

CURRICULUM VITAE

1. Full Name : İlhan KOCAARSLAN
2. Place and Date of Birth : Kırıkkale, November 26, 1964
3. Title : Professor
4. Marital Status : Married, father of 4 children
5. Foreign Languages : German: Advanced
English : Intermediate



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Areas of Expertise: Control and Automation Systems, Adaptive Control, Fuzzy Logic, Artificial Neural Networks, Support Vector Machines, Energy Generation Systems and Automation, Primary Frequency Control System, Railway Vehicles, Risk Analysis and Safety Management System in Railways, Risk Analysis in Industrial Systems, Electrification of Railways

6. Educational Background:

Degree	Field	Institution	Year
Bachelor's degree	Electrical Engineering	Yıldız Technical University - Turkey	1979-1983
Master's degree	Electrical Engineering	Yıldız Technical University - Turkey	1983-1985
Master's degree	Electrical Engineering	Bochum Ruhr University - Germany	1985-1986
Doctorate	Electrical Engineering	Bochum Ruhr University - Germany	1986-1991

Doctoral Thesis: Real Time Implementation of Modern Adaptive Control Concept to the 750 MW Natural Gas Cycled Power Plant
Ruhr University Bochum/Germany, 1991

Master Thesis: Design of the compensator to control of the multi-input, multi-output system.
Ruhr University Bochum/Germany, 1986

Master Thesis: Electrical Supply and Actuator Mechanisms of Electrical Transport (Railway) Systems
Yıldız Technical University, Istanbul, 1985

7. Academic Titles:

Title	University	Year
Associate Professor	Babcock Prozessautomation Germany	1993
Professor	Kocaeli University Faculty of Engineering	1997
Professor	Kırıkkale University Faculty of Engineering	1999

8. Professional Experience

2020-...	Istanbul Technical University, Director of Energy Institute
2020-...	Istanbul Technical University Control and Automation Department Lecturer
2017 - 2020	Turkey Wagon Industries Inc. Chairman of the Board and General Manager
2017 - 2019	Turkey Atomic Energy Agency Nuclear Security Advisory Committee Chairman
2016 - 2017	Istanbul University Energy Management Application and Research Center Manager
2015 - 2017	Istanbul University, Department of Electrical and Electronics Engineering, Head of the Department of Control and Command Systems
2015 - 2017	Istanbul University Technology Transfer Office Project Manager
2014 - 2017	TÜBİTAK Energy Institute Consultant
2014 - 2015	TÜBİTAK, Electrical and Electronic Technologies Working Group (ELOTEG) Executive Board Member
2014 - 2015	TCDD Marmaray Safety Management System and Electrification Systems Consultant
2014 - 2015	Risk Management for Safe Operations in TCDD Conventional Lines Research and Development Project Consultant
2014 - 2017	TCDD, National Train Project, Advisory Board Member
2014 - 2017	International Congress on Advanced Railway Engineering, Congress President
2013 - 2018	Ministry of Transport, Accident Research and Investigation Board Member
2009 - 2010	Istanbul University, Vice President of University Industry Cooperation
2009 - 2013	Istanbul University Advanced Analysis Laboratory Executive Board Member
2009 - 2017	Istanbul University Scientific Research Projects Unit Executive Board Member
2008 - 2017	Istanbul University Eng. Fak. Electrical & Electronics Department Lecturer
2007 - 2015	TCDD High Speed Train Project Consultant
2002 - 2004	Kırıkkale University, Dean of the Faculty of Engineering
2002 - 2004	Kırıkkale University Board Member
2002 - 2004	Kırıkkale University Senate Member
2000 - 2008	Kırıkkale University Faculty of Engineering Faculty Board Member
2000 - 2004 2006 - 2008	Kırıkkale University Institute of Science and Technology Board Member
1999 - 2008	Kırıkkale University Faculty of Engineering Board Member
1999 - 2004 2006 - 2008	Prof. Dr. and Kırıkkale Uni. Head of Electrical & Electronics Engineering Department
1997 - 1999	Assoc. Dr. as Head of Department of Electrical Facilities at Kocaeli University
1990 - 1997	Project and Department Manager at Babcock Prozessautomation Company in Germany
1986 - 1990	Research Assistant in the Department of Electrical Engineering, Command and Control Systems (Automation Engineering) at Bochum Ruhr University

9. Projects

Projects at İstanbul University

1. TCDD Ankara-Eskişehir High Speed Train Line Elektrification Project

All phases of the catenary system of Ankara-Eskisehir High Speed Rail Project examined, controlled and consulted with German TÜV company.

2. TCDD Ankara – Konya High Speed Train Infrastructure, Superstructure, Electrical Facilities and Vehicle Risk Analysis

3. TCDD Ankara – Eskişehir High Speed Train Infrastructure, Superstructure, Electrical Facilities and Vehicle Risk Analysis

4. Establishment of Safety Management System for TCDD (Turkish State Railways)

According to 2004/49/EC directive, Establishment of Safety Managemet System for Ankara- Eskişehir High Speed Train Line

5. Safety Management System trainings were given throughout Turkey for all conventional lines.

6. Risk Management System trainings were given throughout Turkey for all conventional lines

7. Reporting Compliance and Cost Issues of Vehicles Automatic Drive Systems which has been serving on Avcılar-Söğütlüçeşme line

Examination and Reporting Cost Issues of Automatic drive system's hardware and software on Philieas brand vehicles which has been serving on Avcılar-Söğütlüçeşme line

8. Reporting Cost Issues of Extra Drive Systems on Philies Brand Vehicles which has been serving on Avcılar-Söğütlüçeşme Line

Technical examination and Reporting Cost Issues of Additonal hydraulic drive system on Philieas brand metrobus vehicles was conducted.

9. İstanbul University SOCRAT (Solar Car Racing Team) Project

10. SEAŞ Soma Electricity Generation and Trade Inc. Directorate General Thermal Power Plant Primary Frequency Control Tests

SEAŞ Electricity Generation and Trade Inc. Directorate General Thermal Power Plant 1., 2., 3. and 4. Units Primary Frequency Control Performance Tests was done. The reports related to these tests was prepared for TEİAŞ.

11. Çolakoğlu Metallurgy Inc. Thermal Power Plant Primary Frequency Control Performance Tests

Çolakoğlu Metallurgy Inc. OP1 Natural Gas Combined Cycle Power Plant GT-1 Unit Primary Frequency Control Performance Tests was done. The reports The reports related to these tests was prepared for TEİAŞ.

12. Ova Elektrik Inc. Thermal Power Plant Primary Frequency Control Performance Tests

Ova Elektrik Inc. Natural Gas Combined Cycle Power Plant GT-2 Unit Primary Frequency Control Performance Tests was done. The reports The reports related to these tests was prepared for TEİAŞ.

13. Petkim Petrokimya Holding Inc. Thermal Power Plant Primary Frequency Control Performance Tests

Petkim Petrokimya Holding Inc. Thermal Power Plant G5 Gas Turbine Unit Primary Frequency Control Performance Tests was done. The reports related to these tests was prepared for TEİAŞ.

14. Risk analysis of TCDD Ankara-Istanbul high speed train project İnönü-Vezirhan section T26 tunnel

The Monte-Carlo Method was used for the economic risk analysis of the T26 Tunnel and also, for the physical risk analysis, the report was made as a result of detailed examinations.

15. Construction of PVC snow shield in TCDD Polatlı-Konya YHT line in order to prevent snow shoot in winter conditions.

The most appropriate method has been researched in order to prevent the snow shoots that troubling the train business on the said line and it has been determined that it is appropriate to make snow shields in accordance with world standards. In addition, supervision and consultancy services were provided in the design and production processes of snow shields.

16. TCDD Marmaray safety management system and electrification systems consultancy

Within the scope of this project, Marmaray Safety System was examined and solutions were produced for the problems experienced in LV-MV systems by comparing with similar applications in the world.

17. Research and development project for the development of precaution suggestions based on scientific methods by making risk management for safe operation in TCDD conventional lines

Within the scope of this work, risk assessments were completed and reported by making on-site examinations for 7 regions of TCDD. Software is also a risk for subtracting a risk assessment report for the first time in Turkey, Turkish State Railways TCDD General was created.

18. The project of determining the deficiencies that may pose a danger in the business by performing the risk analysis of the deray incident on the M02 switch of the 10023 train between the Separation Fountain-Üsküdar where the Marmaray operation is carried out.

Within the scope of this work, scientific investigations within the scope of scissors, signaling, electrification, telecommunication and electromechanical systems, and risk analysis of proactive and reactive systems in this field based on scientific methods, and deficiencies that may pose a danger in business have been identified.

19. Project for the development of fuel efficiency and innovative technologies for internal combustion motor vehicles, (Project Manager)

With the accepted Project, within the scope of TÜBİTAK ARDEB 1003, 216M252, a hybrid technology that can be used in internal combustion motor vehicles will be developed that will increase fuel efficiency and reduce carbon dioxide emissions accordingly. To increase fuel efficiency by 15% by combining internal combustion engine, BLDC engine and Thermoelectric Generator technology, to increase the competitiveness of our country with the production of high value-added technological products, to train expert scientists in this field, to publish qualified publications within the scope of SCI and to obtain patents in case the project is successful. It is aimed to improve this system in large-scale commercial vehicles (such as trucks and buses) with high fuel consumption by system optimization in the light of the results to be achieved.

20. European Union project titled “Cities for People (Cities -4- People)” and number 723194, (Project Manager)

The Cities for People project, accepted within the scope of the European Union Commission's Horizon 2020 “Mobility for Growth” call, is a 3-year Research and Innovation project. Five developed and emerging in cities covered by the project (Üsküdar-Turkey, Hamburg, Germany, Budapest-Hungary, Oxfordshire in the United Kingdom, Trikala-Greece) citizens, city officials and innovation specialists, to understand the transport and mobility constraints and priorities, ideas and concepts will work together as a "community" to produce, test these concepts in real life and develop their potential.

21. Magnetless Motor and Driver Development Project for Electric Light Commercial Vehicles, (Project Consultant)

With the project, which is accepted within the scope of TÜBİTAK 15011-OTO-HEAT 2015-2, it is aimed to design and develop the motor and motor driver, which do not use rare elements such as magnets, completely locally, to be used in electric vehicles, to make them ready for mass production and to be used in an application tool determined as a project output.

9.2. Istanbul University Scientific Research Projects Unit Projects

1. Realization of Control Laboratory and Preparation of Its Content, Project Number: 4645.
2. Development of Control and Automation System Laboratory and Content Enrichment Project Number: 9547.
3. Development of Solar Car for Long Roads, Project Number: 16359 (Project Manager).

9.3. Projects at Kırıkkale University

1. Determine the need for residential and industrial natural gas in 15 cities in Turkey (with the survey and Statistics) were conducted.
2. Investigate of Turks living in Germany settlements were conducted with surveys as cultural and statistical.
3. Electronic Security System was established at MKE Weapon Museum.

9.4. 1985-1990 THE PROJECTS MADE IN WESTFALEN ELECTRICAL ENERGY INSTITUTE (VEW, ALMANYA)

Project Name: The installation and operation of all command and control systems for 750 MW gas and coal-fired rotative electric power plants

Various products produced in the BAYER are particularly sensitive and most technological products and at the same time consist of a mixture of a lot raw materials and substances. The processes performing these products are supposed to do their function properly in order to produce the predicted (Pharmaceutical Sector). To run these type of processes a computer software that is analysing, commanding and controlling multi-input and multi-output systems was produced.

In Europe, especially in PhD studies in Germany, if a collaborative work with the industry is to be done, PhD candidate works in that industry and learns the system more closely to recognize this

industry much better and to make real time correction of his work. ***In this context, 4 months in 1986, all command and control systems of VEW-Westphalia Electric Company's 750 MW gas and coal-fired rotative electric power-plant overhauled, and as a result a preliminary study is made to apply PhD study on this field in real time.*** In 1986 and again in 1990 as a result of successful projects, theoretically done with the university, a new method was developed and this developed method was performed successfully in real time on the electric power plant mentioned above, in 1989 and 1990. In 1991 The Doctorate exam was completed. In the same year began to work for German Babcock Company that is performing in this field.

9.5. 1991 PROJECTS REALIZED IN THE GERMAN BABCOCK AG- COMPANY

1. More efficient use of solid fuels in thermal power plants in Greece Megapolis

In 1991 in Greece, lignite coal fired Power Plant in Megalopolis, Modeling and simulation of the unit IV was made. Because of the low heat value of Lignite coal in this country; in power plants, coal burning takes a great hardship (the same of our case, in Elbistan Afşin).

As a result of modelling and simulation efforts it is shown that this coal can be burn efficiently in this type of power plants.

2. Establishment of the fluidized bed thermal power plants for Germany Bayer Chemical Sector

Especially in industry to meet energy demand (electricity, steam and heat); fluidized bed, compatible to the environment, having low emission values, working on controllable cheap coal thermal power plants are established. Projecting of the 130 MW coal-fired, fluidized bed thermal power plant for Bayer chemical industry was completely done. Later, the engineering of command control system, adaptation and installation on siemens hardware was done, it was taken into the business and run. Then, to reduce emission values, bed temperature control concept was developed and applied successfully.

3. Process and control engineering of sugar factory established for Süd-Zücker Company in Germany was done and the business was made able to run.

The process engineering of 150 MW coal-fired fluidized bed thermal power plant that was made for Züd-Zücker Company's sugar factory was done. Moreover; the measuring, command, and control engineering of the power plant was done and a list of required hardware was made. Likewise, all the necessary engineering services until the plant put into operation was given. Also; the process, command and control engineering of gas-fired backup boiler (required for the plant) was done and it was taken into business.

4. Project directorship of the coal-fired thermal power plant Established in the Republic of Czechoslovakia

The complete project directorship of 120 MW coal-fired thermal power plant that was established in the Czech Republic was undertaken and with Czech Bruno Machinery Factory the installation of the powerplant was done. Engineering studies have been made in this country.

5. Increasing the efficiency of Chemnitz City thermal power plant in Former East Germany project. Also a PATENT has been received for this topic.

Chemnitz City's (in Former East Germany) central heating is carried out by an old coal power plant. To increase the efficiency of this power plant, a modernization has been carried out. Thanks to studies in this context the settings of Coal mills' number of cycles was made with compact controllers. Also a PATENT has been received about this issue.

6. Making the command and control project of Germany Wiesloch Paper Factory's natural gas power plant

The transformation (to make able to be fired with natural gas) and the all measuring command and control parts' renewal of Wiesloch paper factory's oil-fired, established to produce electric power and process steam power plant was made, the responsibility of this was undertaken and it was put into operation.

7. The modernization and purification (from old Russian technology) of Hagenwerder Electric power plants in the former East Germany

Electrical and electronic devices of the coal mills that were made with Russian technology and used in Hagenwerder Electric Power Plants (in the former East Germany) were changed, adapted to new hardwares, modernized and put into operation.

8. Evaluation of organic wastes Project

In Western European countries, waste disposal is always on the agenda as an important issue because of scarcity of places and importance of the environment. A variety of methods are developed to evaluate wastes as less costly as possible, or even in a profitable way. As one of these methods; the projecting, the command and control engineering of 'accelerated organic waste composting, gas extracting, electricity generating plant' was made and it was taken into business.

9. Being director of Assessment of Domestic Wastes Project held in Berlin Germany.

Became director of 'admission to the business, project, and automation Engineering' in the construction process of two units of the power plant which generates electrical energy by burning household wastes of Berlin.

10. Conducted in TAIWAN, gas and oil-fired thermal electricity plant's automation engineering was done.

In Taiwan, coal, gas and oil complex-fired Thermal Power Plant's project, automation engineering, and documentation was done.

11. Caried out in ABU DHABI, Purification of Sea Water Project

In Abu Dhabi, Command and control system of 'gas and oil-fired 32 boilers and associated with these sea water purification plants' was modeled, simulated and optimized within modernization. In addition to these, customer training have been made, and an extensive documentation has been prepared within this framework.

12. In China, 1400 MW Huaneng coal power plant's all projects were prepared and it was built
HUANENG project in China: the complete command and control engineering of Coal-fired heat and electricity and process steam generating 4X350 MW units and also the process was managed. In this framework, between turbine's working system, software, hardware and engineering coordination and documentation jobs have been made.

13. In CHINA, complete project preparation and construction of Yang Liu 700 MW coal power plant

In China YANG LIU Project: complete command and control engineering of 2X350 MW units in the Coal-fired Thermal Power Plant was made and also the process was managed. In this framework, between turbine's working system, software, hardware and engineering coordination and documentation jobs have been made.

14. In East Germany Thermal Power Plant Schkopau's commissioning process was made

In the New East Germany State, in the Schkopau thermal power plant, fuel oil-fired backup boiler was put into operation and optimisation of control systems projet was done.

15. Project Engineering for Natural Gas and Fuel-Oil Boiler Paper Factory in Wiesloch

16. Projecting of Seyitömer thermal power plant's connection to the electrical system

Renewal of the Seyitömer Thermal Power Plant's Mills and projecting jobs for the plant to be able to run with interconnected system were done.

17. Feasibility and privatization file was prepared for Orhaneli Thermal Power Plant

In the framework of Orhaneli Thermal Power Plant's Privatization, proposals and feasibility files were prepared.

18. Feasibility and privatization file was prepared for Seyitömer thermal power plant

In the framework of Seyitömer Thermal Power Plant's Privatization, proposals and feasibility files were prepared.

19. Feasibility and privatization file was prepared for Tunçbilek thermal power plant

In the framework of Tunçbilek Thermal Power Plant's Privatization, proposals and feasibility files were prepared.

20. Common thesis execution with Paderborn University in Germany in the framework of university-industry cooperation

Cooperative master thesis and its management was done with Paderborn University to measure and observe the chimney fluid in the fluidized bed, coal-fired thermal power plants.

21. Counseling and feasibility studies of electrical energy production from the medical wastes project on behalf of İstanbul Metropolitan Municipality

Counselling of the power plant (established for the disposal of medical wastes by burning and at the same time producing electrical energy in İstanbul) was done; required reports and documentations were prepared to put it into operation; and necessary studies were made to improve its efficiency.

9.6. Projects carried out at TUVASAŞ (Turkey Wagon Industry Corporation)

- **ITEM E-INDEX project coordinator Turkey**

In this project carried out with Sweden, Germany, Canada, Portugal and Romania, it aims to use renewable energy and traditional energy sources in an optimum way by using intermediate storage elements such as train sets.

- **Production of national train set**

The first National Electric Train Set of our country, with a speed of 160 km / h, was designed in TSI standards and its prototype was produced.

- **The design of the Electric High Speed Train Set**

The High Speed Train Set with a speed of 225 km / h has been designed in accordance with TSI standards and made ready for production.

- **Other projects**

- Establishment of Railway Vehicles (Metro, Tram, Commuter, High Speed and High Speed Train) Aluminum body factory
- Establishing the Railway Vehicles lining factory
- Establishment of Robotic Bogie production line
- Modernizing the aluminum body test stand to meet the standards.
- Making the K type composite brake Lining Project with shaft welds.
- Design and production of personnel wagons

9. Undergraduate and graduate level courses

9.a. Graduate Level Courses

Akademic Year	Term	Course Name	Weekly Hours	
			Theoretical	Practice
1997-2017	Fall	Railway Systems Command and Control Technique Applications	3	
		Renewable Energy Sources	3	
		Power System Planning	3	
	Spring	Electric Railway Systems Power Supply and Drive Mechanisms	3	
		Digital Control	3	
		Energy Systems Control Techniques and Applications	3	
		Special Expertise Issues		
		Seminar		

9.b. Undergraduate Level Course

Akademic Year	Term	Course Name	Weekly Hours	
			Theoretical	Practice
1997 -2017	Fall	System Modeling and Automatic Control 1	3	2
		Energy Systems 1	3	2
		Microprocessors 2 (PLC)	2	
		Introduction to Engineering	2	
		Automation	3	2
		System Modelling	3	
	Spring	Control Systems	3	
		Energy Systems II	3	
		Microprocessors I	3	
		System Modelling and Control 2	3	2
Programmable Logic Controller (PLC)	3	2		

10. Awards

- 1) Kirikkale University Scientific Publication Award
- 2) At the beginning of 21. Century Kirikkale Symposium Science Committee Chairman Award
- 3) Award for Advisor of the High Speed Train Project in TCDD
- 4) TUBITAK 2010 Formula-G Racing Championship Award
- 5) TUBITAK 2011 Formula-G Racing Championship Award
- 6) World Solar Challenge Race Eight Place (World)
- 7) Istanbul University The Biggest Industry Project Award
- 8) TUBITAK Alternative Energy Vehicle Races Electromobile Category First Place
- 9) TUBITAK Alternative Energy Vehicle Races Electromobile Category Second Place

11. Patents

1 - Regulation of speed of coal crushing mill having fluid torque converter

Inventor: KOCAARSLAN ILHAN (DE)

Applicant: BABCOCK PROZESSAUTOMATION
GMBH (DE) (BR)

EC: B02C13/30; F16D33/16; (+1)

IPC: B02C13/30; F16D33/16; G05D13/40(+7)

Publication info: DE4342103 - 1995-06- 14



2 - A Method for Performing Primary Frequency Control Performance Tests with a Central Automation System

Inventor : Ilhan Kocaarslan

Application Number : 2015/11960

Document Number : 2015-GE-3522842

Registration Number : 2015 11960

Date of Application : 2015/09/29

Document Date: 2015/09/29

Registration Date : 2018/09/21

Application Type : National

Application Protection Type :Patent

3 – Transformer Cooling System and Method

Inventor : Ilhan Kocaarslan

Application Number : 2016/01641

Document Number : 2016-GE-49537

Registration Number : 2016 01641

Date of Application : 2016/02/08

Document Date: 2016/02/08

Registration Date : 2019/06/21

Application Type : National

Application Protection Type :Patent

4 - Providing Optimal Load Distribution in Power Plants and Reducing Carbon Emissions with Central Automation Method

Inventor : Ilhan Kocaarslan, Hasan Tiryaki

Application Number : 2015/09434

Document Number : 2015-GE-280386

Registration Number : 2015 09434

Date of Application : 2015/07/29

Document Date: 2015/07/29

Registration Date : 2019/02/21

Application Type : National

Application Protection Type :Patent

12. Academic Activities

Managed Master of Science Thesis'

1. Uluer M., "Artificial Neural Networks Approach to Power System Stabilizers", Kırıkkale University, 2001.
2. Coşkun G., "Researching of Combined Heat Power Generation Systems", Kırıkkale University, 2002.
3. Akbıyık B., "Evaluation of wind energy potential in Turkey", Kırıkkale University, 2004.
4. Tiryaki H., "Comparison of Fuzzy Logic Controller and PID Controllers in an Electric Power Station", Kırıkkale University, 2005.
5. Filiz , C., "Researching of Power System Harmonics and Filtering" , 2006.
6. Kınalı, Ö., G., "Generator Modelling on Regenerative Energy Systems and Controlling with Fuzzy Logic", 2007
7. Duman D., "Parallel Operation of Two Synchronous Generator with PLC" İstanbul Üniversitesi, 2010
8. Pektaş, Ö., Ö., "Researching of Mobile Bomb Disposal Robots and Robot Prototype Design", 2010
9. Bal, E., "Voltage Control Power System Stabilizer Applications and Alternatives", 2012
10. Gümüş, K., "Power Plants Primary Frequency, Load Control", 2012
11. Ertik, A., "Evaluation of Energy Efficiency in Rail Systems", 2012
12. Bulut, İ., B., "Modeling Coordination of Natural Gas Combined Cycle and Wind Power Plants with Modern Control Methods", 2013
13. Karabacak S., A., "Application of Monitoring and Analysis Method in Railway Safety Management System" 2014
14. Koçak Y., "Risk Analysis Methods of Railway Safety Management System", 2014
15. Kamel H. A., "Comparison of Real Time Classical PID Controllers with MATLAB (Simulink) Application with PLC Application in the Laboratory" 2016
16. Topçu N., "Factors Affecting Safety in Railways", 2016
17. Karadeniz O., "Battery Management System Design for Lithium Based Energy Storage Units", 2017

Managed Doctorate Thesis'

1. Kurt A.G., "Load-Frequency Control in Power Systems", Kocaeli University, 2000.
2. Cam E., "Implementation of New Control Methods in Power System", Kırıkkale University, 2004.
3. Lüy M., " Artificial Neural Network Modeling, and Implementing on Thermal Power Plants", 2009.
4. Tiryaki H., "Application of Modern Control Methods in Load Distribution Systems", 2013.
5. Akçay M. T., "Design, Analysis and Energy Management of Optimum Electrification System in Railways", 2018

13. Publications

14.1 Published articles in international refereed journals

1. Kocaarslan, İ., "Application of adaptive control concept in a 750 M W coal fired power plant", *Control Engineering Practice*, 2(6), 1076, (1994).
2. Çam, E., Kocaarslan, İ., "Load Frequency Control in Two Area Power Systems Using Fuzzy Logic Controller", *Energy Conversion and Management*, 46(2), 233-243 (2005).
3. Çam, E., Kocaarslan, İ., "A Fuzzy Gain Scheduling PI Controller Application for an Interconnected Electrical Power System", *Electric Power Systems Research*, 73(3), 267-274 (2005).
4. Kocaarslan İ., Çam E., "Fuzzy logic controller in interconnected electrical power systems for load-frequency control", *International Journal of Electrical Power and Energy Systems*, 27(8), 542-549, (2005).
5. Kocaarslan İ., Çam E., Tiryaki H., "A Fuzzy Logic Controller Application For A Thermal Power Plants", *Energy Conversion and Management*, 47(4), 442-458, (2006).
6. Kocaarslan İ., Çam E., "An adaptive control application in a large thermal combined power plant", *Energy Conversion and Management*, 48(1), 174-183, (2007).
7. Kocaarslan İ., Çam E., "Experimental Modelling and Simulation with Adaptive Control of Power Plant", *Energy Conversion and Management*, 48(3), 787-796, (2007).
8. Gözde H., Taplamacıoğlu M.C., Kocaarslan İ., Senol M.A., "Particle Swarm Optimization Based PI Controller for Load-Frequency Control of Two-Zone Superheated Thermal Power System " *Journal of Thermal Science and Technique* Volume 30 Issue 1, Page 13-22 (2010)
9. Eke, İ., Taplamacıoğlu, M. C., Kocaarslan, İ., "Artificial Bee Colony Algorithm Based Design of Stable Power System Balancer", *Journal of The Faculty of Engineering and Architecture of Gazi University*, (2011)
10. Gözde. H., Taplamacıoğlu, M. C., Kocaarslan, İ., "Comparative Performance Analysis of Artificial Bee Colony Algorithm in Automatic Generation Control for Interconnected Reheat Thermal Power System", *Electrical Power and Energy Systems*, 42, 167–178, (2012).
11. Kocaarslan İ., Akçay M.T., Ulusoy S.E. , Bal E., Tiryaki H., "Creation of a dynamic model of the electrification and traction power system of a 25 kV AC feed railway line together with the analysis of different operation scenarios using Matlab/Simulink", *Turkish Journal Of Electrical Engineering And Computer Sciences*, Vol. 25, No. 5, 4254-4267, 2017
12. Kocaarslan İ., Akçay M. T., Akgündoğdu A., Tiryaki H., " The Comparison of the ANN and ANFIS Methods for the Prediction of Voltage Drop on an Electric Railway Line", *Istanbul University-Journal of Electrical & Electronics Engineering*, Accepted Paper, 19.04.2017.
13. Karaman S., Kocaarslan İ., Tiryaki H., Bal E., "The Modelling Recorded Faults In Railways and Prediction", *Istanbul University-Journal of Electrical & Electronics Engineering*, Vol. 17(2), pp. 3417-3423, June 2017.
14. Akçay M., T., Kocaarslan İ., , Determination of distance between ac traction power centers with a designed model depending on operational datas in a 25 kV AC railway line using artificial intelligence methods, *International Journal of Engineering Research and Development*, Vol. 13, Issue 11, 18-27, 2017.
15. Kocaarslan, İ., Akçay, M. T., "Analysis of electrical and operational effects of the supply voltage

specification together with the comparison of 750 V and 1500 V DC option: A case study of a railway line“, *Journal of Scientific and Engineering Research* , Vol. 4, Issue 12, 168-174, 2017.

16. Kocaarslan, İ., Akçay, M. T., Calculation of the Effects of the Traction Force Curve to the Catenary Voltage With a Comparison of Two Different Curve Levels in a Railway Line, *Journal of Scientific and Engineering Research* , Accepted Paper, 1-10, 2017.
17. Kocaarslan, İ., Akçay, M., T., Akgündoğdu, A., Tiryaki, H., The comparison of the ANN and SVM Methods for the Prediction of Voltage Drop on a Subway Line, *International Journal of Engineering Research and Advanced Development (IJERAD)*, 1-10, 2017 .
18. Kocaarslan, İ., Kart, S., Genc, N., Uzmus, H., Design and Application of PEM Fuel Cell-Based Cascade Boost Converter, *Electrical Engineering*, 101-4, 1323-1332, 2019
19. Kocaarslan, İ., Kart, S., Altun, Y., Genc, N., Lyapunov Based PI Controller for PEM Fuel Cell Based Boost Converter *International Journal of Renewable Energy Research*,10-1, 275-280, 2020

14.2 Presented papers at the international scientific conferences and published in Proceedings

20. Unbehauen, H., Kocaarslan, I., “Experimental Modelling and Simulation of a Power Plant”, *Eurepean Simulation Multiconference (ESM)*, Nürnberg (GERMANY), 10-13, June 1990.
21. Unbehauen, H., Kocaarslan, I., “Experimental Modelling and Adaptive Power Control of a 750 MW Once-Through Boiler”, *International Federation of Automatic Control (IFAC) 11th World Congress*, Talling (USSR), 13-17 August 1990.
22. Unbehauen, H., Keuchel,U., Kocaarslan, I., „Real-time adaptive control of electrical power and enthalpy for a 750 MW once-through boiler”, *Proceedings IEE CONTROL 91*, Edinburgh (GB) 42-47, 1991.
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