

## Prof. ANAR HÜSEYİN

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Anadolu University, Institute Of Science, Uygulamalı Matematik (Dr), Turkey 2011 - 2014

Undergraduate, Anadolu University, Faculty Of Science, Department Of Mathematics, Turkey 2007 - 2010

### Foreign Languages

English, C1 Advanced

Azerbaijani, C2 Mastery

Russian, B1 Intermediate

### Dissertations

Doctorate, The properties and approximation of the set of trajectories of the control system described by nonlinear Volterra integral equation., Anadolu University, Institute Of Science, 2014

### Academic and Administrative Experience

Sivas Cumhuriyet Üniversitesi, Fen Fakültesi, İstatistik Bölümü, 2016 - Continues

### Courses

Görsel Programlama, Undergraduate, 2019 - 2020

Olasılık Ve İstatistik II, Undergraduate, 2018 - 2019

Biyoistatistik, Undergraduate, 2019 - 2020

Zaman Serileri Analizi, Undergraduate, 2018 - 2019

Kemometri, Undergraduate, 2018 - 2019

Dönem Projesi, Postgraduate, 2018 - 2019

Olasılık ve İstatistik, Undergraduate, 2018 - 2019

Tam Sayılı Programlama, Undergraduate, 2019 - 2020

Olasılık Ve İstatistik II, Undergraduate, 2018 - 2019

İstatistik, Undergraduate, 2019 - 2020

Oyun Teorisi, Undergraduate, 2018 - 2019

İstatistik, Undergraduate, 2019 - 2020  
İstatistik, Postgraduate, 2019 - 2020  
Biyostatistik, Undergraduate, 2018 - 2019  
İstatistik, Postgraduate, 2019 - 2020  
İST4000 Bitirme tezi (Güz-Bahar), Undergraduate, 2017 - 2018  
TMB2278 İstatistik (Gıda Müh.), Undergraduate, 2017 - 2018  
İstatistik ve Olasılık, Undergraduate, 2017 - 2018  
BKM2012 Kemometri (Biokimya), Undergraduate, 2017 - 2018, 2016 - 2017  
TMB2279 İstatistik (Otom.Müh.), Undergraduate, 2017 - 2018, 2016 - 2017  
MKT4008 İstatistik ve Olasılık (Mekatr.Müh. İÖ), Undergraduate, 2017 - 2018, 2016 - 2017  
Olasılık ve İstatistik, Undergraduate, 2018 - 2019  
İST4011 Tam Sayılı Programlama, Undergraduate, 2017 - 2018  
SPB1006 Olasılık ve İstatistik (Mimar.Fak.), Undergraduate, 2017 - 2018  
GEO2001 Olasılık ve İstatistik (Geom.Müh.), Undergraduate, 2017 - 2018  
TMB2279 İstatistik (İmal.Müh.), Undergraduate, 2017 - 2018, 2016 - 2017  
İST4006 Oyun Teorisi, Undergraduate, 2017 - 2018  
TMB2278 İstatistik (Gıda Müh. İÖ), Undergraduate, 2017 - 2018  
Olasılık Ve İstatistik I, Undergraduate, 2018 - 2019  
MKT4008 İstatistik ve Olasılık (Mekatr.Müh.), Undergraduate, 2017 - 2018, 2016 - 2017  
TMB2279 İstatistik (Otom.Müh. İÖ), Undergraduate, 2017 - 2018, 2016 - 2017  
Olasılık Ve İstatistik I, Undergraduate, 2018 - 2019  
TMB2279 İstatistik (İmal.Müh. İÖ), Undergraduate, 2017 - 2018, 2016 - 2017  
İST3005 Yöneylem Araştırması, Undergraduate, 2017 - 2018, 2016 - 2017  
İstatistik ve Olasılık, Undergraduate, 2017 - 2018  
İstatistiksel Deney Tasarımı, Undergraduate, 2016 - 2017  
Bitirme Tezi, Undergraduate, 2017 - 2018  
İST2009 Bilgisayar Programlama, Undergraduate, 2016 - 2017  
İST3002 İstatistiksel Deney Tasarımı, Undergraduate, 2016 - 2017  
Olasılık ve İstatistik, Undergraduate, 2017 - 2018  
İST3001 Regresyon Analizi, Undergraduate, 2016 - 2017  
SBP1006 Olasılık ve İstatistik (Mimar.Fak.), Undergraduate, 2016 - 2017  
Yöneylem Araştırması, Undergraduate, 2017 - 2018  
Regresyon Analizi, Undergraduate, 2016 - 2017  
Bilgisayar Programlama -II, Undergraduate, 2015 - 2016  
Optimizasyon - II, Undergraduate, 2015 - 2016  
Bilgisayar Programlama -I, Undergraduate, 2016 - 2017  
Optimizasyon - I, Undergraduate, 2015 - 2016

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Approximation of the set of integrable trajectories of the control system with  $L_2$  norm constraints on control functions**  
Hüseyin N., Hüseyin A., Guseinov K.  
Evolution Equations and Control Theory, vol.13, no.4, pp.1212-1228, 2024 (SCI-Expanded)
- II. **On the robustness of the integrable trajectories of the control systems with limited control resources**  
Hüseyin N., Hüseyin A., Guseinov K.  
ARCHIVES OF CONTROL SCIENCES, vol.33, no.3, pp.527-537, 2023 (SCI-Expanded)
- III. **On the Vietoris semicontinuity property of the  $L_p$  balls at  $p=1$  and an application**  
HÜSEYİN A.

Archiv der Mathematik, vol.121, no.2, pp.171-182, 2023 (SCI-Expanded)

- IV. **Approximations of the Images and Integral Funnels of the  $L_p$  Balls under a Urysohn-Type Integral Operator**  
Hüseyin A., Hüseyin N., Guseinov K. G.  
FUNCTIONAL ANALYSIS AND ITS APPLICATIONS, vol.56, no.4, pp.269-281, 2022 (SCI-Expanded)
- V. **Approximations of the set of trajectories and integral funnel of the non-linear control systems with  $L_p$  norm constraints on the control functions**  
Hüseyin N., Hüseyin A., Guseinov K. G.  
IMA JOURNAL OF MATHEMATICAL CONTROL AND INFORMATION, vol.39, no.4, pp.1213-1231, 2022 (SCI-Expanded)
- VI. **On the  $p$ -integrable trajectories of the nonlinear control system described by the Urysohn-type integral equation**  
HÜSEYİN A.  
OPEN MATHEMATICS, vol.20, no.1, pp.1101-1111, 2022 (SCI-Expanded)
- VII. **Аппроксимации образов и интегральных воронок шаров в пространстве  $L_p$  под действием интегрального оператора урысоновского типа**  
Hüseyin A., Hüseyin N., Guseinov K.  
ФУНКЦИОНАЛЬНЫЙ АНАЛИЗ И ЕГО ПРИЛОЖЕНИЯ, vol.56, no.4, pp.43-58, 2022 (SCI-Expanded)
- VIII. **Continuity of  $L_p$  Balls and an Application to Input-Output Systems**  
HÜSEYİN A., HÜSEYİN N., Guseinov K. G.  
MATHEMATICAL NOTES, vol.111, no.1-2, pp.58-70, 2022 (SCI-Expanded)
- IX. **Approximation of the integral funnel of the Urysohn type integral operator**  
HÜSEYİN A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.341, pp.277-287, 2019 (SCI-Expanded)
- X. **On the compactness of the set of  $L_2$  trajectories of the control system**  
HÜSEYİN N., HÜSEYİN A.  
NONLINEAR ANALYSIS-MODELLING AND CONTROL, vol.23, no.3, pp.423-436, 2018 (SCI-Expanded)
- XI. **Approximation of the Set of Trajectories of the Nonlinear Control System with Limited Control Resources**  
HÜSEYİN N., HÜSEYİN A., Guseinov K.  
MATHEMATICAL MODELLING AND ANALYSIS, vol.23, no.1, pp.152-166, 2018 (SCI-Expanded)
- XII. **Compactness of the set of trajectories of the control system described by a Urysohn type integral equation with quadratic integral constraints on the control functions**  
Alias I. A., HÜSEYİN N., HÜSEYİN A.  
JOURNAL OF INEQUALITIES AND APPLICATIONS, 2016 (SCI-Expanded)
- XIII. **Approximation of the Sections of the Set of Trajectories of the Control System Described by a Nonlinear Volterra Integral Equation**  
HÜSEYİN A., HÜSEYİN N., Guseinov K. G.  
MATHEMATICAL MODELLING AND ANALYSIS, vol.20, no.4, pp.502-515, 2015 (SCI-Expanded)
- XIV. **Dependence on the parameters of the set of trajectories of the control system described by a nonlinear Volterra integral equation**  
Huseyin A., Huseyin N.  
APPLICATIONS OF MATHEMATICS, vol.59, no.3, pp.303-317, 2014 (SCI-Expanded)
- XV. **On the approximation of the set of trajectories of control system described by a Volterra integral equation**  
Huseyin A.  
NONLINEAR ANALYSIS-MODELLING AND CONTROL, vol.19, no.2, pp.199-208, 2014 (SCI-Expanded)
- XVI. **Compactness of the set of trajectories of the controllable system described by an affine integral equation**  
Huseyin N., Huseyin A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.219, no.16, pp.8416-8424, 2013 (SCI-Expanded)

**XVII. ON THE POSITIVE LINEAR SET VALUED MAPS**

Huseyin A., Huseyin N.

MISKOLC MATHEMATICAL NOTES, vol.14, no.1, pp.111-123, 2013 (SCI-Expanded)

**XVIII. Precompactness of the Set of Trajectories of the Controllable System Described by a Nonlinear Volterra Integral Equation**

Huseyin A., Huseyin N.

MATHEMATICAL MODELLING AND ANALYSIS, vol.17, no.5, pp.686-695, 2012 (SCI-Expanded)

### Articles Published in Other Journals

- I. **İntegrallenebilir Yörüngeleri ve Kontrol Kaynakları Kısıtlı olan Kontrol Sistemin Yörüngeler Kümesinin Özellikleri Üzerine**  
Hüseyin A.  
Kafkas Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Kafkas Üniversitesi, vol.16, no.1, pp.24-29, 2023 (Peer-Reviewed Journal)
- II. **On the Properties of the Set of Trajectories of the Nonlinear Control System with Quadratic Integral Constraint on the Control Functions**  
Hüseyin A., Hüseyin N.  
Ural Mathematical Journal, vol.9, no.1, pp.93-103, 2023 (Scopus)
- III. **On the Continuity Properties of the Set of Trajectories of the Control System with Limited Control Resources**  
Hüseyin A.  
Celal Bayar Üniversitesi Fen Bilimleri Dergisi, vol.19, no.2, pp.151-157, 2023 (Peer-Reviewed Journal)
- IV. **On the continuity properties of the  $L_p$  balls**  
Hüseyin N., Hüseyin A.  
JOURNAL OF APPLIED ANALYSIS, vol.29, no.1, pp.151-159, 2023 (ESCI)
- V. **On the Robustness of Continuous Trajectories of the Nonlinear Control System Described by an Integral Equation**  
Hüseyin N., Hüseyin A.  
JOURNAL OF THE KOREAN SOCIETY OF MATHEMATICAL EDUCATION SERIES B-PURE AND APPLIED MATHEMATICS, vol.30, no.2, pp.191-201, 2023 (ESCI)
- VI. **Upper and lower directional derivative sets and differentials of the set valued maps**  
Ege N., Hüseyin A., Hüseyin N.  
Vestnik Udmurtskogo Universiteta. Matematika. Mekhanika. Komp'yuternye Nauki, vol.32, no.3, pp.403-414, 2022 (ESCI)
- VII. **On the Properties of the Set of Trajectories of Nonlinear Control Systems with Integral Constraints on the Control Functions**  
Hüseyin N., Hüseyin A., Guseinov K.  
Trudy Instituta Matematiki i Mekhaniki UrO RAN, vol.28, no.3, pp.274-284, 2022 (ESCI)
- VIII. **ON THE ROBUSTNESS PROPERTY OF A CONTROL SYSTEM DESCRIBED BY AN URYSOHN TYPE INTEGRAL EQUATION**  
HÜSEYİN N., HÜSEYİN A., Guseinov K. G.  
TRUDY INSTITUTA MATEMATIKI I MEKHANIKI URO RAN, vol.27, no.3, 2021 (ESCI)
- IX. **Approximation of the Integral Funnel of a Nonlinear Control System with Limited Control Resources**  
Hüseyin A., Hüseyin N., Guseinov K.  
Minimax Theory and its Applications, vol.5, no.2, pp.327-346, 2020 (ESCI)
- X. **ON THE EXISTENCE OF epsilon-OPTIMAL TRAJECTORIES OF THE CONTROL SYSTEMS WITH CONSTRAINED CONTROL RESOURCES**  
HÜSEYİN A.  
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS,

vol.66, no.1, pp.75-84, 2017 (ESCI)

**XI. Approximation of sections of the set of trajectories for a control system with bounded control resources**

Huseyin A., Huseyin N., Guseinov K.

TRUDY INSTITUTA MATEMATIKI I MEKHANIKI URO RAN, vol.23, no.1, pp.116-127, 2017 (ESCI)

**XII. Approximation of the set of trajectories of a control system described by the Urysohn integral equation**

Huseyin N., Huseyin A., Guseinov K. G.

TRUDY INSTITUTA MATEMATIKI I MEKHANIKI URO RAN, vol.21, no.2, pp.59-72, 2015 (ESCI)

## Books & Book Chapters

**I. Analiz ve Cebirden Olimpiyat Problemleri**

HÜSEYİN A., HÜSEYİN N., KHALİK G.

Sinopsis, 2014

## Refereed Congress / Symposium Publications in Proceedings

**I. Continuity of  $L_p$  Balls and Application to the Nonlinear Control Systems**

Hüseyin A., Hüseyin N., Guseinov K.

International Conference "Dynamic Systems: Stability, Control, Differential Games" (SCDG`2024) devoted to the 100-th anniversary of Academician N.N. Krasovskii, Jekaterinburg, Russia, 9 - 13 September 2024, pp.459-462

**II. Approximations of the set of outputs and integral funnel of a nonlinear input-output systems**

Hüseyin N., Hüseyin A., Guseinov K.

International Conference on Mathematical Modeling with Modern Applications (M3A\_24), İstanbul, Turkey, 4 - 06 June 2024, pp.42

**III. On the Robustness of the Trajectories of Nonlinear Control Systems with Respect to the Remaining Control Resource**

Hüseyin A., Huseyin N., Guseinov K.

8th International School-Seminar "Nonlinear Analysis and Extremal Problems" (NLA-2024) , Irkutsk, Russia, 24 - 28 June 2024, pp.116

**IV. On the Robustness of the Trajectories of Control Systems with Respect to Fast Consumption of the Control Resource**

Hüseyin N., Hüseyin A., Guseinov K. G.

2nd International Symposium on Current Developments in Fundamental and Applied Mathematics Sciences (ISCDFAMS-2023), Ankara, Turkey, 14 - 17 November 2023, pp.38

**V. On the properties of the set of trajectories of the nonlinear control systems with limited control resources**

Hüseyin A., Hüseyin N., Guseinov K.

International Conference "Optimal Control Theory and Applications" (OCTA'2022 - Satellite Conference for International Congress of Mathematicians (ICM 2022)), Jekaterinburg, Russia, 27 June - 01 July 2022, pp.304-307

**VI. On the control system described by Urysohn type integral equation**

Hüseyin N., Hüseyin A., Guseinov K.

Control Theory and Theory of Generalized Solutions of Hamilton–Jacobi Equations (CGS'20), Jekaterinburg, Russia, 26 - 30 October 2020, pp.42-45

**VII. On the Structure of the Set Valued Maps**

HÜSEYİN A., HÜSEYİN N., GUSEINOV K.

International Conference on Mathematics, Turkey, 3 - 06 July 2018, pp.143

**VIII. On the Properties of the Set of Trajectories of the Control System with Limited Control Resources**

**and Described by Volterra Integral Equation**

HÜSEYİN H., HÜSEYİN A., HÜSEYİN N.

The 11th Dynamical Systems, Mathematical, Physical Sciences and Engineering Applications, Davao, Philippines, 9 - 12 May 2018, pp.14-15

- IX. **Approximation of the family of solutions of the Urysohn integral equation**  
HÜSEYİN N., HÜSEYİN A., GUSEINOV K.  
2nd International Conference Mathematics and Mathematics Education (ICMME'xx2017), Şanlıurfa, Turkey, 11 - 13 May 2017, pp.232-233
- X. **Approximation of the set of trajectories of the control system with limited control resources**  
GUSEINOV K., HÜSEYİN N., HÜSEYİN A.  
22nd International Conference Mathematical Modelling and Analysis (MMA2017), Druskininkai, Lithuania, 30 May - 02 June 2017, pp.21
- XI. **Attainable Set of a Sir Epidemiological Model with Constraint on Vaccination and Treatment Stocks**  
NAZLIPINAR A. S., HÜSEYİN A., HÜSEYİN N.  
5th International Eurasian Conference on Mathematical Sciences and Applications, Serbia And Montenegro, 16 - 19 August 2016, pp.81
- XII. **Properties and Approximate Construction of the Set of Trajectories of the Control System with Integral Constraint on the Control Functions**  
HÜSEYİN N., HÜSEYİN A., GUSEINOV K.  
Asian Mathematical Conference 2016, Indonesia, 25 - 29 July 2016
- XIII. **Properties and Approximation of the Set of Trajectories of the Control Systems with Limited Control Recourses**  
HÜSEYİN N., HÜSEYİN A., GUSEINOV K.  
3rd International Conference on Structural Nonlinear Dynamics and Diagnosis. (CSNND 2016), Marrakech, Morocco, 23 - 25 May 2016, pp.52
- XIV. **Approximate Construction of the Sections of the Set of Trajectories of the Control System**  
GUSEINOV K., HÜSEYİN A., HÜSEYİN N.  
5th International Conference on Mathematics and Information Science (ICMIS 2016), Kahire, Egypt, 11 - 13 February 2016, pp.97-98
- XV. **Approximation of the set of trajectories of the control system described by an affine Volterra type integral equation**  
HÜSEYİN N., HÜSEYİN A., KHALİK G., USHAKOV V.  
International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.111
- XVI. **Approximation of the set of trajectories of the control system with integral constraint on the controls and described by a Urysohn type integral equation**  
HÜSEYİN N., HÜSEYİN A., KHALİK G.  
2nd international seminar "Control Theory and Theory of Generalized Solutions of Hamilton-Jacobi Equations", Jekaterinburg, Russia, 1 - 03 April 2015, pp.162-163
- XVII. **On the Set of Trajectories of the Control Systems with Limited Control Resources**  
Huseyin N., Huseyin A., Guseinov K. G.  
8th International Conference on Curves and Surfaces, Paris, France, 12 - 18 June 2014, vol.9213, pp.280-288
- XVIII. **On properties of trajectories set of control system described by an affine integral equation**  
HÜSEYİN N., HÜSEYİN A., KHALİK G.  
International conference "Systems Dynamics and Control Processes", Jekaterinburg, Russia, 15 - 20 September 2014, pp.239-240
- XIX. **Upper and Lower Differentials and Directional Derivative Sets of the Set Valued Maps**  
ALTAY S., EGE N., HÜSEYİN A., HÜSEYİN N.  
3rd International Eurasian Conference on Mathematical Sciences and Applications, Vyana, Austria, 25 - 28 August 2014, pp.119
- XX. **On the Set of Trajectories of the Control Systems with Limited Control Resources**  
HÜSEYİN N., HÜSEYİN A., KHALİK G.

8th International Conference "Curves and Surfaces", Paris, France, 12 - 18 June 2014, pp.40

**XXI. Precompactness of the Set of Trajectories of the Control System with Integral Constraint on the Control Functions**

HÜSEYİN A., HÜSEYİN N.

International Seminar "Nonlinear Phenomenology Advances", St. Petersburg, Russia, 1 - 05 October 2013, pp.28

**XXII. On the Control Systems with Limited Control Resources and Governed by the Nonlinear Integral Equation**

HÜSEYİN A., HÜSEYİN N., KHALİK G.

International Seminar "Nonlinear Phenomenology Advances", St. Petersburg, Russia, 1 - 05 October 2013, pp.27

**XXIII. On the Compactness of the Set of Trajectories of Control System Described by an Affine Volterra Type Integral Equation**

HÜSEYİN N., HÜSEYİN A.

International Seminar "Nonlinear Phenomenology Advances", St. Petersburg, Russia, 1 - 05 October 2013, pp.28

**XXIV. On the Existence of the epsilon Optimal Trajectories of the Control System Described by a Nonlinear Volterra Integral Equation**

HÜSEYİN A., HÜSEYİN N., KHALİK G.

International Conference on Approximation Theory and Applications, Hong Kong, 20 - 24 May 2013, pp.22

**XXV. Existence of the Optimal Trajectories of the Controllable System Described by an Affine Integral Equation**

Huseyin N., Huseyin A., Guseinov K.

4th International Conference on Problems of Cybernetics and Informatics (PCI), Baku, Azerbaijan, 12 - 14 September 2012

## Supported Projects

Hüseyin N., Hüseyin A., Guseinov K., Project Supported by Higher Education Institutions, Kontrol Kaynakları Sınırlı Olan Kontrol Sistemin Yörüngeler Kümesinin Özellikleri, 2019 - 2020

Hüseyin N., Hüseyin A., Guseinov K., Project Supported by Higher Education Institutions, Davranışı Urysohn İntegral Denklemi ile Verilen ve Kontrol Fonksiyonları İntegral Kısıtlı Olan Kontrol Sistemlerin Yörüngeler Kümesinin Özellikleri ve Yaklaşık Yapılandırılması, 2016 - 2017

Hüseyin N., Hüseyin A., Guseinov K., Project Supported by Higher Education Institutions, Doğrusal Olmayan İntegral Denklemlerle Tasvir Edilen Kontrol Sistemin Özellikleri Proje no 1306F171 Anadolu Üniversitesi Bilimsel Araştırma Fonu tarafından desteklenmiştir, 2013 - 2014

## Metrics

Publication: 56

Citation (WoS): 86

Citation (Scopus): 66

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