

Curriculum Vitae
OKYAY KAYNAK
Fellow Member of IEEE

Emeritus Professor and UNESCO Chair on Mechatronics,
Department of Electrical and Electronic Engineering,
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A. PERSONAL DATA

Name : Mustafa Okyay Kaynak
Born : 19 April 1948, Afyon, Turkey
Nationality : Turkish
Marital Status : Married to Pervin and has a daughter, Ece.
Home Address : Goztepe, Kemal Sunal Sok., Sanal Apt, No:1, D. 26, 34728 Istanbul, Turkey
Tel : +90-533-475-1010

B. HIGHER EDUCATION

Courses and research program leading to Ph. D. degree in Electronic and Electrical Engineering at University of Birmingham, Birmingham, U.K., 1969-72.
B.Sc. course at Electronic and Electrical Engineering Dept. of University of Birmingham, Birmingham, U.K., 1966-69 (Graduation: Honours, Class I).
Advanced Level General Certificate of Education Courses at North Western Polytechnic, London, U.K., 1965-66.

C. EMPLOYMENT HISTORY AND POSITIONS HELD

July 2018 – Aug. 2021
1000 People Plan Program Professor, University of Science & Technology Beijing, Beijing, China.
Nov. 2017 – Aug. 2021
Adjunct Professor, King Fahd University of Petroleum and Minerals (KFUPM), Dammam, Saudi Arabia.
July 2017 – Sept. 2018
Part-time Chair Professor, Harbin Institute of Technology, Harbin, China.
Sept. 2014 – Sept. 2017
External Academic Advisor for Dept. of Mech. And Biomedical Engng., City University of Hong Kong, China.
July 2013 – July 2017
1000 People Plan Program Professor, Harbin Institute of Technology, Harbin, China.
Mar. 2012 – July 2013
Chief International Academic Advisor, Harbin Institute of Technology, Harbin, China.
Oct. 2010 – Oct. 2018
Country liason to Turkey, A*Star, Singapore.
Oct. 2009 – Oct. 2011
Consulting Professor to University of Technology MARA, Malaysia.
Sept. 2009 – Sept. 2012
Overseas Officer of KAIST, South Korea.
Sept. 2003 – Sept. 2008
Consulting Professor to Harbin Institute of Technology, Harbin, China.
Sept. 2001 – July 2013
Part-time Professor of Aeronautical and Space Technologies Institute, Air Force Academy, Turkey
Nov. 1993 - Present
Holder of UNESCO Chair on Mechatronics at Bogaziçi University.
Jan. 1979 – Present
Member of Electrical and Electronic Engineering Dept., Bogaziçi University, Bebek, Istanbul, Turkey (till Apr. 1983 Assistant Professor, till Aug. 1988 Associate Professor, till Apr. 2015 Full Professor, since then Emeritus Professor).
Feb. 1975 - July 1978
Electronics Engineer at General Directorate of Meteorology, Jeddah, Saudi Arabia.
Sept. 1973 - Oct. 1974 (National Service)
Sub-lieutenant Project Engineer at NATO Infrastructure Dept. (Air Force Section), Ankara, Turkey.
Sept. 1972 - Apr. 1973 and Oct. 1974 - Feb. 1975
Electronics Engineer at General Directory of SEKA Pulp and Paper Mills, Izmit, Turkey.

D. ADMINISTRATIVE POSITIONS HELD

Director of Mechatronics Research and Application Center of Bogaziçi University (Oct. 1998 – Apr. 2015)

Chairman of Electrical and Electronic Engng. Dept., Bogazici University (August 1998 – October 2000)
Director of Mechatronics Research and Application Center of Bogazici University (Oct. 1995 - June 1997)
Director of Biomedical Research Institute, Bogazici University (May 1985 - August 1986)
Member of Senate of Bogazici University (May 1985 - August 1986)
Member of Executive Council of Vocational School of Bogazici University (August 1985 – August 1986)
Member of Executive Council of Research Fund of Bogazici University (May 1985 - August 1986)
Chairman of Computer Engineering Department of Bogazici University (April 1983 - May 1985)
Vice Chairman of Electrical and Electronics Eng. Dept. of Bogazici University (April 1981 - August 1986)

E. PROJECTS DIRECTED/PARTICIPATED

Start-up Research Fund, University of Science & Technology Beijing (USTB), Beijing, China (funded by USTB, **08.2018-08.2021**, project total about US\$ 900,000).
Development of Vision-based Control Algorithms and Platform (funded by Harbin Institute of Technology, **2014**, project total about US\$ 1,167,000).
Development of Advanced Process Control Algorithms and Experimental Platform (funded by Central Government of China, **2013**, project total about US\$ 670,000).
Development of Type-2 Fuzzy C-means Classification Algorithms and Their Application in Control Engineering (funded by Bogazici University Research Fund, **2012**, project total about US\$ 6.000).
Development and Application of VSS based Learning Algorithms for Spiking Neural Networks (funded by Bogazici University Research Fund, **2011**, project total about US\$ 15.000).
Development of Interval Type-2 Fuzzy Sets Theory and Design (funded by Bogazici University Research Fund, **2009**, project total about US\$ 8.000).
Contributions to Type-2 Fuzzy Sets Theory and Applications in Control Engineering and Other Areas (funded by TÜBİTAK - Scientific and Technological Research Council of Turkey) **2008** (project total about US\$ 70.000)
Development of Type-2 Fuzzy Sets Theory and Applications in Control Engineering (funded by Bogazici University Research Fund, **2008**, project total about US\$ 10.000)
Integration of Grey System Theory in Conventional Controllers and Performance Evaluation of Grey Predictive Controllers on an Antilock Braking System (funded by Bogazici University Research Fund, **2006**, project total about US\$ 15.000).
European Mechatronics for a New Generation of Production Systems (funded by European Union- FP6, **2005**, project total about US\$ 20.000)
Mechatronics Center (Turkish State Planning Organization, **2005**, project total about US\$ 500.000)
International Cooperation in Silicon Implementation of Computational Intelligence for Mechatronics (Joint project funded by TÜBİTAK - Scientific and Technological Research Council of Turkey) **2004**
Application of VLSI based Soft Computing to Mechatronics (funded by NSF, USA).
Integration of Soft Computing Methodologies with Sliding Mode Control Theory for Control of Nonlinear Systems (funded by Bogazici University Research Fund, **2003**, project total about US\$ 4.000).
VSS Theory Based Learning Algorithms for Computationally Intelligent Systems (funded by Bogazici University Research Fund, **2003**, project total about US\$ 15.000)
Intelligent Control of Mechatronic Systems (Joint project with a team from Hungary, jointly funded by TÜBİTAK - Scientific and Technological Research Council of Turkey and Hungarian National Committee for Technological Development)
Intelligent Control of Mechatronic Systems with Special Emphasis on the Application of Soft Computing Techniques (Joint project with teams from Hungary and Tatarstan, funded by Foundation for Promotion of Advanced Automation Technology, Japan)
Design and Manufacture of an Industrial SCARA Type Direct Drive Manipulator (funded by TÜBİTAK - Scientific and Technological Research Council of Turkey)
Use of Soft Computing Methodologies for Control of Nonlinear Systems (Joint Project with a team from Hungary, funded by TÜBİTAK - Scientific and Technological Research Council of Turkey, **2001**, project total about US\$ 48.000)
Game Strategies for Robotic Soccer (funded by Bogazici University Research Fund, **2001**)
A number of other projects funded by Bogazici University Research Fund.

F. ACADEMIC VISITS ABROAD

Jan.-Feb. 2018: JSPS Fellow, Shibaura Institute of Technology, Saitama, Japan.
January 2012: Visiting Professor at RMIT (Royal Melbourne Institute of Technology), Australia.
February 2010: Visiting Professor at King Fahd University of Petroleum and Minerals, Saudi Arabia.
January 2010: Visiting Professor at Digital Ecosystems and Business Intelligence Institute (DEBI), Curtin University of Technology, Perth, Australia.
August 2009: Visiting Professor at Dept. of Manufacturing Engineering and Engineering Management, City University of Hong Kong.
August 2001: Visiting Professor at Technical University of Munich, Germany (Supported by Alexander von Humboldt Foundation).
July 2000 - August 2000: Visiting Professor at Keio University, Japan (on invitation by the University).
July 1997 - July 1998: Visiting Professor at National University of Singapore, Singapore (attached to the Dean's Office for M.Sc. in Mechatronics Programme).
July 1993 - Aug. 1993: Visiting Scholar at Mechanical Engineering Department, University of California, Berkeley, U.S.A. (in connection with a NATO collaborative research project).
Sept. 1990 - July 1991: Visiting Associate Professor at Michigan Technological University, Michigan, U.S.A.

Jan. 1990 - Feb. 1990: Guest Researcher at Indiana University - Purdue University at Fort Wayne, Indiana, U.S.A. (in connection with a NATO collaborative research project).
Jan. 1989 - Feb. 1989: Guest Professor at Institute of Industrial Science, University of Tokyo, Tokyo, Japan (on invitation by the Institute).
Nov. 1986 - Oct. 1987: Guest Researcher at Institute of Robotic Research, University of Dortmund, F.R.G. (with a fellowship of Alexander von Humboldt-Stiftung).
July 1984 - Aug. 1984: Guest Researcher at Université du Québec à Trois-Rivières, Québec, Canada (in connection with a NATO collaborative research project).
Oct. 1981 - May 1982: Visiting Scholar at Institute of Industrial Science, University of Tokyo, Tokyo, Japan (with a fellowship of Matsumae International Foundation).

G. RESEARCH INTERESTS

Intelligent Control, Industrial Automation, Data Driven Techniques, Industrial Cyber Physical Systems.

H. AWARDS AND HONORS

- Elected as a Member of Turkish Academy of Sciences (2022-...)
- IEEE Systems Council Distinguished Lecturer (2021-2023)
- International Academy Prize of Turkish Academy of Sciences (2020)
- Clarivate Analytics Highly Cited Researcher (2017-2021)
- Doctor Honoris Causa, Obuda University, Budapest, Hungary (2020).
- Ranked 3rd in Turkey among Top Scientists for 2020 by Guide2Research (2020).
- Senior Award, Japan Society for the Promotion of Science, 2018
- Outstanding Associate Editor of IEEE Access, 2017
- IEEE/SMCS Distinguished Lecturer (2016-2021)
- Humboldt Research Award, 2016
- China Friendship Award, 2016
- Mustafa Parlar Foundation, Science Award, 2015
- Recipient of China's Qianren (1000 People) Program Professorship, 2013
- Excellence in Research Award of Bogazici University, 2013
- Guest Professor of Wuhan University, China (2012-2015)
- IEEE/CIS Distinguished Lecturer (2012-2014)
- IEEE/SMCS Outstanding Contribution Award, 2011
- IEEE/IES Dr.-Ing. Eugene Mittelmann Achievement Award (*for contributions to variable structure systems theory and its fusion with intelligent control methodologies*), 2011
- IEEE/IES Distinguished Lecturer (2005-...)
- IEEE/IES Anthony J. Hornfeck Service Award, 2005
- Guest Professor of Harbin Institute of Technology, China (2004-2006)
- IEEE Fellow Grade, 2003 (*for contributions to variable structure systems theory and its applications in mechatronics*)
- Excellence in Research Award of Bogazici University, 2003
- 2003 APNNA (Asia-Pacific Neural Network Assembly) Leadership Award
- IEEE Third Millennium Medal, 2000
- Honorary Professorship of Banki Donat Polytechnic, 1999
- IFAC Japan Foundation Scholarship (1990)
- Matsumae International Foundation Fellowship (9/1981-5/1982)
- Alexander von Humboldt Foundation Fellowship (9/1986-9/1987)
- Turkish State Fellowship for Study Abroad (9/1964-9/1972)

I. OTHER

a. Activities in professional organizations

- Member of IEEE TAB/Products and Services Committee (2022)
- Vice President (Organization & Planning) of IEEE Systems, Man, and Cybernetics Society (2022-2024)
- Member of Board of Governors of IEEE Systems, Man and Cybernetics Society ((2016 – 2018, 2019 – 2021)
- Member of IEEE Future Directions Committee (2019-2022)
- Member of Board of Governors of IEEE Control Systems Society (2019, appointed)
- IEEE Industrial Electronics Society Representative to IEEE Systems Council (2019 – 2021)
- Vice Chair of IFAC TC 9.1 Economic, Business, and Financial Systems (2014- 2020)
- Member of IEEE TAB/Products and Services Committee (2017)
- Member of Board of Governors of IEEE Education Society (2014 – 2016)
- Vice-Chair (Strategic Planning and Analysis) of IEEE Membership and Geographical Activities Board (2012)
- IEEE Turkey Section Chair (2011 -2012, appointed)
- Member of AIAA International Activities Committee (2009 -2012)
- Chair, IEEE MGA AdHoc Committee Conferences Committee (2011)
- Member of IEEE Conferences Committee (2010 - 2011)
- Member of IEEE Periodicals Committee (2009 - 2010)
- Member of IEEE TAB Nominations & Appointments Committee (2007-2008)
- Vice Chair of IEEE Membership Development Committee (2006)
- Member of IEEE RAB/TAB Section/Chapter Support Committee (2005)

- Member of National Innovation Initiative Working Group (2004 – 2006)
- Member of IEEE Teaching Award Committee (2004 – 2006)
- Member of IEEE Fellow Committee (2004 – 2006)
- Vice-President (Conferences) of IEEE Computational Intelligence Society (2004 – 2005)
- President of IEEE Industrial Electronics Society (2002 – 2003)
- AdCom Member of IEEE Neural Networks Society (2002 – 2003)
- Member of Board of Governors of IEEE Education Society (2000 – 2002)
- President Elect of IEEE Industrial Electronics Society (2000 – 2001)
- Vice President (Administration) of IEEE Industrial Electronics Society (1998 – 1999)
- Vice President (Technical Activities) of IEEE Industrial Electronics Society (1996 – 1997)
- Vice President (Publication) of IEEE Industrial Electronics Society (1994 – 1995)
- AdCom member of IEEE Industrial Electronics Society (1990 –).
- Chairman of Technical Committee on Emerging Technologies, IEEE Industrial Electronics Society (1991 – 1996)

b. Activities related to recent international conferences

- General Chair of International Workshop on Recent Advances in Sliding Modes - RASM 2015 (April 9-11, 2015, Istanbul, Turkey)
- General Chair of 23rd IEEE International Symposium on Industrial Electronics, ISIE 2014 (1-4 June, Istanbul, Turkey)
- General Chair of IEEE Global Engineering Education Conference – EDUCON 2014, (3-5 April 2014, Istanbul, TURKEY)
- General Chair of 12th International Conference on Information Technology Based Higher Education and Training, ITHET 2013 (10-12 October 2013, Antalya, Turkey)
- General Chair of 9th Asian Control Conference – ASCC 2013, (June 23-26, 2013, Istanbul, Turkey)
- General Chair of 10th International Conference on Information Technology Based Higher Education and Training, ITHET 2011 (4-6 August 2011, Kusadasi, Turkey)
- General Chair of the 2010 IEEE International Conference on Systems, Man, and Cybernetics: SMC 2010 (10-13 October 2010, Istanbul, Turkey)
- General Chair of the IFAC International IFAC International Workshop on Adaptation and Learning in Control and Signal Processing; ALCOSP 2010 and IFAC International Workshop on Periodic Control Systems-PSYCO 2010, (August 26-28, 2010, Antalya, Turkey).
- General Chair of 9th International Conference on Information Technology Based Higher Education and Training, ITHET 2010 (29th April - 1st May 2010, Cappadocia, Turkey)
- General Chair of the 2nd IFAC International Conference on Intelligent Control Systems and Signal Processing, ICONS 2009 (Sept. 21-23, 2009 Istanbul, Turkey).
- General Chair of the International Symposium on Optomechatronic Technologies, ISOT 2009 (Sept. 21-23, 2009, Istanbul, Turkey).
- General Chair of 10th International Workshop on Variable Structure Systems - VSS 2008 (8-10 June 2008, Antalya, Turkey).
- General Chair of IEEE International Electric Machines and Drives Conference - IEMDC 2007 (3-5 May 2007, Antalya, Turkey).
- General Chair of ICSC Congress on Computational Intelligence: Methods and Applications (Dec. 15-17, 2005, Istanbul, Turkey).
- Technical Program Co-Chair, IEEE International Conference on Industrial Electronics, Control and Instrumentation; IECON'2004 (6-9 Nov. 2004, Busan, Korea).
- General Chair of 12th Mediterranean Conference on Control and Automation: MED'04 (June 6-9, 2004, Kusadasi, Izmir, Turkey)
- General Chair of International Conference on Mechatronics: ICM'04 (June 3-5, 2004, Istanbul, Turkey)
- General Chair of 5th International Conference on Information Technology Based Higher Education and Training: ITHET 2004 (May 31-June 2, 2004, Istanbul, Turkey)
- Technical Program Co-Chair of IEEE International Symposium on Industrial Electronics- ISIE 2003 (June 9-12, 2003, Rio de Janeiro, Brazil)
- General Chair of International Fuzzy Systems Association Congress, IFSA 2003 (29 June - 2 July 2003, Istanbul, Turkey).
- General Chair of Joint 13th International Conference on Artificial Neural Networks and 10th International Conference on Neural Information Processing- ICANN/ICONIP 2003 (26-29 June 2003, Istanbul, Turkey).
- General Chair of IEEE Conference on Control Applications, CCA 2003 (23-25 June 2003, Istanbul, Turkey)
- Vice Co-Chair of 3rd Int. Conf. on Information Technology based Higher Education and Training - ITHET 2002 (Budapest, Hungary, July 4-6, 2002).
- General Chair of Int. Conf. on Information Technology in Mechatronics - ITM 2002 (Istanbul, Oct. 3-5, 2001).
- Vice Co-Chair of 2nd Int. Conf. on Information Technology based Higher Education and Training - ITHET 2001 (Kumamoto, Japan, July 4-6, 2001).
- General Chair of Int. Conf. on Information Technology based Higher Education and Training - ITHET 2000 (Istanbul, July 3-5, 2000).
- General Chair of Int. Conf. on Technology Management: University/Industry/Government Collaboration- UnIG'96 (Istanbul, June, 24-26, 1996).
- Has served on Advisory, Organizing and/or International Program Committees of numerous international meetings.

c. Activities related to international journals

- Editor-in-Chief of Discover Artificial Intelligence (2021 - Present)
- Associate Editor of IEEE Transactions on Systems, Man, and Cybernetics - Systems (2020 - Present)
- Associate Editor of IEEE Systems, Man And Cybernetics Magazine (2019 - Present)
- Associate Editor of IEEE Industrial Electronics Magazine (2019 - Present)
- Member of Editorial Board of IEEE Access (2019-2025)
- Guest Editor of IEEE Access, Special Section on Data-Driven Monitoring, Fault Diagnosis and Control of Cyber-Physical Systems, 2020.
- Guest Editor of IEEE Trans. On Industrial Electronics, Special Section Sliding Mode Control and Observation for Complex Industrial Systems, 2017.
- Guest Editor of Proceeding of The IEEE, Special Issue on Industrial Cyber Physical Systems, 2016.
- Editor-in-Chief of IEEE/ASME Transactions on Mechatronics (2014-2016)
- Associate Editor of IEEE Transactions on Industrial Informatics (2011 - Present)
- Member of Editorial Advisory Board of Grey Systems: Theory and Application (2010 - Present)
- Co-Editor-in-Chief of IEEE Trans. on Industrial Electronics (2009 -2012).
- Associate Editor of IEEE/ASME Trans. on Mechatronics (2008 - 2011)
- Associate Editor of IEEE Sensors Journal (2006 – Oct. 2020).
- Guest Editor of IEEE Trans. Industrial Electronics, Industrial Applications of Sliding Mode Control, 2008.
- Member of Editorial Board of Applied Soft Computing (2007 - 2014)
- Member of Executive Scientific Board of International Journal on Interactive Design and Manufacturing (Springer), (2007 - 2010)
- Guest Editor of IEEE Trans. on Education, Special Issue on Plagiarism, 2007.
- Area (Robotics and Mechatronics) Editor of Springer-Verlag Int. Journal on Soft Computing (2006-2008).
- Editor-in-Chief of IEEE Trans.on Industrial Informatics (2005 - 2006).
- Associate Editor of IEEE Trans.on Neural Networks (2002 - 2005).
- Associate Editor of IEEE Trans. on Industrial Electronics (1995 - 2009).
- Guest Editor of International Journal of Adaptive Control and Signal Processing, Special Issue on Learning in Intelligent Systems, 2003.
- Guest Editor (with Yavuz Akpinar) of Industry & Higher Education, Special Issue on ITHET 2000 – Information Technology Based Higher Education and Training, v. 15, no: 2, April 2001.
- Guest Editor of IEEE Trans. Industrial Electronics, Special Section on Computationally Intelligent Methodologies and Sliding-Mode Control, v. 48, no: 1, Feb. 2001
- Guest Editor of Robotics and Autonomous Systems, Special Issue on Mechatronics, vol. 19, no: 2, Dec. 1996.
- Guest Editor of IEEE Trans. on Industrial Electronics, Special Section on Mechatronics, vol. 43, no: 1, February 1996.
- Guest Editor (with Gunduz Ulusoy) of Industry & Higher Education, Special Issue on Technology Management: University-Industry-Government Collaboration, v. 10, no: 6, December 1996.
- Member of Management Committee of IEEE-ASME Transactions on Mechatronics (Jan.. 1995 – Dec. 1998, Jan. 2001-Jan. 2003).
- Member of Editorial Board of the KAIST Press journal; Neural Information Processing – Letters and Reviews (May 2003 - 2008).
- Member of Editorial Board of Asian Journal of Control (2001 –2005).
- Member of Editorial Board of International Journal of Advanced Computational Intelligence (1997 -2005).
- Member of Editorial Board of IEEE Spectrum (Jan. 1996 - Dec. 1998).
- Member of the Editorial Board of IEEE Press (1995).

d. Invited Presentations/Tutorials (more than 130 in total)

- Will be a panelist at the 2022 International Conference on Intelligent Systems and Computational Intelligence (ICISCI2022), May 10-13, 2022, Changsha, China.
- Will present a keynote lecture at the 2022 IEEE 9th International Conference on Industrial Engineering and Applications (ICIEA 2022), April 15-18, 2022, Sanya, China.
- Will present a keynote lecture at the 8th International Conference on Control, Automation and Robotics, (ICCAR 2022), April 8-10, 2022, Xiamen, China.
- Will present an invited talk (virtually) at Global Artificial Intelligence Summit, organized by Analytics Inside to be held on 22 Feb, 2022.
- Will present a virtual keynote at the 2022 International Workshop on Artificial Intelligence and Applications (IWAIA2022), February 18-20, 2022, Doha, Qatar.
- Presented a distinguished lecture (virtually) at the 3rd International Forum on Frontiers of Automation and Artificial Intelligence (FAAI 2021), November 8, 2021, Shenyang, China.
- Presented an invited talk (virtually) on Deep learning vs Machine Learning at Northeastern University, August 3, 2021, Shenyang, China
- Presented an invited talk (virtually) at the Graduated Student Summer Program, organized by Central South University, July 14, 2021, Changsha, China.
- Presented an IEEE distinguished lecture (virtually) on Digital Transformation at the IEEE Victoria Section, July 2, 2021, Australia.
- Presented a virtual keynote at 2nd International Conference on Artificial Intelligence, Robotics and Control (AIRC 2020), December 26-28, 2020. Cairo, Egypt.
- Presented a virtual keynote at IEEE International Conference on E-health Networking, Application & Services (IEEE Healthcom 2020), December 12-15, 2020. Shenzhen, China.

- Presented (virtually) an invited talk at 2nd International Forum on Frontiers of Automation and Artificial Intelligence (FAAI 2020), 22-23 Oct. 2020, Shenyang, China.
- Presented (virtually) a keynote at 3rd IEEE International Conference on Industrial Cyber-Physical Systems (ICPS 2020), 10-12 June 2020, Tampere, Finland.
- Presented a plenary talk at IEEE Service Operations and Logistics, and Informatics (SOLI 2019), November 6-8, 2019, Zhengzhou, China.
- Presented an invited talk at 3rd International Conference on Artificial Intelligence + Adaptive Education (AIAED), May 24-25, 2019, Beijing, China.
- Presented an invited talk at King Abdullah University of Science and Technology (KAUST), Jan. 3, 2019 Jeddah, Saudi Arabia.
- Presented an invited talk during the 2019 China-Qatar International Workshop on Artificial Intelligence and Applications to Intelligent Manufacturing (AIAIM2019), January 1-4, 2019 in Doha, Qatar.
- Presented an invited talk during the 2nd International Symposium on Autonomous Systems, ISAS 2018, May 19-21, 2018, Chongqing, China.
- Presented a plenary talk during the 3rd International Symposium on 3-D Printing (Additive Manufacturing) Technologies and Digital Industry, April 19-20, 2018, Antalya, Turkey.
- Presented an invited talk at The 2018 Spring International Workshop, Hubei Key Laboratory of Advanced Control and Intelligent Automation for Complex Systems, March 12-17, 2018, Wuhan, China.
- Presented a plenary talk during the 19th International Conference on Information Technology (ICIT 2018), Feb.20-22, 2018, Lyon, France.
- Presented an invited talk at Meijo University of Technology, Feb. 5, 2018, Nagoya, Japan.
- Presented an invited talk at Iwate Prefectural University, Feb. 1, 2018, Marioka, Japan.
- Presented an invited talk at Tokyo University of Technology, Jan. 27, 2017, Haijoji, Japan.
- Presented an invited talk at Xi'an University of Technology, Nov. 4, 2017, Xi'an, China.
- Presented a plenary talk during the 14th International Workshop on Complex Systems and Networks (IWCSN2017), December 8-10, 2017, Doha, Qatar.
- Presented an invited talk at Xi'an University of Technology, Nov. 4, 2017, Xi'an, China.
- Presented a plenary talk during the 21st International Conference on Mechatronics Technology, October 20–23, 2017, Ho Chi Minh City, Vietnam.
- Presented a plenary talk during the IEEE 15th International Symposium on Intelligent Systems and Informatics (SISY 2017), September 14-16, 2017, Subotica, Serbia.
- Presented an invited talk at Wuhan University, April 24, 2017, Wuhan, China.
- Presented an invited talk at Duisburg-Essen University, March 28, 2017, Wuhan, China.
- Presented an invited talk at Xi'an University of Technology, January 16, 2017, Xian, China.
- Presented an invited talk at Northwestern Polytechnical University, January 15, 2017, Xian, China.
- Presented a plenary talk during The Seventh International Conference on Intelligent Control and Information Processing (ICICIP 2016), Dec. 1-4, 2016, Siam Reap, Cambodia.
- Presented a plenary talk during the 16th International Conference on Control, Automation and Systems (ICCAS 2016), Oct. 16 - 19, 2016, Gyeongju, Korea.
- Presented an invited talk at Nazarbayev University, Oct. 3, 2016, Astana, Kazakhstan.
- Presented an invited talk at China University of Geosciences, Sept. 21, 2016, Wuhan, China.
- Presented a plenary talk during the 2016 IEEE International Conference on Advanced Robotics and Mechatronics (ICARM 2016), Aug 18-20, 2016, Macau, China.
- Presented an invited talk at Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences (SIAT, CAS), Aug. 17, 2016, Shenzhen, China.
- Presented an invited talk at Harbin Institute of Technology, Shenzhen Campus, Aug. 16, 2016, Shenzhen, China.
- Presented a plenary talk during the 2016 IEEE International Conference on Mechatronics and Automation (ICMA 2016), August 7-10, 2016, Harbin, China.
- Presented an invited talk at Duisburg-Essen University, July 21, 2016, Duisburg, Germany.
- Presented an invited talk at Peking University, May 12, 2016, Beijing, China.
- Presented an invited talk at Peking Jiaotong University, May 12, 2016, Beijing, China.
- Presented an invited talk at Shanghai Jiaotong University, May 3, 2016, Shanghai, China.
- Presented a plenary talk during the IEEE 14th International Workshop on Advanced Motion Control (AMC 16), 22-24 April 2016, Auckland, New Zealand.
- Presented an invited talk at Inst. of Advanced Manufacturing Technology, Chinese Academy of Sciences, Changzhou, Apr. 18, 2016, Hangzhou, China.
- Presented an invited talk at Zhejiang University, Hangzhou, Apr. 16, 2016, Hangzhou, China.
- Presented an invited talk at Dianzhi University, Hangzhou, Apr. 15, 2016, Hangzhou, China.
- Presented, as Distinguished Lecturer of IEEE SMCS, a seminar at Mind Research Network, University of New Mexico, Apr. 7, 2016, Albuquerque, USA.
- Presented an invited talk at Macau University of Science and Technology, March 31, 2016, Macau, China.
- Presented a plenary talk during The Chinese Intelligent Network of Things (CINT 2015), December 2-3, 2015, Gungzhou, China.
- Presented an invited talk at Zhejiang University, July 30, 2015, Hangzhou, China.
- Presented a plenary talk during the International Conference on Estimation, Detection and Information Fusion - ICEDIF 2015, January 10-11, 2015, Heilongjiang University, Harbin, China
- Presented invited talks at KAIST, GIST and Chonnam University, Nov. 10-14, 2014, Korea.
- Presented an invited talk at Nankai University, Sept. 26, 2014, Tianjin, China.
- Presented an invited talk at Tsinghua University, Sept. 25, 2014, Beijing, China.
- Presented a plenary talk during the 13th International Conference on Information Technology Based Higher Education and Training: ITHET 2014, Sept. 11-13, 2014, York, UK.

- Presented a plenary talk during The 14th Iranian Conference on Fuzzy Systems (ICFS2014), August 19-21, 2014, Tabriz, Iran.
- Presented, as Distinguished Lecturer of IEEE CIS, a plenary talk during The International Conference of Soft Computing and Pattern Recognition, SoCPaR 2014, Aug. 11-14, 2014, Tunis, Tunisia.
- Presented a plenary talk during The International Conference of Industrial Informatics, INDIN 2014, July 27-30, 2014, Porto Alegre, Brazil.
- Presented, as Distinguished Lecturer of IEEE CIS, a seminar, titled “Intelligent Systems: An Assessment of the Past and the Prospects for the Future” at Carnegie Mellon University, Silicon Valley Campus, USA, 25 November, 2013.
- Presented seminars as IEEE Industrial Electronics Society Distinguished Lecturer at Kuala Lumpur, Malaysia and Singapore, 4-9 July 2013.
- Presented a tutorial at 22nd International Symposium on Industrial Electronics (ISIE 2013), 28-31 May 2013, Taipei, Taiwan.
- Presented a Plenary talk at 2013 Chinese Control and Decision Conference, 25-27 May 2013, Guiyang, China.
- Presented, as Distinguished Lecturer of IEEE CIS, a seminar, at EVIC 2012 – 8th Latin American summer School on Computational Intelligence, December 10-12, 2012, Santiago, Chile.
- Presented a Distinguished Lecturer Invited talk, titled “at Hong Kong Polytechnic, on invitation by the local IEEE PES/IAS/PELS/IES Chapter, 3 Dec. 2012, Hong Kong.
- Presented, as Distinguished Lecturer of IEEE IES, a seminar, at Sun-Yat-Sen University, November 30, 2012, Guangzhou, China.
- Presented a keynote at ICMCE 2012, International Conference on Mechatronics and Control Engineering, November 29, 2012, Guangzhou, China.
- Presented a plenary talk at ICMSMT - The First International Conference on Mechatronic System and Measurement Technology, August 16-18, 2012, Nanjing, China.
- Presented seminars at Sichuan University, Chengdu, August 13-16, 2012.
- Presented seminars at Wuhan University, China as the Guest Professor, July 2012.
- Presented a plenary talk at DoCEIS'12 - 3rd Doctoral Conference on Computing, Electrical and Industrial Systems, Costa da Caparica, Lisbon, Portugal, 27-29 Feb. 2012.
- Presented seminars as IEEE Industrial Electronics Society Distinguished Lecturer, Auckland, New Zealand, 6-7 Feb. 2012.
- Presented a plenary talk at ICMAM 2011 – International Conference on Mechatronics and Applied Mechanics, Hong Kong, 27-28 Dec. 2011.
- Presented Seminars as IEEE Industrial Electronics Society Distinguished Lecturer, Cape Town, Stellenbuch and Pretoria, South Africa, 8-14 Sept. 2011.
- Presented a plenary talk at IEEE Africon 2011 – Livingstone, Zambia, 13-15 Sept. 2011.
- Presented a keynote, titled at the 8th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2011), 28-31 July 2011, Noordwijkerhout, The Netherlands.
- Presented a seminar at Beijing University of Chemical Technology, China, 20 July 2011.
- Presented seminars on Intelligent Systems and Industrial Informatics at National Taipei University, Chung-Hsing University and National Taiwan University of Science and Technology, May 15-20. 2011, Taiwan.
- Presented a keynote during 2011 International Conference on Information Technology for Manufacturing Systems. ITMS 2011, May 7-8. 2011, Shanghai, China.
- Presented seminars on Intelligent Systems and Mechatronics at Hong Kong Polytechnic University, Hong Kong City University and Harbin Institute of Technology, China on Intelligent Systems, Jan 16-30. 2011, HK and China.
- Presented a keynote at International Conference on Intelligent Systems Design and Applications - ISDA 2010, 29 November -1 December 2010, Cairo, Egypt.
- Presented a plenary talk during the Fifth Libyan Arab International Conference on Electrical and Electronic Engineering, Tripoli, Libya, October 23-26, 2010.
- Presented seminars in Singapore as a Distinguished Lecturer of IEEE Industrial Electronics Society, 13-21 September 2010, Singapore.
- Presented a lecture during NATO 2010: Advanced All-Terrain Autonomous Systems, Çeşme, Turkey August 1 -24, 2010.
- Presented seminars at Universiti Teknologi Mara, Kuala Lumpur, Malaysia, 16-25 May 2010
- Presented seminars at King Fahd University of Petroleum and Minerals, Dammam, Saudi Arabia, 25 Feb. – 4 March 2010.
- Presented a seminar at the Curtin University, Australia, Perth, 9 January 2010.
- Presented a keynote during 3rd International Conference on Mechanical Engineering & Mechanics (3rd ICMEM), Beijing, P.R.China, October 21 –23, 2009.
- Presented a tutorial during IEEE Symposium in Industrial Electronics and Applications – ISIEA 2009, Kuala Lumpur, Malaysia, 4-6 October 2009.
- Presented a seminar at the Hong Kong Institution of Engineers (HKIE), Hong Kong, 25 August 2009.
- Presented a plenary talk during the Federation of International Robot-soccer Association (FIRA) Congress, Incheon, Korea, 16-18 August, 2009.
- Presented a plenary talk during the International Symposium on Innovations in Intelligent Systems and Applications, INISTA 2009, Trabzon, Turkey, June 29-July 1, 2009.
- Presented a keynote talk at The 2nd Conference on Automotive Electronics Industry, Tehran, Iran, 4-5 February 2009.
- Presented a keynote talk at International Conference on Mechatronics, - ICOM 2008, Kuala Lumpur, Malaysia, 18-20 December 2008.
- Presented a keynote talk at 2nd Int. Symp. on Systems and Control in Aeronautics and Astronautics- ISSCAA 2008, Shenzhen, China, 10 -12 December 2008.

- Presented an invited talk at Int. Workshop on Ubiquitous ICT for Sustainable Education and Cultural Literacy, Haameenlinna, Finland, 6-7 October 2008.
- Presented an invited talk at XV Congreso Internacional de Ingeniería Eléctrica, Electrónica y de Sistemas, "INTERCON 2008," Trujillo-Peru, 4-8 August 2008.
- Conducted a training course on mechatronics in Rabat, Morocco on invitation from Islamic Educational, Scientific and Cultural Organization (ISESCO), during Feb. 11-15, 2008.
- Conducted a training course on mechatronics in Jakarta, Indonesia on invitation from Islamic Educational, Scientific and Cultural Organization (ISESCO), during Dec. 15-19, 2007.
- Presented a keynote talk during the International Conference on Mechanical Engineering and Mechanics, ICMEM2007, November 5-7, 2007 in Wuxi, P. R. China.
- Presented seminars on mechatronics at various universities in Malaysia within the Distinguished Lecturer Program of IEEE Industrial Electronics Society, 7-11 August 2007.
- Presented a plenary talk during the 2nd IEEE Conference on Industrial Electronics and Applications, ICIEA 2007, 23-25 May 2007, Harbin, China.
- Presented a tutorial, titled "Variable Structure Systems with a Sliding Mode" at Colombia University, December 19, 2006, USA.
- Presented a plenary talk during 2nd Asia International Symposium on Mechatronics (AISM 2006), December, 11-14, 2006, Hong Kong, China.
- Presented a plenary talk during 2006 International Conference on Intelligent Computing, August 16-19, 2006, Kunming, China.
- Presented a plenary talk during IEEE 7th Int. Conf. On Information Technology Based Education and Training, ITHET 2006, 10-13 July 2006, Sydney, Australia.
- Presented an invited talk during National Instruments Academic Day, 6-7 July 2006, Beirut, Lebanon.
- Presented seminars on intelligent systems at Xian Jiaotong University and Shenyang Northeastern University China on invitation by the stated universities during June 28 - July 3, 2006.
- Presented a plenary talk at The First International Conference on Engineering of Intelligent Systems, Islamabad, Pakistan, April 22-23, 2006.
- Presented seminars on mechatronics at Pachuca, Mexico on invitation by Universidad Politécnica de Pachuca during Feb. 13-14, 2006.
- Presented an invited seminar at Vanderbilt University, Nashville, Tennessee, USA titled "Intelligent Systems: An Assessment of the Past and the Prospects for the Future" on February 7, 2006.
- Presented a plenary talk at 1st International Symposium on Systems and Control in Aerospace and Astronautics: ISSCAA 2006, Jan. 19-21, 2006, Harbin, China.
- Presented a plenary talk at International Conference on Computational Intelligence for Modelling Control and Automation - CIMCA'2005, Nov. 28-30, 2005, Vienna - Austria.
- Presented an invited "research lecture" at the Singapore Institute of Manufacturing Technology (one of the research institutes of the Agency for Science, Technology and Research: A*STAR), titled, "Industrial Informatics in 21st Century" on August 15, 2005.
- Presented a tutorial during the International Symposium on Neural networks (ISNN 2005), Chongqing, China, May 30-June 2, 2005.
- Presented a seminar as an ARRI Distinguished Lecturer at University of Texas at Arlington, USA titled "Mechatronics in 21st Century" on February 27, 2004.
- Presented an invited seminar at Auburn University, Alabama, USA titled "Mechatronics in 21st Century" on February 27, 2004.
- Presented two seminars on mechatronics and VSS theory based learning at Tebriz University, Iran during December 2-5, 2004.
- Presented a plenary talk during the Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International Symposium on Advanced Intelligent Systems - SCIS & ISIS 2004, titled "Intelligent Systems: An Assessment of the Past and the Prospects for the Future," September, 21-24, 2004, Yokohama, Japan.
- Presented a plenary talk during the 6th IASTED Conference on Intelligent Systems and Control – ISC 2004, titled "Evolution of Intelligent Systems," August 23-25, 2004, Honolulu, Hawaii, USA.
- Presented a plenary talk during the First AUS (American University of Sharjah) International Symposium on Mechatronics, titled "Mechatronics in 21st Century," May 25-27, 2004, Sharja, UAE.
- Presented a keynote speech during the opening session of IEEE International Symposium on Industrial Electronics: ISIE 2004, titled "Industrial Electronics in the 21st Century," May 4-7, 2004, Ajaccio, France.
- Presented an invited lecture, titled "Mechatronics in 21st Century" at Pusan National University, Pusan, Rep. of Korea, on Sept. 24, 2003.
- Presented invited lectures and seminars on "Variable Structure Systems Theory and its Applications in Intelligent Systems" at Harbin Institute of Technology, Harbin, China, during Sept. 15-20, 2003.
- Presented a tutorial during 2003 IEEE International Symposium on Industrial Electronics, ISIE 2003; June 9-12, 2003, Rio de Janeiro, Brazil.
- Presented a keynote speech during 2002 IEEE Conference on Industrial Technology, titled "Mechatronics in the 21st Century" Dec. 11-14, 2002, Bangkok, Thailand.
- Presented invited lectures and seminars on "Responding to Issues and Trends in Mechatronics in the 21st Century" at AMA Computer University, Manila, Philippines, during Sept. 23-24, 2002.
- Presented a tutorial during the International Conference on Artificial Neural Networks – ICANN 2002, August 27-31 2002, Madrid, Spain.
- Presented a tutorial during The 27th Annual Conference of the IEEE Industrial Electronics Society: IECON'01, Nov. 29 - Dec. 2, 2001, Denver, USA.
- Presented an invited talk during the NATO Advanced Research Workshop on Limitations and Future Trends in Neural Computation, Oct. 22-24, 2001, Siena, Italy.

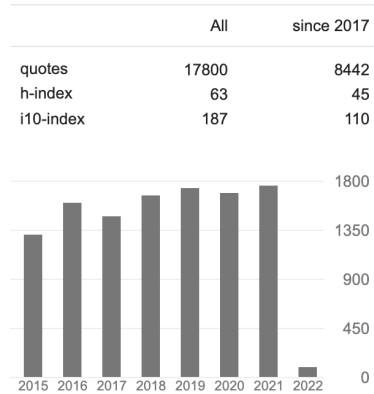
- Presented an invited talk during the 2nd International Conference on Information Technology Based Higher Education and Training 2001: ITHET 2001, July 4-6, 2001, Kumamoto City, Japan.
- Presented the keynote talk during the First International Conference on Mechatronics – ICOM'01; 11-12 February 2001, Kuala Lumpur Malaysia.
- Presented a tutorial during the IEEE 26th Int. Conf. on Industrial Electronics, Control and Instrumentation; IECON 2000, 22-28 October 2000, Nagoya, Japan.
- Presented a plenary talk during the 2000 International Symposium on Mechatronics and Intelligent Mechanical System for 21 Century (ISIM2000), 4-6 October 2000, KyongSangNam-Do, South Korea.
- Directed a workshop during the IEEE 25th Int. Conf. on Industrial Electronics, Control and Instrumentation; IECON'99, 29 Nov. – 3 December 1999, San Jose, U.S.A.
- Presented a plenary (opening) talk during the Jubilee Conference of Banki Donat Polytechnic, 1-3 September 1999, Budapest, Hungary.
- Presented a tutorial during the IEEE International Symposium on Industrial Electronics (ISIE'99), 12-16 July, 1999, Bled, Slovenia.

e. External Examinations (outside of Turkey)

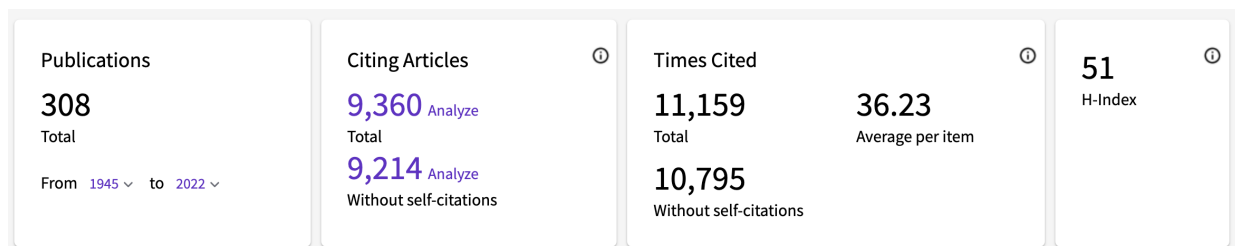
- Ph. D. Thesis, “Plug-and-Play Monitoring and Performance Optimization for Industrial Automation Processes” by Hao Luo, Universities Duisburg-Essen, Duisburg, Germany, 2016.
- Ph. D. Thesis, “Prediction of Engineering Students’ Academic Performance Using Neural Network and Linear Regression” by Pauziah Binti Mohd Arsad, University Technology Mara, Kuala Lumpur, Malaysia, 2015.
- Ph. D. Thesis, “Parametric Convergence Bound of Volterra Series Expansion and Applications with the nCOS Based Analysis and Design” by Xiao Zhenlong, The Hong Kong Polytechnic University, Hong Kong, 2015.
- Ph. D. Thesis, “Efficient Antilock Braking Systems in Regenerative Brakes” by Amir Dadashnialehi, Swinburne University of Technology, Melbourne, Australia, 2014.
- Ph. D. Thesis, “Challenges Of Control Design For Precision Servo System^[1] With Application On Hard Disk Drive” by Zhao Shao, National University of Singapore, Singapore, 2013.
- Ph. D. Thesis, “Development of Advanced Algorithms for Hybrid MPC for High Consumption Industrial Plants”, by Goran Stojanovski, Sts. Cyril and Methodius University, Skopje, Rep. of Macedonia, 2012.
- Ph. D. Thesis, “Online Multidisciplinary Neuro-Controller Design for Active Suspension Systems”, by Olurotimi Akintunde Dahunsi, University of Witwatersrand, Johannesburg, South Africa, 2012.
- Ph. D. Thesis, “Development of a Real-Time Embedded Digital Intelligent Controller for Anti-Lock Braking Systems (ABS)”, by Samuel John, University of Witwatersrand, Johannesburg, South Africa, 2012.
- Ph. D. Thesis, “A Novel Methodology for Development of Distributed Industrial Wireless Sensor and Actuator Network in Reconfigurable Mechatronic Devices”, by Reza Abrisham BAF, Eastern Mediterranean University, Northern Cyprus Turkish Republic, 2012.
- Ph. D. Thesis, “Navigation of Mobile Robots in the Presence of Obstacles (Comparative Study)”, by Besime Erin, Near East University, Northern Cyprus Turkish Republic, 2011.
- Ph. D. Thesis, “Fault Diagnosis Methodologies for Automotive Engine Air Intake Path,” by Qadeer Ahmed, M. A. Jinnah University, Islamabad, Pakistan, 2011.
- Ph. D. Thesis, “Advanced Control of Networked Embedded Systems for Enabling Reconfiguration of Modular Manufacturing Systems,” by Omar Lopez Orozco, Tampere University of Technology, Finland, 2007.
- Ph. D. Thesis, “A Neuro-Fuzzy Equaliser for Channel Distorsion,” by Tayseer A.M. Alsanableh, Near East University, Northern Cyprus Turkish Republic, 2007.
- Ph. D. Thesis, “Fault Diagnostics and Vibration Control of Paper Winders by Timo Virtanen,” Helsinki University of Technology, The Netherlands, 2006.
- M. Sc. Thesis, “Design and Implementation of Real-time Neural Control Systems” by Sarah Pule, University of Malta, Malta, 2005.
- Ph. D. Thesis, “Development of Learning Control Algorithms” by Zhao Shao, National University of Singapore, Singapore, 2005.
- M. Sc. Thesis, “High Precision Optimum Control of a Linear Motor Drive Using Genetic Algorithm,” by Keck Meng Teck, Nanyang Technological University, Singapore, 2000.
- Ph. D. Thesis, “Control of Planar Flexible-Link Robots,” by Yang Hong, National University of Singapore, 1999.
- M. Sc. Thesis, “The Design and Building of a 4-Legged Walking Machine,” by Cheong Choon Ghee, National University of Singapore, 1998
- M. Sc. Thesis, “Trajectory Following of a Robotic Manipulator,” by Ding Ming Zohn, National University of Singapore, 1998
- Ph. D. Thesis, “Actuation Redundancy Control of 2 Co-operating Industrial Robots,” by Dilek Bilgin Tukel, Katholieke Universiteit Leuven, 1997.
- Ph. D. Thesis, “Unconventional Control of Industrial Energetic Processes of Large Scale Heating Furnaces,” by Milne Stankovski, Sts. Cyril and Methodius University, Rep. of Macedonia, 1997.

K. GOOGLE SCHOLAR PERFORMANCE (as of 13 January 2022)

<https://scholar.google.com/citations?user=z6IH3aIAAAAJ&hl=tr&oi=ao>

**L. WEB OF SCIENCE PERFORMANCE (All Databases, as of 13 January 2022)**

Author Identifier: ORCID: 0000-0002-4789-6700

a. Citation Metrics**b. ESI Top Papers**

Highly Cited Papers **13**

- Y. Jiang, S. Yin and O. Kaynak, "Optimized Design of Parity Relation-Based Residual Generator for Fault Detection: Data-Driven Approaches," in IEEE Transactions on Industrial Informatics, vol. 17, no. 2, pp. 1449-1458, Feb. 2021 (**Times Cited: 31**).
- W. He, T. Wang, X. He, L.-J. Yang and O. Kaynak, "Dynamical Modeling and Boundary Vibration Control of a Rigid-Flexible Wing System," IEEE/ASME Trans. on Mechatronics, v. 25, No: 6, pp. 2711-2721, Dec. 2020 (**Times Cited: 99**).
- Y. Jiang, S. Yin and O. Kaynak, "Data-Driven Monitoring and Safety Control of Industrial Cyber-Physical Systems: Basics and Beyond," IEEE Access, v.6, pp. 47374-47384, Sept. 2018 (**Times Cited: 133**).
- M. Khodayar, O. Kaynak and M. E. Khodayar, "Rough Deep Neural Architecture for Short-term Wind Speed Forecasting," IEEE Trans on Industrial Informatics, v.13, no: 6, pp. 2770-2779, Dec. 2017 (**Times Cited: 141**).
- S. Yin, H. Yang, O. Kaynak, "Sliding Mode Observer-Based FTC for Markovian Jump Systems with Actuator and Sensor Faults," IEEE Trans. on Automatic Control, v.62, no:7, pp. 3551-3558, July 2017 (**Times Cited: 157**).
- S. Yin, J. Qiu, H. Gao and O. Kaynak, "Descriptor Reduced-Order Sliding Mode Observers Design for Switched Systems with Sensor and Actuator Faults," Automatica, v.76, pp. 282-292, Feb. 2017 (**Times Cited: 207**).
- B. Xiao, S. Yin and O. Kaynak, "Tracking Control of Robotic Manipulators with Uncertain Kinematics and Dynamics," IEEE Trans. on Industrial Electronics, v. 63, no: 10, pp. 6439-6449, Oct. 2016 (**Times Cited: 146**).
- W. Sun, H. Gao and O. Kaynak, "Vibration Isolation for Active Suspensions With Performance Constraints and Actuator Saturation," IEEE/ASME Trans. On Mechatronics, v. 20, no. 2, pp. 675-683, Apr. 2015 (**Times Cited: 184**).
- Yin, X. Zhu and O. Kaynak, "Improved PLS Focused on Key Performance Indicator Related Fault Diagnosis," IEEE Trans. on Industrial Electronics, v. 63, no:3, pp. 1651-1658, March 2015 (**Times Cited: 426**).

10. Yin, X. Li, H. Gao and O. Kaynak, "Data-Based Techniques Focused on Modern Industry: An Overview," IEEE Trans. on Industrial Electronics, v. 62, no. 1, pp. 657-667, Jan. 2015 (**Times Cited: 706**).
11. W. Sun, H. Gao and O. Kaynak, "Adaptive Backstepping Control for Active Suspension Systems with Hard Constraints," IEEE/ASME Trans. on Mechatronics, v.18, no:3, pp. 1072-1079, June 2013 (**Times Cited: 272**).
12. L. Zhang, H. Gao and O. Kaynak, "Network-Induced Constraints in Networked Control Systems – A Survey," IEEE Trans. Industrial Informatics, v.9, no:1, pp, 403-416, February 2013 (**Times Cited: 783**).
13. Sun, H. Gao and O. Kaynak, "Finite Frequency H_{infinity} Control for Vehicle Active Suspension Systems," IEEE Trans. on Control Systems Technology, v. 19, pp. 416-422, March 2011 (**Times Cited: 322**).

Total citations to 13 "Highly Cited" publications: 3607.

LIST OF PUBLICATIONS

a. Books:

1. M.A. Khanesar, O. Kaynak and E. Kayacan, Sliding-Mode Fuzzy Controllers, Springer Nature, Studies in Systems, Decision and Control 357, pp. XVI + 237, Hardcover ISBN: 978-3-030-69181-3, 2021.

b. Books (in Turkish):

3. M.O. Efe and O. Kaynak, Artificial Neural Networks and their Applications, pp. 141, Bogaziçi University Press, No: 696, 2000.
2. O. Kaynak, Programmable Controllers, pp. 106, Istanbul Water and Sewage Treatment General Directorate, 1989.
1. O. Kaynak, Power Electronics : Devices, Circuits and Systems, pp. 227, Bogaziçi University Press, No:446, 1988.

c. Edited books :

7. T. Bilgiç, B. De Baets, and O. Kaynak (Eds.), Fuzzy Sets and Systems – IFSA 2003, vol. LNA I2715, Springer-Verlag Heidelberg, pp. 1188, 2003,
6. O. Kaynak, E. Alpaydin, E. Oja and L. Xu (Eds.), Artificial Neural Networks and Neural Information Processing – ICANN/ICONIP 2003, vol. LNCS 2714, Springer-Verlag Heidelberg, pp.735, 2003,
5. O. Kaynak, S. Tosunoglu and M. H. Ang (Eds.), Recent Advances in Mechatronics, Springer-Verlag, Singapore, pp. 589, 1999.
4. O. Kaynak, L.A. Zadeh, B. Turksen and I.J. Rudas (Eds.), Computational Intelligence: Soft Computing and Fuzzy-Neuro Integration with Applications, Springer-Verlag, NATO ASI Series, Series F, vol. 162, pp. 538, 1998.
3. O. Kaynak, M. Özkan, N. Bekiroglu and I. Tunay (Eds.), Recent Advances in Mechatronics, v.1 and v.2, pp. 1172, Bogaziçi University Publications, No: 572, 1995.
2. O. Kaynak, G. Honderd and E. Grant (Eds.), Intelligent Systems: Safety, Reliability and Maintainability Issues, Springer - Verlag (NATO ASI Series, Series F, vol. 114), pp. 340, 1993.
1. O. Kaynak et al (Eds.), Proceedings of IEEE International Workshop on Intelligent Motion Control, 20-22 August 1990, v.1 and 2, IEEE Catalogue Number: 90CH20045, 1990.

d. Journal Papers (appearing in publications that are indexed by SCI or SCIE):

181. T. Salloom, O. Kaynak, X. Yu and W. He "Proportional integral derivative booster for neural networks-based time-series prediction: Case of water demand prediction," *Engineering Applications of Artificial Intelligence*, v.108, article 104570, 2022.
180. S. Wu, Y. Jiang, H. Luo, J. Zhang, S. Yin and O. Kaynak, "An integrated data-driven scheme for the defense of typical cyber-physical attacks," *Reliability Engineering & System Safety*, article 108257, 2021.
179. D. G. Broo, O. Kaynak, and S. M. Sait, "Rethinking Engineering Education at the Age of Industry 5.0," *Journal of Industrial Information Integration*, vol. 25, article 100311, 2022.
178. X. Zhang, H. Luo, K. Li and O. Kaynak, "Time-Domain Frequency Estimation with Application to Fault Diagnosis of the UAVs Blade Damage," *IEEE Trans. on Industrial Electronics*, vol. 69, no. 5, pp. 5257-5266, May 2022.
177. M. Mohammadi, M.M.Arefi, N. Vafamand and O. Kaynak, "Control of an AUV With Completely Unknown Dynamics and Multi-Asymmetric Input Constraints via Off-Policy Reinforcement Learning," *Neural Computing and Applications*, DOI: 10.1007/s00521-021-06476-8, 2021.
176. M. Huo, H. Luo, S. Yin, Y. Jiang and O. Kaynak, "A Novel Subspace-Aided Fault Detection Approach for the Drive Systems of Rolling Mills," *IEEE Trans. on Control Systems Technology*, DOI: 10.1109/TCST.2021.3109051, 2021.
175. H-P Ren, S-S Jiao, X. Wang and O. Kaynak, "Fractional Order Integral Sliding Mode Controller Based on Neural Network: Theory and Electro-Hydraulic Benchmark Test," *IEEE. Trans. on Mechatronics*, DOI: 10.1109/TMECH.2021.3088955, 2021.
174. Y. Salmanpour, M. M. Arefi, A. Khayatian and O. Kaynak, "Event-Triggered Fuzzy Adaptive Leader-Following Tracking Control of Non-Affine Multi-Agent Systems with Finite-Time Output Constraint and Input Saturation," *IEEE Transactions on Fuzzy Systems*, DOI: 10.1109/TFUZZ.2021.3050847, 2021.
173. F. Sedghi, M. M. Arefi, A. Abooe and O. Kaynak, "Adaptive Robust Finite-Time Nonlinear Control of a Typical Autonomous Underwater Vehicle with Saturated Inputs and Uncertainties," *IEEE/ASME Trans. On Mechatronics*, vol. 26, no. 5, pp. 2517-2527, Oct. 2021.
172. D. Yang, H.R. Karimi, O. Kaynak and S. Yin, "Developments of Digital Twin Technologies in Industrial, Smart City and Healthcare Sectors: A Survey," *Complex Eng Syst*, 2021;1:3. <http://dx.doi.org/10.20517/ces.2021.06>, Sept. 2021.
171. Kong L., He W., Yang W., Li Q. and Kaynak O, "Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space," in *IEEE Transactions on Cybernetics*, vol. 51, no. 10, pp. 4873-4884, Oct. 2021.
170. X. Li, Y. Jiang, J.J. Rodriguez-Andina, H. Luo, S. Yin and O. Kaynak, "When medical images meet generative adversarial network: recent development and research opportunities," *Discover Artificial Intelligence*, v.1, art. no:5, <https://doi.org/10.1007/s44163-021-00006-0>, 2021.

169. O. Kaynak, "The golden age of Artificial Intelligence," *Discover Artificial Intelligence*, v.1, art. no:1, <https://doi.org/10.1007/s44163-021-00009-x>, 2021.
168. M. Khodayar, G. Liu, J. Wang, O. Kaynak and M. E. Khodayar, "Spatiotemporal Behind-the-Meter Load and PV Power Forecasting via Deep Graph Dictionary Learning," *IEEE Trans. on Neural Networks and Learning Systems*, v. 32, no. 10, pp. 4713-4727, Oct. 2021.
167. O. Kaynak, W. He, F. Flammini and Z. Liu, "Towards symbiotic autonomous systems," *Phil. Trans. R. Soc. A*, v. 379, Issue: 2207, DOI: 10.1098/rsta.2020.0359, Oct. 2021.
166. Y. Wang, F. Karray, S. Kwong, K. N. Plataniotis, H. Leung, M. Hou, E. Tunstel, I. J. Rudas, L. Trajkovic, O. Kaynak, J. Kacprzyk, M. Zhou, M. H. Smith, P. Chen and S. Patel, "On the philosophical, cognitive and mathematical foundations of symbiotic autonomous systems," *Phil. Trans. R. Soc. A*, v. 379, Issue: 2207, DOI: 10.1098/rsta.2020.0362, Oct. 2021.
165. Y. Jiang, S. Yin, K. Li, H. Luo and O. Kaynak, "Industrial applications of digital twins," *Phil. Trans. R. Soc. A*, v. 379, Issue: 2207, DOI: 10.1098/rsta.2020.0360, Oct. 2021.
164. O. Kaynak, S. Ding, A. Palazoglu and H. Luo, "Guest Editorial: Data-Driven Management of Complex Systems Through Plant-Wide Performance Supervision," in *IEEE Transactions on Industrial Informatics*, vol. 17, no. 9, pp. 6324-6328, Sept. 2021.
163. M. Huo, H. Luo, X. Wang, Z. Yang and O. Kaynak, "Real-time Implementation of Plug-and-Play Process Monitoring and Control on an Experimental Three-Tank System," in *IEEE Transactions on Industrial Informatics*, vol. 17, no. 9, pp. 6448-6456, Sept. 2021.
162. T. Salloom, O. Kaynak and W. He, "A Novel Deep Neural Network Architecture for Real-time Water Demand Forecasting," in *IEEE Journal of Hydrology*, v.599, 126353, August 2021.
161. Y. Jiang, S. Yin, J. Dong and O. Kaynak, "A Review on Soft Sensors for Monitoring, Control and Optimization of Industrial Processes," *IEEE Sensors Journal*, v. 21, no:11, pp. 12868-12881, June 2021.
160. H. Yang, S. Yin and O. Kaynak, "Neural Network-Based Adaptive Fault-Tolerant Control for Markovian Jump Systems With Nonlinearity and Actuator Faults," in *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, vol. 51, no. 6, pp. 3687-3698, June 2021.
159. K. Li, H. Luo, S. Yin and O. Kaynak, "A Novel Bias-Eliminated Subspace Identification Approach for Closed-Loop Systems," *IEEE Trans. on Industrial Electronics*, v. 68, no:6, pp. 5197-5205, June 2021.
158. W. He, Z. Li, T. Meurer, G. Antonelli, O. Kaynak and T. Fukuda, "Guest Editorial Focused Section on Mechatronics in Unmanned Systems," in *IEEE/ASME Transactions on Mechatronics*, vol. 26, no. 2, pp. 595-599, April 2021.
157. M. Mohammadi, M. M. Arefi, P. Setoodeh and O. Kaynak, "Optimal Tracking Control based on Reinforcement Learning Value Iteration Algorithm for Time-delayed Nonlinear Systems with External Disturbance and Input Constraints," *Information Sciences*, v.554, pp.84-98, April 2021.
156. A. W. Colombo, S. Karnouskos, X. Yu, O. Kaynak, R. C. Luo, Y. Shi, P. Leitao, L. Ribeiro and J. Haase, "A 70-Year Industrial Electronics Society Evolution Through Industrial Revolutions: The Rise and Flourishing of Information and Communication Technologies," in *IEEE Industrial Electronics Magazine*, vol. 15, no. 1, pp. 115-126, March 2021.
155. H. Yang, H. Luo, O. Kaynak and S. Yin, "Adaptive SMO-Based Fault Estimation for Markov Jump Systems With Simultaneous Additive and Multiplicative Actuator Faults," in *IEEE Systems Journal*, vol. 15, no. 1, pp. 607-616, March 2021.
154. Y. Jiang, S. Yin and O. Kaynak, "Performance Supervised Plant-Wide Process Monitoring in Industry 4.0: A Roadmap," in *IEEE Open Journal of the Industrial Electronics Society*, vol. 2, pp. 21-35, 2021.
153. Y. Jiang, S. Yin and O. Kaynak, "Optimized Design of Parity Relation-Based Residual Generator for Fault Detection: Data-Driven Approaches," in *IEEE Transactions on Industrial Informatics*, vol. 17, no. 2, pp. 1449-1458, Feb. 2021.
152. W. He, T. Wang, X. He, L.-J. Yang and O. Kaynak, "Dynamical Modeling and Boundary Vibration Control of a Rigid-Flexible Wing System," *IEEE/ASME Trans. on Mechatronics*, v. 25, No: 6, pp. 2711-2721, Dec. 2020.
151. X. Yin, J. She, Z. Liu, M. Wu, and O. Kaynak, "Chaos Suppression in Speed Control for Permanent-Magnet-Synchronous-Motor Drive System," *Journal of the Franklin Institute*, v. 357, pp. 13283-13303, Dec. 2020.
150. H. Luo, K. Li, O. Kaynak, S. Yin, M. Huo and H. Zhao, "A Robust Data-Driven Fault Detection Approach for Rolling Mills With Unknown Roll Eccentricity," *IEEE Trans. on Control Systems Technology*, v. 20, no: 6, pp. 2641-2648, Nov. 2020.
149. O. Kaynak, H. Luo and S. Yin, "Guest Editorial: Special Issue on Fault Diagnosis and Adaptive Fault-Tolerant Control for Automatic Control Systems," *IEEE Trans. on Systems, Man, and Cybernetics: Systems*, v. 50, No: 9, pp. 3330-3332, Sept. 2020.
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