

Doç.Dr. SERGEY BORISENOK

Kişisel Bilgiler

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Posta Adresi: Department of Electrical and Electronics Engineering, Faculty of Engineering, Abdullah Gül University, 38080 Kocasinan / Kayseri, Turkey

Eğitim Bilgileri

Doktora, Leningrad Devlet Üniversitesi, Fizik Enstitüsü, Teorik, Rusya 1993 - 1996

Yüksek Lisans, Leningrad Devlet Üniversitesi, Fizik, İstatistik Fiziği, Rusya 1991 - 1993

Lisans, Leningrad Devlet Üniversitesi, Fizik, İstatistik Fiziği, Rusya 1987 - 1991

Yabancı Diller

İngilizce, C1 İleri

Rusça, C2 Ustalık

Yaptığı Tezler

Doktora, Quantum field theory mathematical methods in investigation of developed turbulent energy spectra, Leningrad Devlet Üniversitesi, Fizik Enstitüsü, Teoretik Fizik Bölümü, 1996

Yüksek Lisans, One dimensional spectrum of developed turbulence, Leningrad Devlet Üniversitesi, Fizik, İstatistik Fiziği, 1993

Araştırma Alanları

Yaşam Bilimleri, Matematik, Diferansiyel denklemler, Kısmi diferansiyel eşitlikler, Sistem Kuramı:Kontrol, Fizik, Disiplinlerarası Fizik ve İlgili Bilim ve Teknoloji Alanları, Malzeme Bilimi, Genel Fizik, İstatistik fizik, termodinamik ve nonlineer dinamik sistemler, Yoğun Madde 1:Yapısal, Mekanik ve Termal Özellikler , Temel Bilimler

Akademik Unvanlar / Görevler

Doç.Dr., Abdullah Gül Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2014 - Devam Ediyor

Doç.Dr., Universiti Putra Malaysia, Matematik Araştırma Enstitüsü , Matematik Araştırma Enstitüsü , 2013 - 2013

Doç.Dr., İstanbul Kültür Üniversitesi, Fen-Edebiyat Fakültesi, Fizik, 2010 - 2012

Doç.Dr., Gertsen Devlet Eğitim Enstitüsü, Fizik, Fizik Eğitimi , 2002 - 2010

Verdiği Dersler

Kuantum İstatistiğinde Matematiksel Yöntemler , Lisans, 2010 - 2011

Yönetilen Tezler

- BORISENOK S., Open Loop Control Methods in Non-Linear Dynamical Equations, Doktora, B.Ahmad(Öğrenci), 2009
BORISENOK S., Feedforward Control Design for Dynamical Systems, Doktora, N.Iqbal(Öğrenci), 2009
BORISENOK S., Control of Quantum Particle Dynamics by Modulated Optical Field, Doktora, S.Saifullah(Öğrenci), 2008

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Parameter investigation of topological data analysis for EEG signals**
ALTINDIŞ F., YILMAZ B., Borisenok S., İÇÖZ K.
Biomedical Signal Processing and Control, cilt.63, 2021 (SCI İndekslerine Giren Dergi)
- II. **Solution to n-dimensional Sturm-Liouville-like equations using multi-dimensional Schwarzian**
Erkut M. H. , Borisenok S., Caglar M., Polatoglu Y.
JOURNAL OF DIFFERENTIAL EQUATIONS, cilt.251, sa.12, ss.3403-3420, 2011 (SCI İndekslerine Giren Dergi)
- III. **Linear feedforward control of two-level quantum system by modulated external field**
Borisenok S., Saifullah S.
OPTICS COMMUNICATIONS, cilt.284, sa.14, ss.3562-3567, 2011 (SCI İndekslerine Giren Dergi)
- IV. **Thermodynamical approach to sympathetic cooling of neutral particles**
Borisenok S., Rozhdestvensky Y.
JOURNAL OF CHEMICAL PHYSICS, cilt.134, sa.4, 2011 (SCI İndekslerine Giren Dergi)
- V. **Multi-dimensional Weiss operators**
Borisenok S., Erkut M. H. , Polatoglu Y., Demirer M.
TURKISH JOURNAL OF MATHEMATICS, cilt.35, sa.4, ss.687-694, 2011 (SCI İndekslerine Giren Dergi)
- VI. **Control of effective potential minima for Kapitza oscillator by periodical kicking pulses**
Ahmad B., Borisenok S.
PHYSICS LETTERS A, cilt.373, sa.7, ss.701-707, 2009 (SCI İndekslerine Giren Dergi)
- VII. **Open-loop control for focusing of neutral particles by modulated optical field**
Borisenok S., Iqbal N.
ACTA PHYSICA POLONICA A, cilt.114, sa.4, ss.751-759, 2008 (SCI İndekslerine Giren Dergi)
- VIII. **Coherent adiabatic passage in atomic systems with a closed interaction contour**
Borisenok S., Rozhdestvenskii Y.
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS, cilt.96, sa.1, ss.1-7, 2003 (SCI İndekslerine Giren Dergi)
- IX. **Renormalization group in the theory of fully developed turbulence. The problem of infrared-essential corrections to the Navier-Stokes equation**
Antonov N., Borisenok S., Girina V.
THEORETICAL AND MATHEMATICAL PHYSICS, cilt.107, sa.1, ss.456-468, 1996 (SCI İndekslerine Giren Dergi)
- X. **Calculated spectra of decaying turbulence developed in the energy-containing and inertial ranges**
Adzhemyan L., Borisenok S., Nalimov M.
THEORETICAL AND MATHEMATICAL PHYSICS, cilt.106, sa.3, ss.341-348, 1996 (SCI İndekslerine Giren Dergi)
- XI. **Renormalization group in the theory of fully developed turbulence. Composite operators of canonical dimension 8**
Antonov N., Borisenok S., Girina V.
THEORETICAL AND MATHEMATICAL PHYSICS, cilt.106, sa.1, ss.75-83, 1996 (SCI İndekslerine Giren Dergi)
- XII. **Renormalization group approach and short-distance expansion in theory of developed turbulence: Asymptotics of the triplex equal-time correlation function**
Adzhemyan L., Borisenok S., Girina V.
THEORETICAL AND MATHEMATICAL PHYSICS, cilt.105, sa.3, ss.1556-1565, 1995 (SCI İndekslerine Giren Dergi)

Diğer Dergilerde Yayınlanan Makaleler

- I. **Speed Gradient Control Algorithm for Optogenetic Modeling**
Borisenok S.
European Journal of Science and Technology, cilt.28, ss.771-774, 2021 (Diğer Kurumların Hakemli Dergileri)
- II. **QUANTUM ALGORITHMS WITH CONTROLLED HODGKIN-HUXLEY NEURONS**
Borisenok S.
MATTER: International Journal of Science and Technology, cilt.7, sa.3, ss.1-15, 2021 (Diğer Kurumların Hakemli Dergileri)
- III. **Ergotropy of bosonic quantum battery driven via repelling feedback algorithms**
Borisenok S.
Cybernetics and Physics, cilt.10, sa.1, ss.9-12, 2021 (Diğer Kurumların Hakemli Dergileri)
- IV. **Control over Cavity Assisted Charging for Dicke Quantum Battery**
Borisenok S.
European International Journal of Science and Technology, cilt.9, sa.6, ss.1-7, 2020 (Diğer Kurumların Hakemli Dergileri)
- V. **Ergotropy of Quantum Battery Controlled via Target Attractor Feedback**
Borisenok S.
IOSR Journal of Applied Physics, cilt.12, sa.3, ss.43-47, 2020 (Diğer Kurumların Hakemli Dergileri)
- VI. **Control over performance of qubit-based sensors**
BORISENOK S.
Cybernetics and Physics, cilt.7, sa.3, ss.93-95, 2018 (Diğer Kurumların Hakemli Dergileri)
- VII. **TRACKING OF ARBITRARY REGIMES FOR SPIKING AND BURSTING IN THE HODGKIN-HUXLEY NEURON**
Borisenok S., Ünal Z.
MATTER: International Journal of Science and Technology, cilt.3, sa.2, ss.560-576, 2017 (ESCI İndekslerine Giren Dergi)
- VIII. **Energy Transfer in Two-Level Quantum Systems via Speed Gradient-Based Algorithm**
Pechen A., BORISENOK S.
IFAC-PapersOnLine, cilt.48, ss.446-450, 2015 (Diğer Kurumların Hakemli Dergileri)
- IX. **Coherent transfer of population in atomic systems with closed loop of interaction**
Borisenok S., Rozhdestvenskij Y.
Zhurnal Eksperimental'noj i Teoreticheskoy Fiziki, cilt.123, sa.1, ss.5-13, 2003 (Diğer Kurumların Hakemli Dergileri)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Statistical Physics Approach to Small Scale Artificial Neural Networks**
Borisenok S.
5th International Online Conference on Mathematics "An Istanbul Meeting for World Mathematicians", İstanbul, Türkiye, 1 - 03 Aralık 2021, ss.572-579
- II. **Feedback Control for Attractor Dynamics in the Epileptor Model**
Borisenok S.
5th International Online Conference on Mathematics "An Istanbul Meeting for World Mathematicians", İstanbul, Türkiye, 1 - 03 Aralık 2021, ss.371-377
- III. **Speed Gradient Control Algorithm for Optogenetic Modeling**
Borisenok S.
1st International Conference on Applied Engineering and Natural Sciences, Konya, Türkiye, 1 - 03 Kasım 2021, ss.732
- IV. **Distributed Control for Detecting and Suppressing the Epileptiform Regime in the Populations of Hodgkin-Huxley Neurons**
Borisenok S.
5 TH INTERNATIONAL CONFERENCE ON ENGINEERING TECHNOLOGY AND INNOVATION, İstanbul, Türkiye, 13 -

17 Ekim 2021, ss.26-33

- V. **Modeling Optogenetic Control over Epileptiform Activity**
Borisenok S.
5 TH INTERNATIONAL CONFERENCE ON ENGINEERING TECHNOLOGY AND INNOVATION, İstanbul, Türkiye, 13 - 17 Ekim 2021, ss.34-40
- VI. **Detection and control of epileptiform regime in the Hodgkin-Huxley artificial neural networks via quantum algorithms**
Borisenok S.
The Tenth International Scientific Conference on Physics and Control PhysCon2021, Shanghai, Çin, 4 - 08 Ekim 2021, ss.32
- VII. **Non-Classical Algorithm to Control Epileptiform Regime in the Small Population of Hodgkin-Huxley Neurons**
Borisenok S.
7th International Conference on Engineering and Natural Sciences (ICENS 2021), Sarajevo, Bosna-Hersek, 23 - 27 Temmuz 2021, ss.60-66
- VIII. **Control Algorithms for Bosonic Quantum Batteries: Parallel versus Collective Charging**
Borisenok S.
7th International Conference on Engineering and Natural Sciences (ICENS 2021), Sarajevo, Bosna-Hersek, 23 - 27 Temmuz 2021, ss.55-59
- IX. **Feedback Control over the Charging Power of Quantum Battery**
Borisenok S.
II. International Conference on Innovative Engineering Applications (CIEA'2021), 2021, Muş, Türkiye, 20 Mayıs - 22 Haziran 2021, ss.198-202
- X. **Deutsch – Jozsa Algorithm with Feedback Controlled FitzHugh – Nagumo Neurons**
Borisenok S.
II. International Conference on Innovative Engineering Applications (CIEA'2021), 2021, Muş, Türkiye, 20 - 22 Mayıs 2021, ss.193-197
- XI. **Stabilization via Kolesnikov's Fractional Feedback**
Borisenok S.
FIRST ONLINE CONFERENCE ON MODERN FRACTIONAL CALCULUS AND ITS APPLICATIONS (OCMFCA-2020), İstanbul, Türkiye, 5 - 06 Aralık 2020, ss.1
- XII. **Target Repeller Feedback Control over the Ergotropy of Quantum Battery**
Borisenok S.
6th INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES (ICENS), Belgrade, Sırbistan, 21 - 25 Ekim 2020, ss.15-19
- XIII. **Controlled Hodgkin – Huxley Neuron vs Controlled Qubit: Pros and Cons of Their Applications**
Borisenok S.
4th International Conference on Mathematics "An Istanbul Meeting for World Mathematicians" ICOM 2020, 27 - 30 Ekim 2020, ss.212-217
- XIV. **Quantum Batteries Driven via Feedback Algorithms**
Borisenok S.
4th INTERNATIONAL CONFERENCE ON MATHEMATICS "An Istanbul Meeting for World Mathematicians" ICOM 2020, İstanbul, Türkiye, 27 - 30 Ekim 2020, ss.458-462
- XV. **Can Controlled Hodgkin – Huxley Neuron Model Quantum Computations?**
Borisenok S.
6th INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES (ICENS), Belgrade, Sırbistan, 21 - 25 Ekim 2020, ss.9-14
- XVI. **Use of Topological Data Analysis in Motor Intention Based Brain-Computer Interfaces**
ALTINDIŞ F., YILMAZ B., BORISENOK S., İÇÖZ K.
European Signal Processing Conference (EUSIPCO), Rome, İtalya, 3 - 07 Ağustos 2018, ss.1695-1699
- XVII. **Target Attractor Tracking of Relative Phase in Bosonic Josephson Junction**

BORISENOK S.

2nd International Conference on Mathematical Sciences and Statistics (ICMSS), Kuala-Lumpur, Malezya, 26 - 28 Ocak 2016, cilt.1739

XVIII. TRACKING WITH TARGET ATTRACTOR FEEDBACK IN SUPERCONDUCTING JOSEPHSON JUNCTION

BORISENOK S.

PHYSCON 2015, İstanbul, Türkiye, 19 - 22 Ağustos 2015, ss.1-4

XIX. EEG informational code dependence on the functional state: General trends and characteristic period

Mekler A. A. , BORISENOK S.

17th World Congress of Psychophysiology of the International-Organization-of-Psychophysiology (IOP), Hiroshima, Japonya, 23 - 27 Eylül 2014, cilt.94, ss.190

XX. Mathematical Models of Brain Dynamics: Progress and Perspectives

Borisenok S.

5th International Conference on Research and Education in Mathematics (ICREM), Bandung, Endonezya, 22 - 24 Ekim 2011, cilt.1450, ss.18-22

XXI. Speed gradient control of qubit state

Borisenok S., Fradkov A., Proskurnikov A.

IFAC International Workshop on Periodic Control Systems, PSYCO 2010, Antalya, Türkiye, 26 - 28 Ağustos 2010, cilt.4, ss.81-85

XXII. Multi-zone atom beam splitter by Raman transitions

Borisenok S., Selishcheva Y. D. , Rozhdestvensky Y. V.

ICONO 2005 Conference, St Petersburg, Rusya, 11 - 15 Mayıs 2005, cilt.6256

XXIII. Statistical control in dynamical non-linear systems

Borisenok S.

International Conference on Physics and Control (PHYSCON 2005), St Petersburg, Rusya, 24 - 26 Ağustos 2005, ss.145-149

XXIV. Multi-zone coherent atomic beam splitter control by Raman transitions

Borisenok S., Rozhdestvensky Y., Selishcheva Y.

International Conference on Physics and Control (PHYSCON 2005), St Petersburg, Rusya, 24 - 26 Ağustos 2005, ss.150-154

XXV. Coherent atomic beam splitter control for nano-scale atom wave packet lithography

Borisenok S., Rozhdestvensky Y.

International Conference on Physics and Control (PHYSCON 2003), ST PETERSBURG, Rusya, 20 - 22 Ağustos 2003, ss.906-908

XXVI. Scale splitting control for an atom wave packet coherent scattering in modulated standing wave

Borisenok S., Rozhdestvensky Y., Udov G.

International Conference on Physics and Control (PHYSCON 2003), ST PETERSBURG, Rusya, 20 - 22 Ağustos 2003, ss.913-916

XXVII. Speed-gradient control of cooled atom dynamics in potential of standing wave

Borisenok S., Rozhdestvensky Y., Fradkov A., Andrievsky B., Matisov B.

International Conference on Physics and Control (PHYSCON 2003), ST PETERSBURG, Rusya, 20 - 22 Ağustos 2003, ss.909-912

Desteklenen Projeler

Borisenok S., TÜBİTAK Projesi, Hodgkin-Huxley nöronlarında ani yükseliş ve fırlama dinamiklerinin kontrolü, 2016 - 2018

YILMAZ B., İÇÖZ K., BORISENOK S., ERKUTLU İ., Yükseköğretim Kurumları Destekli Proje, Motor niyet dalgaları tabanlı ihtiyaç iletim sistemi tasarımı, 2015 - 2017

ABLAY G., ALTINTAŞ A., BORISENOK S., Öğrencisi Y., Öğrencisi Y., Yükseköğretim Kurumları Destekli Proje, Elektronik

Devrelerinde Kaotikleřtirme ve Rastgeleleřtirme iin Geribeslemeli Algoritmalar ve Bunların Gvenli Haberleřme Uygulamaları, 2015 - 2017

BORISENOK S., MSTECAPLIOĐLU . E. , Yksekđretim Kurumları Destekli Proje, Josephson Eklemleri Kontrol Dinamiđi, 2015 - 2017

Atıflar

Toplam Atıf Sayısı (WOS):41

h-indeksi (WOS):3