Prof.Dr. YORGO İSTEFANOPULOS
Işık University
Dean of Faculty of Engineering
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1. Name : Yorgo ISTEFANOPULOS

2. Birth Date : 28.02.1944

3. Academic Title : Professor

4. Education :

DATES	DEGREE	UNIVERSITY	DEPARTMENT
1962-1967	Prep. and BS	Robert College	Electrical Engineering
1967-1969	MS	Massachusetts Institute of Technology(MIT)	Electrical Engineering
1969-1972	PhD	Massachusetts Institute of Technology(MIT)	Electrical Engineering

5. Academic Titles

YEAR	TITLE	UNIVERSITY	DEPARTMENT
1972	Asst. Prof.	Boğaziçi University	Electrical & Electronic Engineering
1982	Assoc. Prof.	Boğaziçi University	Electrical & Electronic Engineering
1988	Full Prof.	Boğaziçi University	Electrical & Electronic Engineering

6. Supervised MS and PhD Theses

6.1. MS Theses

MS Theses at the Electrical & Electronic Engineering Department and the Biomedical Engineering Institute (BME) of Boğaziçi University.

1	DÜNDAR HACİPOĞLU	An Analysis of Discrete Control Systems and Computer Simulation of a Physical System	1975
2	CEVAT KUMBASAR	Comparison of Two Indices of Performance for a Model Reference Identified Adaptive Control System	1976
3	FATOŞ TÜNAY YARMAN	Stability Analysis of TR-l Research Reactor Identification of the Transfer Function by Noise Analysis Method	1977
4	İZZET BAHAR	Design and Construction of a Digital Voltmeter	1977
5	SEMİH PEKOL	Design and Realization of an Alphanumeric Computer Display Terminal	1977
6	SUAT KÖPRÜLÜ	Planning and Design of a Telephone Network	1977
7	H. DERYA CANSEVER	Modelling & Identification of Electrical Load Systems	1979
8	İBRAHİM EKSİN	Two Approaches to Min-Max Feedback Control and Design of Uncertain Systems	1979
9	ÖMER AYZAN	Design of Optimal Sampled Data Linear Regulator	1979
10	FAİK BURHANOĞLU	A Package Program on the Numerical Solutions of the Matrix Riccati Equation	1980
11	MELİKE BAYKAL GÜRSOY	Optimal Output Feedback Regulators	1980
12	MEHMET ZEYTİNOĞLU	Pole Assignment in Linear Multivariable Systems	1981
13	ERHAN İZMİR	Observers for Linear Time-Invariant Systems	1982
14	NAZAN HEKİM	Automatic LMS Equalizer with Fast Rate of Convergence	1982
15	EMİN ANARIM	Spectrum Estimation Using Adaptive Filters	1983
16	GÜVEN MERCANKÖŞK	Solution of General TPBVP's in Optimal Control Using the Sensitivity Method	1983
17	FEZA KERESTECİOĞLU	An Adaptive Control Structure Combining Model Reference Adaptive Controllers and Stochastic Self-Tuning Regulators	1985
18	KEMAL DÖNMEZ	Robust Controller Design	1985
19	MURAT ÜÇÜNCÜ	Discrete Time Variable Structure Systems	1985

20	ARİ KİREÇYAN	Design and instrumentation of a coronary care unit (BME)	1985
21	NEVZAT KILINÇ	A Study on Manipulator Control	1985
22	A. RAİF ALTUNSU	Microprocessor Based Optimal Digital Position Control with AC Squirrel Cage Motor	1988
23	LUCİANO CASAGRANDE	Automatic Determination of Joint Trajectories and Adaptive Control for a Robotic Arm	1990
24	ŞEBNEM AKYILDIZ	Design & Implementation of Self-Tuning Regulators Using Different Adaptation Schemes	1990
25	ŞÜKRÜ ERGÜR	Comparison and Evaluation of Model Reference Adaptive Control Techniques	1990
26	TAMER ERGÜN	Filtering Modifications on the Generalized Predictive Control Algorithm	1991
27	ALPTEKİN FADILLıOĞLU	Neural Network Control of Nonlinear Systems	1992
28	A. NACİ ERAKIN	A Comparison of Conventional and Fuzzy PID Control	1992
29	BİROL BAYRAK	Robot Path Planning Using Intersecting Convex Shapes	1992
30	C. DENİZ MENDİ	Vector Quantization of Seismological Data	1992
31	MEHMET İMERYÜZ	Second Order Sliding Mode Control Systems	1992
32	DENİZ DUMLU	Design of an Adaptive Controller for Submarines via Gain Scheduling	1993
33	GÜRKAN DAMATOĞLU	Obstacle Avoidance Using Harmonic Potential Functions	1997
34	ÖMER ÖZGÜN	Investigation and Design of Fuzzy Logic Based Controllers for Nonlinear Systems	1997
35	DORUK ÖZKÖK	PID, Fuzzy-PID and Variable Structure Control of Two-link Manipulators	1998
36	GÜRHAN TAHTALI	Process Control With Neurofuzzy Controller	1998
37	HAYRİ KEREM ERENAY	Application of Fuzzy Algorithms to the Speed Control of Washing Machines	1998
38	İBRAHİM BOUL	Modelling and Control lmprovements for a Gas-Turbine System	1998

39	M.ALPARSLAN PARLAKÇl	Comparative Evaluation of Four Control Algorithms for Nonlinear Systems	1998
40	ALPER GÜLERER	Low-Depth-Keeping Autopilot Design for Submarines	1999
41	H. HAKAN KIZILOCAK	Fuzzy Control of Liquid Container Transfer	1999
42	MEHMET DÜNDAR	Investigation of Adaptive Fuzzy Control Strategies for Nonlinear Plants	1999
43	ZEHRA KIVANÇ	Adaptive Fuzzy Controller of a Thermal System and an Induction Motor Using Existing PLCs	1999
44	HASİP BULUT	Control and Animation of A Three Link Robotic Arm Using Direct Kinematics and Inverse Kinematics Methods	2002
45	SERDAR BEBİŞ	3-D Segmentation of Medical lmages Using Region Growing and Fuzzy C Means Clustering	2002

6.2. PhD Theses (Boğaziçi University, Electrical & Electronic Engineering Department)

1	ENGiN YAZ	Stochastic adaptive receding horizon controllers	1982
2	İBRAHİM EKSİN	Sensitivity Theory Application to the Numerical Solutions of the General Optimal Control Problem	1983
3	MUSTAFA AKTAR	Modern spectrum estimation	1983
4	EMİN ANARIM	Novel results on frequency estimation and statistical characterization of three spectral estimation techniques (co-supervisor)	1985
5	MURAT ÜÇÜNCÜ	Investigation of different control strategies with variable structure conrollers	1988
6	YAĞMUR DENİZHAN	A variable structure control algorithm for robotic systems and a learning scheme for load adoptation	1988
7	AHMET ADEMOĞLU	Analysis of average and single evoked potentials using damped sinusoids and wavelet based functions (BME co-supervisor)	1995

8	FİGEN ÖZEN	Novel control strategies for flexible link manipulators	1996
9	NURDAN BEKiROĞLU	Adaptive sliding surface design for sliding mode control systems	1996
10	MEHMET ALPARSLAN PARLAKÇI	Robust variable structure controllers design for robot manipulators with parameter perturbations	2003
11	GÜLAY ÖKE	Application of Intelligent Approaches for the Tip Position Control of a Two-Link Flexible Manipulator	2004
12	MUSTAFA DOĞAN	Optimal nonlinear controller design for flexible robot manipulators	2006

7. Publications

7. 1. Journal Publications (SCI- SCI Expanded)

Dogan, M., Y. Istefanopulos, "Optimal Nonlinear Controller Design for Flexible Robot Manipulators with Adaptive Internal Model", *IET Control Theory* , Vol:1, no.8, pp.770-778, May 2007

Oke, G., Y. Istefanopulos, "End-effector Trajectory Control in a Two-Link Flexible Manipulator Through Reference Joint Angle Values Modification by Neural Networks", *Journal of Vibration and Control*, 12(2), pp. 101-117, February 2006

Guclu, B., G.A. Gesheider; S.J. Bolanowski, Y. Istefanopulos, " Population-response model for vibrotatctile summation," *Somatosensory and Motor Research*, 22(4), pp.239-253, December 2005

Jafarov, E.M., M.N.A. Parlakci, Y. Istefanopulos, " A New Variable Structure PID-Controller Design for Robot Manipulators", *IEEE Transactions on Control Systems Technology, Vol. 13, No. 1*, January 2005, pp. 122-130

Parlakci, M. N. A., E. M. Jafarov, Y.Istefanopulos, " New Variable Structure PD-Controllers Design for Robot Manipulators with Parameter Perturbations", *International Journal of Robotics & Automation*, Vol. 19, Issue 3, pp. 134-142, 2004

Soyer, C., H.I. Bozma, Y. Istefanopulos, " Attentional Sequence –Based Recognition: Markovian and Evidential Reasoning", *IEEE Trans. On Systems, Man and Cybernetics- Part B: Cybernetics*, Vol. 33, No. 6, pp. 937-950, December 2003.

Oke,G., Istefanopulos,Y, "Tip position control of a two-link flexible robot manipulator based on nonlinear deflection feedback, *Chaos,Solitons and Fractals*, Vol. 17, Iss. 2-3, p. 499-504, July 2003.

Demiralp, T., A. Ademoğlu, Y. İstefanopulos, C. Başar-Eroğlu, E. Başar, "Wavelet Analysis of Oddball P300 ", *International Journal of Psychophysiology*, Vol. 9, pp.221-227, 2001

Demiralp, T., A. Ademoğlu, Y. Istefanopulos, H. Gülçür, "Analysis of event-related potentials (ERP) by damped sinusoids", *Biological Cybernetics, 78*, pp.487-493, June 1998

Bekiroğlu,N., Y.Istefanopulos,"Comparative Evaluation of Model Reference Adaptive Approach in the Design of Linear and Nonlinear Switching Surfaces for Robotic Manipulators", *International Journal of Intelligent Mechatronics, Design and Production,* 17 January 1996.

Anarim, E., H. Uçar, Y. Istefanopulos, "Identification of Image and Blur Parameters in Frequency Domain Using EM Algorithm", *IEEE Transactions on Image Processing,* Vol.5, No. 1, pp. 159-164 , Jan. 1996

Istefanopulos, Y., " Control Education in Turkey". *IEEE Control Systems,* Vol. 16, No.2, pp. 47-51, April 1996.

Özen, F. and Y.Istefanopulos, "Trajectory Tracking and Vibration Suppression of a Single Link Flexible Manipulator Carrying an Unknown Payload", *International Journal of Intelligent Mechatronics: Design and Production,* Vol.1, No.4, pp.212-223, September 1995.

Dumlu, D., Y. Istefanopulos, "Design of an Adaptive Controller for Submersibles via Multimodel Gain Scheduling", *Ocean Engineering*, Vol.22, No.6, pp. 593-614, Elsevier Science, 1995.

Yemez, Y., Anarim, E., Istefanopulos, Y., "Causal and Semicausal AR Image Identification Using EM Algorithm", *IEEE Transactions on Image Processing,* pp. 523-528, October 1993.

Anarim, E., Y.Istefanopulos, "Statistical Analysis of Pisarenko Type Tone Frequency Estimator", *Signal Processing,* Vol. 24, pp.291-298, September 1991

Brown D. , H. Hemami, Y. Istefanopulos, "On-Line Exploration of an Unknown Surface by a Robotic Probe", *Journal of Robotic Systems*, Vol.E6, No 5, pp. 521-543, October 1989

Sarpturk, S. Z., Y. Istefanopulos, O. Kaynak, "On the stability of Discrete-Time Sliding Mode Control Systems" *IEEE Transactions onAutomatic Control* Vol. AC-32, No: 10, p. 930-932, October 1987.

Aktar, M., B. Sankur, Y. Istefanopulos, "Properties of the Maximum Likelihood and Pisarenko Spectral Estimates", *Signal Processing,* Elsevier Science Publishers B.V. (North Holland) Vol. 8 p. 401-413, 1985.

7. 2. Journal Publications (Non SCI-Expanded)

Parlakci, M. N. A., E. M. Jafarov, Y.Istefanopulos, "Robust Relay and PD-Sliding Mode Controllers Design Methods for Robot Position Systems with Parameter Perturbations", *WSEAS Transactions on Systems,* Vol.2, No.3, pp.666-675, 2003.

Parlakci, M. N. A., E. M. Jafarov, Y.Istefanopulos, "Robust Position and Tracking Variable Structure PD-Controllers Design Methods for Robot Manipulators with Parameter perturbation", *WSEAS Transactions on Systems,* Vol.2, No.4, pp.786-795, 2003.

7.3. International Conference Papers.

M. Dogan, Y. Istefanopulos, 'Optimal Nonlinear Control of Two-link Flexible Arm with Adaptive Internal Model', *Proc. 44th IEEE Conference On Decision and Control, and the European Control Conference,* Seville, Spain, 2005, pp. 771-776.

M. Dogan, Y. Istefanopulos, E.D. Diktas, 'Nonlinear Control of two-link Flexible Arm with Adaptive Internal Model', *Proc. IEEE International Conference On Mechatronics,* İstanbul, Turkey, June 2004, pp. 292-298.

Öke G, Istefanopulos Y., "Neural Network Based Trajectory Planning forTip Tracking of a Two-Link Flexible Robot Manipulator," Conference Proceedings, MED'03 (*11th Mediterranean Conference on Control and Automation),* Rhodes, Greece, June 18-20, 2003

Istefanopulos Y., Parlakçı M.N. A., Jafarov E., " A new variable structure PID-controller for robor manipulators with parameter perturbations: an augmented sliding surface approach," *International Federation of Automatic Control 15th IFAC World Congress*, Barcelona, Spain, July 21-26, 2002

Oke, G., Y. Istefanopulos, " Gradient Descent Based Trajectory Planning for Regulation of a Two-Link Flexible Robotic Arm", *2001 IEEE/ASME ınternational Conference on Advanced Intelligent Mechatronics(AIM'01) Proceedings*, Vol. II, p. 948-952, Como, Italy, July 2001

Soyer, C., H. I. Bozma, Y. Istefanopulos "A New Memory Model for Selective Perception Systems" **,** *Proceedings of the 2000 IEEE / RSJ International Conference on Robots and Systems*, (*IROS 2000*), pp. 2304-2309, Takamatsu, Japan, 2000

Ademoglu, A., E. M. Tzanakou, Y. Istefanopulos, " Analysis of Pattern Reversal Visual Evoked Potentials in Alzheimer's Disease by Spline Wavelets", *15th Annual Intern. Conf. of the IEEE Engineering in Medicine and Biology Society,*pp. 320-321, New Jersey, 1993.

Ucuncu, M., Y. Istefanopulos, "Minimization of the Switching Hyperplane by Using Variable Structure Theory" *Proceedings of IFAC Symp. on Microcomputer Application in Process Control.* p. 56-59, Istanbul, July 1986.

7.4. Book Chapters

- Istefanopulos, Y., "Impacts of Information and Communication Systems in Developing Countries." Debons, A (editor) *Information Science in Action: System Design,* Vol.II. Martinus. Nijhoff publishers, The Hague, p. 611-619, 1983.
- Yaz, E., Y.Istefanopulos, "Adaptive Receding Horizon Controllers for Discrete Stochastic Systems". R.S. Bucy and J.M.F. Moura (eds) *Nonlinear Stochastic Problems,* D.Reidel publishing Company, p. 217-228, 1983.
- Istefanopulos, Y., M. Aktar, "Reliability of the Pisarenko Line Spectral Estimate", *Digital Signal Processing-84,* Capellini and Constantinides (Eds.) Elsevier Science Publishers B.V. (North Holland), p. 135-139, 1984.

- Gencer, S., Kaynak, O., Istefanopulos, Y., "Internal Model Control of a Robotic Manipulator", *Communication, Control, Signal Processing,* Ed. Erdal Arikan, Elsevier Publisher, Vol. 1, pp. 758-764 ., 1990.
- Istefanopulos, Y., Casagrande, L., "Automatic Determination of Quasi-time Optimal Joint Trajectories and Adaptive Control for a Robot Arm", *Expert Systems and Robotics*, NATO ASI (15-27 July 1990), Springer Verlag Series F, Vol. 71, pp. 487-514, 1991

7.5. National Journal Publications

Istefanopulos, Y., " Biomedical Engineering: A New Interdisciplinary Scientific Field ", *Popular Science,* No: 68, pp 54-56, July 1999 (in Turkish)

7.6. National Conference Papers

Denizhan,Y., Y.Istefanopulos "A New Variable Structure Control Method with Learning Capabilities for Robot Control", *TOK Proceedings 5. National Automatic Control Symposium,* p.18-30, Istanbul 7-9 December 1988 (in Turkish).

Parlakçı M. N. Alpaslan, Istefanopulos Y., Jafarov E., "Design Method for Variable Structure PD- Controllers for Robotic Manipulators", *National Automatic Control Symposium TOK 2002 Proceedings*, 2002, 517-525.(in Turkish)

Öke G., İstefanopulos Y., "Trajectory Planing for the End-point of Flexible Robotic Arms Using Pointwise Control" *National Automatic Control Symposium TOK 2001.*131-136, October 2001,Bursa .(in Turkish)

Öke G., İstefanopulos Y.," Identification of Kinematic and Inverse Kinematics of Flexible Robot Arms Using Neural Networks" *National Automatic Control Symposium* TOK 2002 Proceedings.477-486.,9-11 September 2002 ODTÜ ,Ankara.(in Turkish)

7.7. Other Publications

8. Research Projects

- MathInd- Mathematics for Industry (2001-2003) , European Commission FP5

- Control of Aerodynamically Driven Missiles (1998-2000) , Boğaziçi U(B.U)., Research Fund

- Selective Perception of Orthonormally Viewed Objects (1997-1998), Boğaziçi U., Research Fund

- A Mobile Robot Prototype Based on Selective Perception (1996-1997), B. U., Research Fund

- Visual Servoing Based on Selective Attention (1995-1996), B. U., Research Fund

- Identification of Earth Layers by Higher Order Statistics (1993-1995), B. U., Research Fund

- Robotic Research Project (1991-1993), B. U., Research Fund

9. Administrative Positions and Employment History

9.1. Administrative Positions

Dates	UNIVERSITY/INSTITUTION	POSITION
1982-1994	Boğaziçi University	Institute of Biomedical Engineering Vice Director
1985-2005	Boğaziçi University	Chair of Graduate Program on Systems and Control Engineering
1982-1992	Boğaziçi University	Electrical & Electronic Engineering Department Vice Chairman
1992-1998	Boğaziçi University	Electrical & Electronic Engineering Department Chairman
1994-2005	Boğaziçi University	Institute of Biomedical Engineering Director
2005-10.11.2012	Işık University	Dean, Faculty of Engineering
10.11.2012-	Işık University	Senior Advisor to the President

9.2. Employment History

DATES	TITLE	UNIVERSITY	BÖLÜM
1969-1972	Research Asst.	MIT	Electrical Engineering
1972-1981	Assist. Prof	Boğaziçi University	Electrical & Electronic Engineering
1982-1988	Assoc. Prof.	Boğaziçi University	Electrical & Electronic Engineering
1985 -1986	Visiting Prof.	Ohio State University	Electrical & Electronic Engineering
1988-2005	Prof. Dr.	Boğaziçi University	Electrical & Electronic Engineering
2005-	Prof. Dr.	Işık University	Electrical & Electronic Engineering

10. Scientific and Professional Memberships

- IEEE Engineering in Medicine and Biology Society, member
- IFAC, TOK- National Automatic Control Committee, Vice Chair

11. Awards

- Albert Long Aweard: College Top Graduating Student , Robert College. 1967
- Fulbright Fellowship 1967-68
- MIT Green Fellowship 1968-69
- MIT Research/ Teaching Assistant 1969-72
- Most Esteemed Academician Award , Boğaziçi University 1991
- Excellence in Teaching Award, Boğaziçi University 2003
- Excellence in Teaching Award,, Boğaziçi University i 2004
- Most Esteemed Academician Award, Işık University 2007, 2008, 2009, 2010, 2011

12. Courses Taught (Last Three Years)

*Engineering Orientation
*Signals and Systems
* Circuit Theory I
* System Dynamics and Control

13. Other Academic and Scientific Activities

International and National Conference Organizations

- General Chair, IEEE-EMBS 2001; 25-28 October 2001, İstanbul,
- General Chair, IEEE- ISIC , July 1997, İstanbul,
- General Co-chair, IFAC- ACE, July1997, İstanbul
- General Co-chair, National Conference on Biomadical Engineering: BİYOMUT (every year since 1994)
- General Co-chair or member of Organization Committee; National Conference on Automatic Control: TOK (every year since 1994)

13.1. Reviewer Activities (SCI-Expanded Journals)

IET Control Theory
IET Control Theory & Applications
IEEE Systems Man and Cybernetics