8. K. Çelik, E. Kurt, E., Y. Uzun, "Experimental and Theoretical Explorations on the Buckling Piezoelectric Layer Under Magnetic Excitation", *J. Electronic Materials*, 46(7), pp. 4003-4016, (2017)
9. E. Kurt, Y. Uzun, "Nonlinear problems in piezoelectric harvesters under magnetic field", in *Lecture Notes in Energy*, 37, pp. 107-142, (2017)
10. H. Gor, E. Kurt, "Waveform characteristics and losses of a new double sided axial and radial flux generator", *Int. J. Hydrogen Energy*, 41(29), pp. 12512-12524, (2016)
11. E. Kurt, B. Dursun, "Particle Trajectories and Energy Distribution from a New IEC Fusion Device: A Many-Body Approach", *J. Fusion Energy*, DOI 10.1007/s10894-015-0033-2, (2016).
12. B. Dursun, E. Kurt, "Many-body solution to the D₂ gas filled inertial electrostatic confinement device", *Int. J. Hydrogen Energy*, 41(29), pp. 12546-12554, (2016)
13. R. Terzi, İ. Tükenmez, E. Kurt, "Energy and exergy analyses of a VVER type nuclear power plant", *Int. J. Hydrogen Energy*, 41(29), pp. 12465-12476, (2016)
14. Y. Bouzelata, N. Altin, R. Chenni, E. Kurt, "Exploration of optimal design and performance of a hybrid wind-solar energy system", *Int. J. Hydrogen Energy*, 41(29), pp. 12497-12511, (2016)
15. B. Madaci, R. Chenni, E. Kurt, K.E. Hemsas, "Design and control of a stand-alone hybrid power system", *Int. J. Hydrogen Energy*, 41(29), pp. 12485-12496, (2016)
16. Ş. Demirbaş, H. Fidanboy, E. Kurt, "Exploration of the Chaotic Behaviour in a Buck–Boost Converter Depending on the Converter and Load Elements", *J. Electronic Materials*, 45(8), pp. 3889-3899, (2016)
17. H.H. Kurt, E. Tanrıverdi, E. Kurt, "Theoretical and Experimental Exploration of Breakdown Phenomena in an Argon-Filled GaP Device", *J. Electronic Materials*, 45(8), pp. 3970-3977, (2016)
18. Kurt, E., Gör, H., Döner, U., "Electromagnetic design of a new axial and radial flux generator with the rotor back-irons", *Int. J. Hydrogen Energy*, 41(17), pp. 7019-7026, (2016)

19. E. Kurt, İ. Sefa, "Preface to the special issue section on "3rd European Conference on Renewable Energy Systems (ECRES'2015), 7-10 October 2015, Kemer, Antalya, Turkey"", *Int. J. Hydrogen Energy*, 41(29), pp. 12441-12442, (2016)
20. H. Ates, B. Dursun, E. Kurt, "Estimation of mechanical properties of welded S355J2+N steel via the artificial neural network", *Scientia Iranica*, 23(2), pp. 609-617, (2016)
21. A. Waris, Z. Suud, H.M. Şahin, **E. Kurt**, S. Şahin, "Influence of void fraction on BWR spent fuel direct recycling scenario", *Int. J. Hydrogen Energy*, 41(29), 15172-15178, (2015).
22. Y. Uzun, E. Kurt, H.H. Kurt, "Explorations of displacement and velocity nonlinearities and their effects to power of a magnetically-excited piezoelectric pendulum", *Sensors & Actuators: A*, 224, 119-130, (2015).
23. Y. Bouzelata, **E. Kurt**, R. Chenni, N. Altın, "Design and simulation of a unified power quality conditioner fed by solar energy", *Int. J. Hydrogen Energy*, 40(44), 15267-15277, (2015).
24. Y. Bouzelata, **E. Kurt**, N. Altın, R. Chenni, "Design and simulation of a solar supplied multifunctional active power filter and a comparative study on the current-detection algorithms", *Renewable & Sustainable Energy Reviews*, 43, 1114-1126, (2015).
25. B. Dursun, **E. Kurt**, "Electromagnetic Design and Simulation of a New Fusion Device", *J. Electronics and Electrical Engineering*, 20(8)(34-38), 2014.
26. Y. Uzun, S. Demirbas, **E. Kurt**, "Implementation of a New Contactless Piezoelectric Wind Energy Harvester to a Wireless Weather Station", *J. Electronics and Electrical Engineering*, 20(10), 35-39, 2014.
27. **E. Kurt**, H. Gör, M. Demirtaş, "Theoretical and experimental analyses of a single phase permanent magnet generator (PMG) with multiple cores having axial and radial directed fluxes", *Energy Conversion & Management*, 77(163-172), (2014).
28. H. Kurt, **E. Kurt**, "The Observations of the IR Sensitivity Enhancement, Negative Differential Resistance and Hysteresis in a Microelectronic Gas Discharge Device with GaP", *J. Electronics and Electrical Engineering*, 20(1), 55-58, (2014).
29. **E. Kurt**, B. Cıylan, O.O. Taskan, H. Kurt, "Bifurcation analysis of a resistor-double inductor and double diode circuit and a comparison with a resistor-inductor-diode circuit in phase space and parametrical responses", *Scientia Iranica*, 21(3), 935-944, (2014).
30. Y. Uzun, **E. Kurt**, Performance exploration of an energy harvester near the varying magnetic field of an operating induction motor", *Energy Conversion&Management*, 72, 156-162, (2013).
31. Y. Uzun, **E. Kurt**, "The effect of periodic magnetic force on a piezoelectric energy harvester", *Sensors & Actuators: A*, 192, 58-68, (2013).

32. **E. Kurt**, S. Arslan, "The effects of cathode structure and dielectric type in an inertial electrostatic confinement (IEC) device", *Energy Conversion&Management*, 63(55-62), (2012).
33. **E. Kurt**, S. Arslan and M. E. Güven , Effects of Grid Structures and Dielectric Materials of the Holder in an Inertial Electrostatic Confinement (IEC) Fusion Device, *J. Fusion Energy*, 30(5),404, (2011).
34. **E. Kurt**, "A stationary multi-component cathode modeling and ion trajectories for an inertial electrostatic confinement fusion device", *Int. J. Energy Research*,, 35(2), 89-95, (2011).
35. M. Cantürk, **E. Kurt**, and I. Askerzade, "Alternative numerical modeling of a superconducting charge qubit as an eigenvalue problem", *COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, 30(2)(775), (2011).
36. **E. Kurt**, M. Cantürk, "Bifurcations and hyperchaos from a dc driven non-identical Josephson junction system", *Int. J. Bifurcation and Chaos*, 20(11), pp.3725-3740, (2010).
37. Y. Akgün, A. S. Bölükdemir, **E. Kurt**, T. Öncü, and A. Alaçakir, "Preliminary plasma focus studies at ODAK-3K device using track detectors", *Plasma Dev. Operations*, 17(4), pp. 293-300, (2009).
38. **E. Kurt**, H. Kurt and U. Bayhan, "Ionization effects and linear stability in a coaxial plasma device", *Cent. Eur. J. Phys.*, 7(1), 123-129, 2009.
39. **E. Kurt**, M. Canturk, "Chaotic dynamics of resistively coupled DC-driven distinct Josephson junctions and the effects of circuit parameters", *Physica D: Nonlinear Phenomena*, 238(22), 2229-2237, 2009.
40. **E. Kurt**, FH. Busse and W.Pesch, "Pattern Formation in the Rotating Cylindrical Annulus with an Azimuthal Magnetic Field at low Prandtl numbers", *J. Vibration and Control*, 13, 1321-1330, 2007.
41. M Canturk, **E Kurt**, "Phase-dependent characteristics of a superconducting junction by using Schrödinger wave function", *Physica Scripta*, 76, 634-640, 2007.
42. **E. Kurt**, "Nonlinear Responses of a Magnetoelastic Beam in a Step-Pulsed Magnetic Field", *Nonlinear Dyn.*, 45(1-2), 171-182, 2006.
43. **E. Kurt**, M. Boyukata and Z.B. Guvenc, "Lyapunov exponent as an indicator of phase transition in melting Pd13 clusters", *Physica Scripta*, 74, 353-361, 2006.
44. H. Yucel Kurt, **E. Kurt** and B. Salamov, "Identification of the dynamics of plasma-induced damage in a CuInSe2 thin Film by fractal processing", *Crystal Res. & Techn.*, 41(7), 698-707, 2006.
45. **E. Kurt**, "Nonlinearities from a non-autonomous chaotic circuit with a non-autonomous model of Chua's diode", *Physica Scripta*, 74, 22-27, 2006.

46. **E. Kurt**, FH. Busse and W.Pesch, "Hydromagnetic convection in a rotating annulus with an azimuthal magnetic Field", *Theor. & Comp. Fluid Dyn.*, 18(2-4), 2004.
47. H. Yucel Kurt, **E. Kurt** and B. Salamov, "Fractal processing for an analysis of the quality and resistivity of large semiconductor plates", *Crystal Res. & Techn.*, 39(9), 2004.
48. B.G. Salamov, H. Yucel Kurt , and **E. Kurt**, "An analysis of the spatial homogeneity of a photodetector surface in an infrared image converter using the fractal dimension", *Imag. Sci. J.*, 51(4): 187-197, 2003.
49. H. Yucel Kurt, **E. Kurt**, and B.G. Salamov, "An analysis of the image homogeneity in an ionization type infrared image converter using the fractal dimension", *Imag. Sci. J.* 49 (4): 205-212, 2001.

b) Publications[†] in Journals (SCOPUS and EI indexed):

1. **E. Kurt**, C. Bingol, "A New Sweep Up /Down Phenomenon between the Chaotic and Regular Regions in a New R2L2D Circuit", *J. Politechnics*, 19(3), 305-310, (2016)
2. M. Cantürk, **E.Kurt**, "Eigenvalue solutions from a Josephson junction circuit as a model of a charge qubit", *Fizika*, 15(2), 177-179, 2009.
3. **E. Kurt**, R. Kasap, and S. Acar, "Effects of Periodic Magnetic Field to the Dynamics of Vibrating Beam", *Math. & Comp. Appl. J.*, 4(2), 2004.
4. **E. Kurt**, M.K. Ozturk, and R. Kasap, "Investigating the most appropriate parameters of the nonlinear resistor circuit from time series", *Gazi Uni. J. Inst. Sci. & Techn.*, 14 (4), 2001.
5. **E. Kurt**, M. Karabacak, and Z.B. Guvenc, "Chaotic Properties of Pd₇ Cluster", *Balkan Phys. Lett.*, 9(2), 2001.
6. **E. Kurt**, S. Acar, and R. Kasap, "A comparison of chaotic circuits from a statistical approach", *Math. & Comp. App. J.*, 2(2), 2000.
7. R.Kasap, and **E. Kurt**, "Investigation of chaos in the RL-Diode circuit by using the BDS test", *J. Appl. Math. & Decision Sci.*, 2(2), 1998.
8. H. Yucel Kurt, **E. Kurt**, B.G. Salamov, "Development and characterization of semiconductor gas discharge microstructure", *Fizika*, 15(2), 22-24, 2009.

[†] Publications have taken lots of references from different authors and scientists. They can be seen in SCOPUS.

9. **E. Kurt**, Dönen bir halkasal boşlukta bulunan manyetik akışkanın konum-zamansal kaotik yapıları", in *Turkish, TÜBAV J. Science*, 1(2), pp73-81, 2008.

- **Dissertations:**

1. **E. Kurt**, *Pattern Formation in Rotating Fluid Systems under Magnetic Fields*, Doctoral dissertation in University of Bayreuth, be available in Opus-Dokumentenserver, Universitätsbibliothek Bayreuth, **URL:** <http://opus.ub.unibayreuth.de/volltexte/2004/112/>.

2. **E. Kurt**, *Crystallographic and Kinetic Properties of Austenite-Martensite Transformation in Fe-8.64%Mn-5.50%Cu Alloy*, M.Sc Thesis in Gazi University, Ankara (Turkey), 2001.

3. **E. Kurt**, *A New Paradigm: Chaos*, Undergraduate Thesis, Ankara, 1998.

- **Lecturer in Schools & Conferences and Workshops:**

1. **E. Kurt**, Analyses and Measurements of the Permanent Magnet (PM) Wind Energy Generators, 2. *European Workshop on Renewable Energy Systems*, 20-29 Sep. 2013, Antalya, Turkey, 2013.

2. **E. Kurt**, Modeling of magnetohydrodynamic systems and an overview to the instabilities, *II. Ph.D. School on Mathematical Modeling of Complex Systems*, 16-28 July, 2012, Pescara, Italy.

3. **E. Kurt**, Introduction to Magnetohydrodynamics, *ISMFA Int. School on Magnetohydrodynamics and Fusion Applications*, Turunç, Marmaris, Turkey.

4. **E. Kurt**, Developments in fusion energy researches, *European Workshop on Renewable Energy Systems*, 17-28 Sep. 2012, Alanya, Antalya, Turkey.

5. **E. Kurt**, Nonlinear aspects in a new piezoelectric energy harvester under a changeable magnetic flux, *European Workshop on Renewable Energy Systems*, 17-28 Sep. 2012, Alanya, Antalya, Turkey.

6. **E. Kurt**, Electrical and optical features of atmospheric pressure plasma jet (APPJ) machine, 22-27 June 2014, TOBB Economy & Tech. Uni., Ankara, Turkey

- **International Conferences:**

1. **INVITED TALK: E. Kurt**, "Chaotic Electrical Circuits and Their Engineering Applications", Int. Conf. Engineering & MIS, 24-26 Sep. 2015, Istanbul , Turkey.

2. **E. Kurt**, Y. Uzun, C. Durmuş, "Power Characteristics of a New Contactless Piezoelectric Harvester", 4. Int. Conf. Electric Power & Energy Conversion Systems, Dubai, 24-26 November 2015.
3. M. Stork, **E. Kurt**, "Control System Approach to the Dynamics of Nonidentical Josephson Junction System", 20. Int. Conf. Applied Electronics, 8-9 Sep. 2015.
4. B. Madaci, R. Chenni, **E. Kurt**, K.E. Hemsas, Control of a Stand-Alone Hybrid Power System, 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
5. Y. Bouzelata, N. Altın, R. Chenni, **E. Kurt**, Optimal design and performance evaluation of hybrid wind-solar energy system for power generation and harmonic compensation, 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
6. Ş. Demirbaş, H. Fidanboy, **E. Kurt**, Exploration of the chaotic behaviour in a buck-boost converter depending on the converter and load elements, 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
7. E. Tanrıverdi, H.H. Kurt, **E. Kurt**, "Theoretical and experimental exploration of breakdown phenomena in an argon filled gap device", 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
8. H. Gor, **E. Kurt**, "Waveform characteristics and losses of a new double sided axial and radial flux generator", 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
9. D. Ozhan, Y. Uzun, **E. Kurt**, "A numerical real-time dynamic tool for piezoelectric beam under magnetic fields", 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
10. M. Demirci, T. Polat, **E. Kurt**, H.M. Şahin, "Numerical analyses of concentrated solar receiver pipes with superheated steam", 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
11. B. Dursun, **E. Kurt**, "Simulations of Particle Distribution at Moderate Magnetic Field Case in an Inertial Electrostatic Confinement Unit", 3. European Conference on Renewable Energy Systems, Antalya, TURKEY, 7-10 Oct. 2015.
12. **E. Kurt**, B. Dursun, "Particle trajectories and energy distribution at low magnetic field case from a new iec fusion device model", 17. Int. Conf. Emerging Nuclear Energy Sciences, Istanbul, Türkiye, 04-08 October 2015.
13. H. Gor, E. Kurt, "A new permanent magnet generator (PMG) with the axial and radial flux morphology", 17. Int. Conf. Emerging Nuclear Energy Sciences, Istanbul, Türkiye, 04-08 October 2015.

14. **E. Kurt**, H. Gor, U. Doner, "Electromagnetic Design of a New Axial Flux Generator", 17. Int. Conf. Emerging Nuclear Energy Sciences, Istanbul, Türkiye, 04-08 October 2015.
15. R. Terzi, I. Tukenmez, **E. Kurt**, "Energy and exergy analyses of a VVER type nuclear power plant", 17. Int. Conf. Emerging Nuclear Energy Sciences, Istanbul, Türkiye, 04-08 October 2015.
16. **E. Kurt**, C. Bingol, "Sweep Up / Down Phenomenon between the Chaotic and Regular Regions in a New R2L2D Circuit", Int. Conf. Engineering & MIS, 24-26 Sep. 2015, Istanbul, Turkey.
17. **E. Kurt**, B. Dursun, "Simulation Studies on the Ion Trajectories And Energy Spectra For A New Inertial Electrostatic Confinement Fusion Device", 1st IAEA Technical Meeting on Fusion Data Processing Validation and Analysis, 1-3 June 2015, Nice, France.
18. **E. Kurt**, H. Gor, "Exploration of Losses in a New Axial Flux Permanent Magnet Generator (AFPMG)", 3th Int. Conf. Information Processing and Electrical Engineering, 24-25 Nov. 2015, Tebessa, Algeria.
19. **INVITED TALK: E. Kurt**, A micro-power resource: Piezoelectric Harvesters, 3th Int. Conf. Information Processing and Electrical Engineering, 24-25 Nov. 2014, Tebessa, Algeria.
20. Y. Bouzelata, **E. Kurt**, R. Chenni, N. Altın, "Design and simulation of a unified power quality conditioner (UPQC) fed by solar energy, 4. Int. Conf. Nuclear & Renewable Energy Resources, Antalya, 26-29 October 2014.
21. **E. Kurt**, H. Gor, Electromagnetic Design of a new Axial Flux, Generator, 6th IEEE Conf. Electronics, Computer and Artificial Intelligence (ECAI-2014), 23-25 Oct. 2014, Bucharest, Romania.
22. **INVITED TALK: E. Kurt**, Y. Uzun, Effects of Nonlinearities in a Magneto-Piezoelectric System, 6th IEEE Conf. Electronics, Computer and Artificial Intelligence (ECAI-2014), 23-25 Oct. 2014, Bucharest, Romania.
23. B. Dursun, **E. Kurt**, "Electromagnetic Design and Simulation of a New Fusion Device", 18. Int. Conf. Electronics, Palanga, Lithuania, 16-18 June 2014.
24. Y. Uzun, S. Demirbas, **E. Kurt**, "Implementation of a New Contactless Piezoelectric Wind Energy Harvester to a Wireless Weather Station", 18. Int. Conf. Electronics, Palanga, Lithuania, 16-18 June 2014.
25. H. Yucel Kurt, **E. Kurt** "The Observations of the IR Sensitivity Enhancement, Negative Differential Resistance and Hysteresis in a Microelectronic Gas Discharge Device with GaP", 17. Int. Conf. Electronics, Palanga, Lithuania, 17-19 June 2013.
26. **E. Kurt**, S. Aslan, H. Gör, M. Demirtaş, "Electromagnetic Analyses of two Axial-Field Permanent Magnet Generators (PMGs)", 4th. Int. Conf. Power Engineering, Energy and Electrical Drives, 13-17 May 2013, Istanbul, Turkey.

27. **E. Kurt**, Finite Element Analysis (FEA) of the Permanent Magnet (PM) Generators with the Multiple Stators, 13. *WSEAS Int. Conf. Electric Power Systems, High Voltages, Electric Machines (POWER '13)*, August 27-29, 2013, Crete, Greece.
28. Y. Uzun, **E. Kurt**, "Power-Vibration Relation for a Piezoelectric Harvester under Magnetic Excitation", 13. *WSEAS Int. Conf. Electric Power Systems, High Voltages, Electric Machines (POWER '13)*, August 27-29, 2013, Crete, Greece.
29. Y. Uzun, **E. Kurt**, "Exploration of the energy harvesting for a weather station", 2. *European Workshop on Renewable Energy Systems*, 20-29 Sep. 2013, Antalya, Turkey, 2013.
30. H. Gor, **E. Kurt**, "Comparison of cogging torques in two different axial flux permanent magnet generators", 2. *European Workshop on Renewable Energy Systems*, 20-29 Sep. 2013, Antalya, Turkey, 2013.
31. **E. Kurt**, B. Dursun, "A new IEC fusion device design", 2. *European Workshop on Renewable Energy Systems*, 20-29 Sep. 2013, Antalya, Turkey, 2013.
32. E. Tanriverdi, **E. Kurt**, H. Kurt, "Preliminary simulation studies on the discharge phenomena in microelectronic gas discharge device (MGDD)", 2. *European Workshop on Renewable Energy Systems*, 20-29 Sep. 2013, Antalya, Turkey, 2013.
33. **E. Kurt**, S. Arslan, "The finite element analysis of an inertial electrostatic confinement (IEC) unit", IAEA Fusion Energy Conference, San Diego, USA, 8-13 Oct. 2012.
34. **E. Kurt**, Y. Uzun, "Design and bifurcation analysis of a piezoelectric energy harvester under a changeable magnetic field", 2. *Int. Conf. Nuclear and Renewable Energy Resources*, Gölbaşı, Ankara, (2010).
35. **E. Kurt**, "Particle trajectories in an inertial electrostatic confinement fusion device", *Nucl.&Renew. Energy Res. Conf. w. Int. Particip.*, Ankara, Turkey, 28-29 Sep 2009.
36. A. S. Bölükdemir, Y. Akgün, E. Kurt, T. Öncü, A. Alaçakır, "D-D fusion studies at Odak-3k plasma focus device", *Nucl.&Renew. Energy Res. Conf. W. Int. Particip.*, Ankara, Turkey, 28-29 Sep 2009.
37. Y. Akgun, A.S. Bolukdemir, T. Oncu, A. Alacakir, **E. Kurt**, E. Recepoglu, A. Yuzubenli, I. Turk Cakir, H. Karadeniz, S. Zararsiz, "Preliminary Fusion Studies with ODAK-3K Plasma Focus Device", 5. *Eurasian Conf. Nucl. Sci. Appl.*, Ankara, Turkey, 14-17 Oct 2008
38. M. Canturk and **E. Kurt**, "A Resistively Coupled DC-Driven Circuit Modeling of Josephson Junctions for Chaotic Signal Generation", *Int. Workshop on New Trends in Sci. Tech.*, Ankara, Turkey, 3-4 Nov 2008.
39. **E. Kurt**, W. Pesch, and F.H. Busse, "Pattern Formation in the Rotating Cylindrical Annulus with an Azimuthal Magnetic Field at Low Prandtl Numbers", *Mathematical Methods in Engineering*, Cankaya University, Ankara, (Turkey), 27-29 April 2006.

40. A. Alaçakır, T. Öncü, **E. Kurt**, Y. Akgün, A.S. Bölükdemir, A. Elmalı, H. Karadeniz, E. Recepoğlu, İ. T. Çakır, Ö. Yeşiltaş, S. Zararsız, "Plasma focus system design, construction and experiments", ICENES (13. Inter. Conf. Emerging Nuclear Energy Sys.), İstanbul, 3-8 Jun 2007.
41. **E. Kurt**, F.H. Busse, and W. Pesch, "Convecting Instabilities in the Rotating Cylindrical Annulus with Azimuthal Magnetic Field", 12. International Statistical Physics Congress, İstanbul, (Turkey), 2005.
42. **E. Kurt**, F.H. Busse, and W. Pesch, "Centrifugally Driven Convection with an Azimuthal Magnetic Field", Non-Equilibrium Phenomena and Phase Transitions in Complex Systems, Bayreuth, (Germany), Sep.28-Oct.2, 2004.
43. **E. Kurt**, F.H. Busse, and W. Pesch, "Hydromagnetic convection in the rotating cylindrical annulus with azimuthal magnetic Field", 13th International Couette-Taylor Workshop (Nonlinear dynamics in Fluids), Barcelona, (Spain), 2003.
44. B.G. Salamov, M.M. Bülbül, H. Yucel, **E. Kurt**, "Surface behaviour of plasma etched photodetector in a planar gas discharge image converter", 7th International Conference on Nanometer-Scale Science and Technology, ECOSS-21, Malmö, Sweden, 24-28 Jun 2002.
45. **E. Kurt**, and F.H. Busse, "The magnetic Ekman-Couette layer", 5th Magnetohydrodynamics Day, Dresden, (Germany), 2002.
46. **E. Kurt**, M. Karabacak, and Z.B. Guvenc, "Chaotic properties of Pd7 cluster", BPU-4, (IV. International Balkan Physics Congree), V. Turnovo, (Bulgaria), 2000.
47. **E. Kurt**, S. Acar, and R. Kasap, "A nonlinearity analysis of the nonlinear resistor circuit using a statistical test", 3. International Statistical Physics Congress, İstanbul, (Turkey), 1999.
48. **E. Kurt**, "Periodic and aperiodic dynamics from a resistively coupled nonidentical superconducting junction under dc excitations", *Recent Advances in Circuits, Systems and Signals*, 1(29), 2010, Malta.
49. S. Arslan, H. Fidanboy, Ş. Demirbaş, M.E. Güven, **E. Kurt**, "Investigation of Current Harmonics Using FEM on Different Rotor Types of PMSMs", *ICAT- 23. Int. Sym. Information, Communication and Automation Tech.*, 27-29 Oct. 2011, Sarajevo, Bosnia&Herzegovina.
50. **E. Kurt**, S. Arslan, 2011. "The Effects of Cathode Structure and Dielectric Type in an Inertial Electrostatic Confinement (IEC) Device" , *10. Int. Conf. Sustainable Energy Technologies*, Kumburgaz, İstanbul.
51. **E. Kurt**, S. Arslan, M. Demirtaş, Güven, M.E., "Design and analysis of an axial-field permanent magnet generator with multiple stators and rotors" , 2011, *IEEE 3. Int. Conf. on Power Engineering*, 11-13 May 2011, Malaga, İspanya.

52. Y. Uzun, **E. Kurt**, "Implementation and Modeling of a Piezoelastic Pendulum under a Harmonic Magnetic Excitation", *WSEAS 11. Int. Conf. Applications of Electrical Engineering (AEE '12)*, 7-9 March 2012, Athens, Greece.
53. S. Söyler, **E. Kurt**, O. Dağ, "Optimization of the Magnetic Anomaly Signals from a New Land-Mine Detection Device", *WSEAS 11. Int. Conf. Applications of Electrical Engineering (AEE '12)*, 7-9 March 2012, Athens, Greece.
54. Y. Uzun, M. Demirtaş, **E. Kurt**, "Exploration of the energy harvesting for a weather station", European Workshop on Renewable Energy Systems, Alanya, Antalya, Turkey, 17-28 Sep. 2012.
55. H. Gor, M. Demirtaş, **E. Kurt**, "A new permanent magnet wind energy generator design with axial and radial directed fluxes", European Workshop on Renewable Energy Systems, Alanya, Antalya, Turkey, 17-28 Sep. 2012.

• **National Conferences:**

1. I. Akgun, **E. Kurt**, H.Y. Ocağ, G. Ugur, and E. Ucgun, "Crystallographic and Structural Properties of the Austenite-Martensite Phase Transformations in Fe-8.62%Mn-5.52%Cu Alloy", 21th Physics Congress of Turkish Physical Society, Isparta, (Turkey), 11-14 Sep 2002.
2. H. Yucel Kurt, **E. Kurt**, B. Salamov, "A non-destructive quality test method for the semiconductor plates using fractal dimension analysis", 8th Condensed Matter Physics, Ankara, (Turkey), 2001.
3. **E. Kurt**, M. Boyukata, Z.B. Guvenc, and R. Kasap, "Chaotic dynamics of Pd₁₃ cluster", III. Atomic and Molecular Physics Congress, Erzurum, (Turkey), 2000.
4. **E. Kurt**, W. Pesch, and F.H. Busse, "Instabilities of convection patterns in a rotating cylindrical annulus under a magnetic Field", Turkish Math. Soc. Ankara Branch- Ankara Mathematical Days PDE Meetings 6, Ankara, (Turkey), 2006.
5. **E. Kurt**, R. Kasap, M. Canturk, "Josephson eklem sisteminden elde edilen zaman serilerinin istatistiksel olarak incelenmesi", *in Turkish*, 18. Statistical Research Symp., Ankara, 7-8 May 2009.
6. **E. Kurt**, M. Cantürk, "Dc beslemeli bağlı Josephson eklemleri içeren süperiletken cihazın simülasyonu ve dinamik özellikleri", *in Turkish*, 15. Condensed Matter Physics Congress, Bilkent University, 7 Nov 2008.
7. **E. Kurt**, "Manyetik Ekman-Couette Tabakası Kararsızlıkları ve Desenler", 18. İstanbul İstatistik Fizik Günleri Sabancı Üniv. , İstanbul, 2011.
8. E. Kurt, O. Taşkan, 2012. "Periodic and Complex Responses from two Basic Electrical Circuits", 19. İstatiksel Fizik Günleri, Sabancı Üniversitesi, İstanbul

- **Missions in Organized Scientific Events:**

1. **Technical Chairman** to *NuRER - 5. Int. Conf. Nuclear & Renewable Energy Resources*, 18-21 September 2016, Hefei, Anhui, China.
2. **Chairman** to *ECRES 2016- 3. European Conf. Renewable Energy Systems*, Antalya, TURKEY, 7-10 Oct. 2015.
3. **Technical Chairman** to *NuRER- 4. Int. Conf. Nuclear & Renewable Energy Resources*, 26-29 Oct 2014, Antalya, Turkey
4. **Co-chairman** to *NuRER- Nuclear & Renewable Energy Resources Conference w. Int. Cont.*, 28-29 Sep 2009, Ankara, Turkey
5. **Co-chairman** to *NuRER- Int. Conf. Nuclear & Renewable Energy Resources*, 4-7 July 2010, Ankara, Turkey
6. **Co-chairman** to *NuRER- Int. Conf. Nuclear & Renewable Energy Resources*, 20-23 May 2012, Ankara, Turkey
7. **Scientific Secretary** to SET 2011- Sustainable Energy Technologies, 4-7 Sep. 2011, Istanbul, Turkey
8. **Chairman** to *ISMFA- International School on Magnetohydrodynamics & Fusion Applications*, 9-16 Sep 2011, Muğla, Turkey.
9. **Chairman** to *EWRES 2012- European Workshop on Renewable Energy Systems*, 17-28 Sep 2012, Alanya.
10. **Chairman** to *EWRES 2013- II. European Workshop on Renewable Energy Systems*, 20-29 Sep 2013, Antalya.
11. **Head of the Organizing Committee**, International Workshop on Numerical Fusion Experiments, 2010, Ankara, Turkey (w. Prof. Lee ve Prof. Saw)
12. **Head of the Organizing Committee**, International Workshop on Numerical Fusion Experiments, 2009, Ankara, Turkey (w. Prof. Lee ve Prof. Saw)
13. **Editorial Board Member**, 18. Int. Conf. Electronics, Palanga, Lithuania, 16-18 June 2014.
14. **Editorial Board Member**, 19. Int. Conf. Electronics, Palanga, Lithuania, 16-18 June 2014.
15. **Editorial Board Member**, 3. Int. Conf. Information Processing and electrical Engineering, Tebessa, Algeria, 16-18 June 2014.
16. **Member of Scientific Committee of many International events.**
17. **Chairman** to *ECRES 2015- 3. European Conference on Renewable Energy Systems*, 7-10 OCT 2015, Kemer.
18. **Chairman** to *ECRES 2016- 4. European Conference on Renewable Energy Systems*, 28-31 AUG 2016, Istanbul.
19. **Chairman** to *ECRES 2017- 5. European Conference on Renewable Energy Systems*, 27-30 AUG 2017, Sarajevo, Bosnia&Herzegovina.
20. **Chairman** to *ECRES 2018- 6. European Conference on Renewable Energy Systems*, 25-27 Jun 2018, Istanbul.

- **Scientific Popular Journal Papers & Books (in Turkish):**

1. **E. Kurt**, "A travel into chaos", Populer Bilim, Apr. 1997, Isik Publ. Ltd., Ankara.

2. **E. Kurt**, "From determinism to indeterminism", Populer Bilim, Dec. 1997, Isik Publ. Ltd., Ankara.
3. **E. Kurt**, "Quantum theory and its basic concepts", Populer Bilim, Nov. 1997, Isik Publ. Ltd., Ankara.
4. **E. Kurt**, "Secrets of blackholes", Populer Bilim, Sep. 1997, Isik Publ. Ltd., Ankara.
5. **E. Kurt**, "Kuhn and Paradigm-related Science", Populer Bilim, Feb. 1998, Isik Publ. Ltd., Ankara.
6. **E. Kurt**, R. Kasap, "The science of complexity: Chaos", (in Turkish), Nobel Yayınları, Ankara, 2011. (*book*)
7. D.E. Yıldız, **E. Kurt**, H.H. Kurt, Translation Editor of "Physics for Science and Engineering" Schauma's Physics Series, 2015, Ankara, Turkey.
8. N. Bizon, N.M. Tabatabaei, F. Blaabjerg, **E. Kurt**, "Energy Harvesting and Energy Efficiency: Technology, Methods, Applications", 2017, Springer, UK

İ. Dissertation Supervisorship:

- Y. Akgün, "Mather Tip Plazma Odak (Plasma Focus) Cihazında Optimizasyon ve Plazma Yoğunluk Ölçüm Çalışmaları (Optimisation of the Mather type plasma focus device and studies on plasma density measurements)", *Ankara University Institute of Natural Sciences*, PhD Thesis (Second Advisor), 2009.
 - Y. Uzun, "Periyodik manyetik alanlar etkisinde doğrusal-olmayan titreşimlerden elektrik enerjisi üretimi" (Electricity generation via nonlinear vibrations under the effects of periodic magnetic fields), *Gazi Univ. Institute of Natural Sciences*, PhD Thesis, 2012.
 - B. Dursun, "Design of an inertial electrostatic confinement fusion device and determination of ion behavior", *Gazi Univ. Institute of Natural Sciences*, MSc Thesis, 2014.
 - H. Gör, "New generator design and implementation", *Gazi Univ. Institute of Natural Sciences*, PhD Thesis, 2014.
 - C. Bingöl, "A new chaotic circuit design and implementation", *Gazi Univ. Institute of Natural Sciences*, MSc Thesis (*continues*)

J. Projects

- Researcher between 2006-2009 at Turkish Atomic Energy Authority Sarayköy Nuclear Research and Training Center, A new Atmospheric Plasma Device Construction and Measurements Project,
Project Head: Tolga Öncü

Project No:
- Researcher between 2001- 2004 at Bayreuth University (Germany), European Graduate College Project, Hydromagnetic Instabilities in Rotating Fluid Systems.
Project Head: Prof. Dr. Friedrich H. Busse

Project No: GRK 698/1-3

- Researcher between 2000-2002 at Gazi University, Faculty of Arts & Sciences, Scientific Research Project, Crystallographic and kinetic properties of the Austenite-Martensite phase transformation in Fe-based alloys.

Project Head Prof. Dr. İrfan AKGÜN

Project No: FEF. No: 2000/06-05

- Researcher between 2006-2009 at Turkish Atomic Energy Authority Sarayköy Nuclear Research and Training Center, Plasma focus device construction for neutron lithography Project,

Project Head Dr. İ. Türk Çakır

Project No: No: III –B.06.TAEK.2.

- Coordinator between 2012-2014 for EU Project – The European Workshop on Renewable Energy systems at Gazi University

Project No's: 2012-1-TR1-ERA10-36810 and 2013-1-TR1-ERA10-48722

- Coordinator between 2014-2016 for TUBITAK (Turkish Scientific & Research Technology Foundation) Project – Modeling of a contactless magnetic piezoelectric energy harvester with multiple natural frequencies and its implementation to wind energy

Project No's: 114E017

- Coordinator between 2015-2018 for EU Project – The Innovative European Studies on Renewable Energy Systems at Gazi University

Project No's: 2015-1-TR01-KA203-021342

K. Journal or Proceedings Editorship and Editorial Board Membership

- Chief-Editor for peer reviewed scientific journal: Int. J. Informatics & Technologies, 2013-...

- Editor for peer reviewed scientific TÜBAV Journal of Science (in Turkish) (2012-2013).
- Editorial Board member for *Science Journal of Circuits, Systems and Signal Processing*, (2013-...)
- Field Editor for Politeknik Journal, (2013-...)
- Guest Editorship for J. Fusion Energy (2015)
- Guest Editor for Int. J. Hydrogen Energy (2015)
- Guest Editor for Scientia Iranica (2015)
- Guest Editor for J. Electronics Materials (2015)
- Guest Editorship for *Int. J. Electr. Energy Res.*
- Guest Editorship for *Energy Conversion & Management*.
- Editor for the Conference Proceedings of NuRER 2014
- Editor for the Conference Proceedings of NuRER 2012
- Editor for the Conference Proceedings of NuRER 2010
- Editor for the Conference Proceedings of NuRER 2009
- Editor for the Workshop Proceedings of EWRES 2012.
- Editor for the Workshop Proceedings of EWRES 2013.
- Editor for the Conference SET 2011 (Int. Conf. Sustainable Energy Technologies)
- Editor for the Conference Proceedings of ECRES 2015
- Editor for the Conference Proceedings of ECRES 2016
- Editor for the Conference Proceedings of ECRES 2017
- Editor for the Conference Proceedings of ECRES 2018

L. Membership to Scientific Organisations

- Member of *Turkish Science Research Foundation (TÜBAV)* and Member of the Administrative Board.
- Member of *The Institute of Electrical and Electronics Engineers - IEEE* after 2011- ...