

Assoc. Prof. İSMET YURDUŞEN

Personal Information

Office Phone: [+90 312 297 7864](tel:+903122977864)

Email: yurdusen@hacettepe.edu.tr

Web: <https://aes.hacettepe.edu.tr/yurdusen>

Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 1999 - 2004

Post Graduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 1997 - 1999

Under Graduate, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Fizik, Turkey 1992 - 1997

Foreign Languages

French, A1 Beginner

English, C1 Advanced

Research Areas

Mathematics, Differential Equations, Dynamic Systems and Ergodic Theory, Physics, General Physics, Mathematical Methods in Physics, Natural Sciences

Academic Titles / Tasks

Associate Professor, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2015 - Continues

Associate Professor, Université de Montreal, Centre de Recherches Mathématiques, 2017 - 2018

Assistant Professor, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2012 - 2015

Lecturer PhD, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2010 - 2012

Lecturer PhD, Université de Montreal, Centre de Recherches Mathématiques, 2005 - 2009

Research Assistant, Orta Doğu Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1997 - 2004

Academic and Administrative Experience

Deputy Head of Department, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2021 - Continues

Deputy Head of Department, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2018 - 2018

Fakülte Kurulu Üyesi, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2013 - 2016

Advising Theses

Yurduşen İ., Kürkçüoğlu S., CHAOS IN YANG-MILLS MATRIX MODELS, Post Graduate, K.BAŞKAN(Student), 2019

Yurduşen İ., Turan İ., EXPLORING EXTRA DIMENSIONS THROUGH RARE PROCESSES, Post Graduate, K.ŞİMŞEK(Student),

Jury Memberships

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2021
 Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, August, 2021
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2021
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, July, 2021
 Doctorate, Doctorate, Eskişehir Teknik Üniversitesi, January, 2021
 Post Graduate, Post Graduate, Ankara Üniversitesi, January, 2020
 Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, December, 2019
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, July, 2019
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, July, 2019
 Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, August, 2018
 PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, February, 2018
 PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, January, 2018
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, June, 2017
 Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, October, 2016
 Doctorate, Doctorate, Hacettepe Üniversitesi, October, 2016
 Post Graduate, Post Graduate, Hacettepe Üniversitesi, May, 2016
 Post Graduate, Post Graduate, Ankara Üniversitesi, June, 2015
 PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, June, 2015
 Post Graduate, Post Graduate, Hacettepe Üniversitesi, February, 2015
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2014
 Doctorate, Doctorate, Hacettepe Üniversitesi, May, 2014
 Post Graduate, Post Graduate, Ankara Üniversitesi, June, 2013
 Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2012

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Superintegrable systems with spin and second-order tensor and pseudo-tensor integrals of motion**
 YURDUŞEN İ., TUNCER O. O., Winternitz P.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.54, no.30, 2021 (Journal Indexed in SCI)
- II. **Extended dynamical symmetries of Landau levels in higher dimensions**
 KÜRKCÜOĞLU S., Unal G., YURDUŞEN İ.
 JOURNAL OF HIGH ENERGY PHYSICS, no.2, 2020 (Journal Indexed in SCI)
- III. **Fourth-order superintegrable systems separating in polar coordinates. II. Standard potentials**
 Escobar-Ruiz A. M., Lopez Vieyra J. C., WINTERNITZ P., Yurdusen I.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.51, no.45, 2018 (Journal Indexed in SCI)
- IV. **General Nth-order superintegrable systems separating in polar coordinates**
 Escobar-Ruiz A. M., Winternitz P., Yurdusen I.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.51, no.40, 2018 (Journal Indexed in SCI)
- V. **Holomorphic solutions of the susy Grassmannian sigma-model and gauge invariance**
 HUSSIN V., LAFRANCE M., Yurdusen I., Zakrzewski W. J.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.51, no.18, 2018 (Journal Indexed in SCI)
- VI. **Constant curvature surfaces of the supersymmetric sigma model**

DELISLE L., HUSSIN V., YURDUŞEN İ., Zakrzewski W. J.

JOURNAL OF MATHEMATICAL PHYSICS, vol.56, no.2, 2015 (Journal Indexed in SCI)

VII. **Second-Order Integrals for Systems in E-2 Involving Spin**

Yurdusen I.

ADVANCES IN MATHEMATICAL PHYSICS, 2015 (Journal Indexed in SCI)

VIII. **Superintegrable systems with spin and second-order integrals of motion**

DESILETS J., WINTERNITZ P., YURDUŞEN İ.

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.45, no.47, 2012 (Journal Indexed in SCI)

IX. **Canonical surfaces associated with projectors in Grassmannian sigma models**

Hussin V., Yurdusen İ., Zakrzewski W. J.

JOURNAL OF MATHEMATICAL PHYSICS, vol.51, no.10, 2010 (Journal Indexed in SCI)

X. **Integrable and superintegrable systems with spin in three-dimensional Euclidean space**

Winternitz P., Yurdusen İ.

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.42, no.38, 2009 (Journal Indexed in SCI)

XI. **On analytic descriptions of two-dimensional surfaces associated with the CPN-1 sigma model**

Grundland A. M., Yurdusen İ.

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.42, no.17, 2009 (Journal Indexed in SCI)

XII. **SURFACES OBTAINED FROM CPN (-) (1) SIGMA MODELS**

Grundland A. M., Yurdusen İ.

INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.23, no.32, pp.5137-5157, 2008 (Journal Indexed in SCI)

XIII. **Conformally parametrized surfaces associated with CPN(-1) sigma models**

Grundland A. M., Hereman W. A., Yurdusen İ.

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.41, no.6, 2008 (Journal Indexed in SCI)

XIV. **The integrability of Pauli system in Lorentz violating background**

Frank M., Turan I., Yurdusen İ.

JOURNAL OF HIGH ENERGY PHYSICS, no.1, 2008 (Journal Indexed in SCI)

XV. **Integrable and superintegrable systems with spin**

Winternitz P., Yurdusen İ.

JOURNAL OF MATHEMATICAL PHYSICS, vol.47, no.10, 2006 (Journal Indexed in SCI)

XVI. **Integrability of Kersten-Krasil'shchik coupled KdV-mKdV equations: singularity analysis and Lax pair**

Kalkanli A., Sakovich S., Yurdusen İ.

JOURNAL OF MATHEMATICAL PHYSICS, vol.44, no.4, pp.1703-1708, 2003 (Journal Indexed in SCI)

XVII. **Prolongation algebra and Backlund transformations of Drinfeld-Sokolov system of equations**

Karasu A., Yurdusen İ.

INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.16, no.26, pp.4261-4269, 2001 (Journal Indexed in SCI)

Articles Published in Other Journals

I. **Nth-Order superintegrable systems separating in polar coordinates**

Yurduşen İ.

Geometry, Integrability and Quantization, vol.21, pp.334-348, 2020 (Refereed Journals of Other Institutions)

II. **Impasse of the Desire**

Yurduşen İ., Yurdusen S.

AYNA Klinik Psikoloji Dergisi, vol.4, no.3, pp.11-23, 2017 (National Refreed University Journal)

Books & Book Chapters

I. **Constant Curvature Holomorphic Solutions of the Supersymmetric G(2, 4) Sigma Model**

Hussin V., Lafrance M., Yurduşen İ.

in: Quantum Theory and Symmetries. CRM Series in Mathematical Physics., M.B. Paranjape, Richard MacKenzie, Zora Thomova, Pavel Winternitz, William Witczek-Krempa, Editor, Springer-Verlag, Montreal, pp.91-100, 2021

Refereed Congress / Symposium Publications in Proceedings

I. Higher-order superintegrable systems separating in polar coordinates

YURDUŞEN İ.

32nd International Colloquium on Group Theoretical Methods in Physics (ICGTMP Group), Prague, Czech Republic, 9 - 13 July 2018, vol.1194

II. SUPERINTEGRABLE SYSTEMS WITH SPIN IN TWO-AND THREE-DIMENSIONAL EUCLIDEAN SPACES

Yurduşen İ., Winternitz P.

SPT 2007—Symmetry and perturbation theory, Lecce, Italy, 2 - 09 June 2007, pp.215-222

Supported Projects

YURDUŞEN İ., Project Supported by Higher Education Institutions, Spin içeren sistemler için süperintegrallenebilirlik ve tam çözümlenebilirlik, 2017 - 2018

YURDUŞEN İ., Project Supported by Higher Education Institutions, Kuantum süperintegrallenebilirlik ve tam çözümlenebilirlik, 2016 - 2016

YURDUŞEN İ., Project Supported by Higher Education Institutions, 2 ve 3 boyutlu Öklid uzaylarında spin içeren sistemler için süperintegrallenebilirlik, 2015 - 2015

Scientific Refereeing

ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, Journal Indexed in SCI-E, January 2019

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, March 2018

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, February 2018

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, May 2017

ACTA POLYTECHNICA, Journal Indexed in ESCI, February 2016

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, July 2015

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, March 2015

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, September 2013

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, December 2012

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, July 2011

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, SCI Journal, June 2011

Mobility Activity

Sabbatical Leave, Guest Researcher, Université de Montreal, Canada, 2017 - 2018

Post Doc, Post Doc, Université de Montreal, Canada, 2006 - 2009

Post Doc, Post Doc, Université de Montreal, Canada, 2005 - 2005

Edit Congress and Symposium Activities

Group theoretical methods in physics, Invited Speaker, Montreal, Canada, 2021

International Conference on Geometry, Integrability and Quantization, Invited Speaker, Varna, Bulgaria, 2019

Citations

Total Citations (WOS):157

h-index (WOS):8

Invited Talks

Professor Pavel Winternitz and Superintegrability with Spin, Conference, Canada, July 2021

Nth-Order Superintegrable Systems Separating in Polar Coordinates, Conference, Varna Teknik Üniversitesi, Bulgaria, June 2019

Scholarships

CRM Postdoctoral Fellowship, University, 2006 - 2009

Yurt dışı doktora sonrası araştırma bursu NATO-B1, NATO, 2005 - 2005