

Prof. Neslihan Serap Şengör

Personal Information

Email: sengorn@itu.edu.tr

International Researcher IDs

ORCID: 0000-0001-6278-2392

Publons / Web Of Science ResearcherID: H-6409-2013

ScopusID: 6602906847

Yoksis Researcher ID: 149112

Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Turkey 1988 - 1995

Postgraduate, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 1985 - 1988

Undergraduate, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 1980 - 1985

Foreign Languages

English

Research Areas

Technical Sciences, Electrical and Electronics Engineering

Academic Titles / Tasks

Professor, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2015 - Continues

Associate Professor, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2010 - 2015

Assistant Professor, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 1998 - 2010

Research Assistant, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 1989 - 1998

Expert, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 1986 - 1989

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, 2009 - 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A dynamical model for the basal ganglia-thalamo-cortical oscillatory activity and its implications in Parkinson's disease**
Navarro-Lopez E. M., Celikok U., Şengör N. S.
COGNITIVE NEURODYNAMICS, vol.15, no.4, pp.693-720, 2021 (SCI-Expanded)
- II. **Modeling nucleus accumbens A Computational Model from Single Cell to Circuit Level**
ELİBOL R., Şengör N. S.
JOURNAL OF COMPUTATIONAL NEUROSCIENCE, vol.49, no.1, pp.21-35, 2021 (SCI-Expanded)
- III. **Hybrid Systems Neuroscience**
Navarro-Lopez E. M., Celikok U., Sengor N. S.
CLOSED LOOP NEUROSCIENCE, pp.113-129, 2016 (SCI-Expanded)
- IV. **Content-based copy detection by a subspace learning based video fingerprinting scheme**
Cirakman O., GUNSEL B., Şengör N. S., KUTLUK S.
MULTIMEDIA TOOLS AND APPLICATIONS, vol.71, no.3, pp.1381-1409, 2014 (SCI-Expanded)
- V. **Model-based bifurcation and power spectral analyses of thalamocortical alpha rhythm slowing in Alzheimer's Disease**
Sen Bhattacharya B., Çakır Y., SERAP-SENGOR N. S., MAGUIRE L., COYLE D.
NEUROCOMPUTING, vol.115, pp.11-22, 2013 (SCI-Expanded)
- VI. **From Occasional Choices to Inevitable Musts: A Computational Model of Nicotine Addiction**
Metin S., Şengör N. S.
COMPUTATIONAL INTELLIGENCE AND NEUROSCIENCE, vol.2012, 2012 (SCI-Expanded)
- VII. **A dwell time approach to the stability of switched linear systems based on the distance between eigenvector sets**
Karabacak O., Şengör N. S.
INTERNATIONAL JOURNAL OF SYSTEMS SCIENCE, vol.40, no.8, pp.845-853, 2009 (SCI-Expanded)
- VIII. **A knowledge-based neuromodeling using space mapping technique: Compound space mapping-based neuromodeling**
Şimşek M., Şengör N. S.
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.21, pp.133-149, 2008 (SCI-Expanded)
- IX. **Modelling the Stroop effect: A connectionist approach**
Kaplan G. B., Sengor N. S., Gurvit H., Guzelis C.
NEUROCOMPUTING, vol.70, pp.1414-1423, 2007 (SCI-Expanded)
- X. **The application of neural network controller to power system with SMES for transient stability enhancement**
Demiroren A., Zeynelgil H. L., Şengör N. S.
EUROPEAN TRANSACTIONS ON ELECTRICAL POWER, vol.16, no.6, pp.629-646, 2006 (SCI-Expanded)
- XI. **A composite neural network model for perseveration and distractibility in the Wisconsin card sorting test**
Kaplan G. B., Sengor N. S., Gurvit H., Genc I., Guzelis C.
NEURAL NETWORKS, vol.19, no.4, pp.375-387, 2006 (SCI-Expanded)
- XII. **A computational model for the effect of dopamine on action selection during Stroop test**
Karabacak O., Sengor N. S.
ARTIFICIAL NEURAL NETWORKS - ICANN 2006, PT 1, vol.4131, pp.485-494, 2006 (SCI-Expanded)
- XIII. **Automatic generation control using ANN technique for multi-area power system with SMES units**
Demiroren A., Zeynelgil H., Şengör N. S.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.32, no.2, pp.193-213, 2004 (SCI-Expanded)
- XIV. **The application of NN technique to automatic generation control for the power system with three areas including SMES units**
Demiroren A., Zeynelgil H., Şengör N. S.
EUROPEAN TRANSACTIONS ON ELECTRICAL POWER, vol.13, no.4, pp.227-238, 2003 (SCI-Expanded)

- XV. **On the realization of NPN-only log-domain chaotic oscillators**
Ozoguz S., SENGÖR N. S.
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-FUNDAMENTAL THEORY AND APPLICATIONS, vol.50, no.2, pp.291-294, 2003 (SCI-Expanded)
- XVI. **Automatic generation control for power system with SMES by using neural network controller**
Demiroren A., Zeynelgil H., Sengör N. S.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.31, no.1, pp.1-25, 2003 (SCI-Expanded)
- XVII. **The application of ANN technique to automatic generation control for multi-area power system**
Zeynelgil H., Demiroren A., Şengör N. S.
INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.24, no.5, pp.345-354, 2002 (SCI-Expanded)
- XVIII. **Load Frequency Control for Power System with Reheat Steam and Governor Deadband Nonlinearity by Using Neural Network Controller**
ZEYNELGİL H. L., DEMİRÖREN A., Şengör N. S.
EUROPEAN TRANSACTIONS ON ELECTRICAL POWER, vol.0, 2002 (SCI-Expanded)
- XIX. **Automatic generation control by using ANN technique**
Demiroren A., Şengör N. S., Zeynelgil H.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.29, no.10, pp.883-896, 2001 (SCI-Expanded)
- XX. **Convergence of threshold networks using their dissipative system model**
Sengör N. S., Goknar I.
INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS, vol.28, no.2, pp.203-207, 2000 (SCI-Expanded)
- XXI. **Solving maximum clique problem by cellular neural network**
Sengör N. S., Yalcin M. E., ÇAKIR Y., UCER M., GUZELIS C., PEKERGIN F., MORGUL O.
ELECTRONICS LETTERS, vol.34, no.15, pp.1504-1506, 1998 (SCI-Expanded)

Articles Published in Other Journals

- I. **BUILDING NEUROCOMPUTATIONAL MODELS AT DIFFERENT LEVELS FOR BASAL GANGLIA CIRCUIT**
Elibol R., Şengör N. S.
ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.17, no.1, pp.3121-3128, 2017 (ESCI)
- II. **A Computational Model of Neural Synchronization in Striatum**
Elibol R., Şengör N. S.
COMPUTATIONAL NEUROLOGY AND PSYCHIATRY, pp.373-403, 2017 (Peer-Reviewed Journal)
- III. **The Recent Developments in Microwave Design**
Şimşek M., Zhang Q., Kabir H., Cao Y., ŞENGÖR N. S.
International Journal of Mathematical Modelling and Numerical Optimization, 2011 (Scopus)
- IV. **Analysis of Maximum Clique Formulations and Saturated Linear Dynamical Network**
ŞENGÖR N. S., ÇAKIR Y., GÜZELİŞ C., MORGÜL Ö.
ARI - An International Journal for Physical and Engineering Sciences, vol.51, pp.268-276, 1999 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **A Computational Model of Neural Synchronization in Striatum**
Şengör N. S., Elibol R.
in: Computational Neurology and Psychiatry, Erdi P., Bhattacharya B.S., Cochran A., Editor, Springer, London/Berlin, Cham, pp.373-403, 2017

II. Spectral and non-linear analysis of thalamocortical neural mass model oscillatory dynamics

ŞENGÖR N. S., ÇAKIR Y.

in: Advanced Computational Approaches to Biomedical Engineering, Punam K. Saha, Ujjwal Maulik, Subhadip Basu, Editor, Springer Heidelberg New York Dordrecht London, 2014

Refereed Congress / Symposium Publications in Proceedings

I. Transform Invariant Video Fingerprinting by NMF

Gursoy O., Günsel Kalyoncu B., Sengor N. S.

13th International Conference on Computer Analysis of Images and Patterns, Münster, Germany, 2 - 04 September 2009, vol.5702, pp.452-459

II. A simple artificial neural network structure for generating chaos

Sengor N. S.

International Symposium on Complex Computing-Networks, İstanbul, Turkey, 13 - 14 June 2005, vol.104, pp.325-331

III. System identification with hybrid Elman network

Meral M., Sengor N. S.

IEEE 12th Signal Processing and Communications Applications Conference, Kusadasi, Turkey, 28 - 30 April 2004, pp.80-83

IV. Modified log-domain oscillator for chaos

Ozoguz S., Sengor N. S.

1st IEEE International Conference on Circuits and Systems for Communications, ST PETERSBURG, Russia, 26 - 28 June 2002, pp.287-290

Supported Projects

Şengör N. S., Project Supported by Higher Education Institutions, Korteks yapısına ilişkin bir hesaplamalı modelin donanım üstünde gerçekleştirilmesi, 2016 - 2021

Şengör N. S., Project Supported by Higher Education Institutions, Çok Kipli Matematiksel Modelleme: Sinir Hücrelerinden Devrelerine, 2014 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, Karar Verme Mekanizmasının Modellenmesi: Vuru Üretken Hücre Modellerinden Robota, 2014 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, Striatal Devrelerin Kara Vermeye Etkisinin İncelenmesi, 2013 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, Amaca Yönelik Davranışı Gerçeklemeye İlişkin Yeni Bir Yapı, 2012 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, Nikotin Bağımlılığına İlişkin Pekiştirmeli Öğrenmeye Dayalı Bir Hesaplamalı Sinirbilim Modeli, 2010 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, HANOİ KULESİ PROBLEMİ İÇİN ÇEVİRİM İÇİ PLANLAMAYA İLİŞKİN BİR HESAPLAMILI MODEL, 2009 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, Cortico-Striato-Thalamic Devrelerin Amaca Yönelik Davranışa İlişkin Bir Hesaplamalı Modeli, 2008 - 2018

Şengör N. S., Project Supported by Higher Education Institutions, Davranış Seçmede Striatum Hücrelerinin Etkisinin Webots Ortamında İncelenmesi, 2013 - 2014

Şengör N. S., Project Supported by Higher Education Institutions, Duygusal Davranışlarda Etkin Sinir Sistemi Altyapılarının Robot Modelinin Elde Edilmesi, 2010 - 2013

Şengör N. S., Project Supported by Higher Education Institutions, Amaca Yönelik Davranışı Gerçeklemek için Kortiko-Striato-Talamik Devrelerin Bir Robot Modeli, 2011 - 2012

Şengör N. S., Project Supported by Higher Education Institutions, Uzay Dönüşümü Tabanlı Modelleme ve Eniyileme

Teknikleri, 2009 - 2012

Şengör N. S., Project Supported by Higher Education Institutions, Hibrid Sistemlerin Bir Türü Olan Doğrusal Anahtarlama Sistemlerinde Kararlılık Analizi, 2006 - 2008

Metrics

Publication: 95

Citation (WoS): 332

Citation (Scopus): 438

H-Index (WoS): 9

H-Index (Scopus): 10

Non Academic Experience

Lincoln University, UK

Helsinki Technology University

Helsinki Technology University