



İzzet SAKALLI

Personal Information

Academic Status: Assoc. Prof. Dr.
Place of Birth : Lefkoşa (Nicosia), North Cyprus
Date of Birth : 15 / 10 / 1977
Citizenship : TRNC
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Research Interests

Specialized and experienced in General Relativity and Gravitation; particularly on the colliding plane waves (CPW) with various fields, CPW in higher-dimensions, black holes and their thermodynamical properties, Hawking radiation, quasinormal modes, cosmic strings, chaos and solutions of the wave equations on a curved spacetime.

Education

PhD : Department of Physics, Eastern Mediterranean University (EMU), Gazimagosa, TRNC, January 2005.

Thesis : "Solution of the Dirac Equation in the Non-Asymptotically Flat Geometries"

Supervisor : Prof. Dr. Mustafa HALİLSOY

MS : Department of Physics, EMU ,Gazimagosa, TRNC, September 2000.

Thesis : "Particle Motion in a Uniform Electromagnetic Universe"

Supervisor : Prof. Dr. Mustafa HALİLSOY

BS : Department of Physics, Osmangazi University (OGU), Eskisehir, Turkey, June 1998.

Graduation Award: Top Scoring Student in the Faculty of Arts & Sciences at OGU, in 1998.

High School : Turk Maarif Koleji, Lefkosa, TRNC, June 1994.

Teaching Experience

- ✚ Teaching Assistant (Tutor) in Physics at EMU for undergraduate students studying in the departments of Engineering and Mathematics.

PHYS101 (Mechanics), 1998-1999.
PHYS102 (Thermodynamics and Electromagnetism), 1999-2004.
PHYS201 (Modern Physics), 2000-2004.
“PHYS101 and PHYS102” – Lab. Sessions, 1998-2004.

- ✚ Lecturer in Physics at EMU for undergraduate students studying in the departments of Engineering, Mathematics and Architecture.

PHYS101 and PHYS106 (Physics for Architects), Fall 2004.

- ✚ Lecturer in Physics for undergraduate students studying in the departments of Engineering, Mathematics, Architecture and Education. (*as being Part-time Academic Personal*)

PHYS101 and PHYS102.
PHYS253 (Physics for Designers).
FIZK101 and FIZK201 (General Physics I and Physics I, in Turkish).
FIZK203 (Introductory Physics, in Turkish).

- ✚ Instructor in Physics (*as being Full-time Academic Personal*) for undergraduate students studying in the departments of Engineering, Mathematics, Health, Architecture and Education. (March 2008 – Present)

PHYS101 and PHYS102.
PHYS253.
FIZK101& 102&103&104, 201& 202&203&109 (General Physics I&II and Physics I&II, in Turkish).
FIZK204 (Introduction to Modern Physics)
FIZK211 (General Physics III, in Turkish).
FIZK301 (Special topics in Physics)
PHYS500 (Master Thesis in Physics)

Additional Information

Co-Supervisor : Together with Prof.Dr. Mustafa Halilsoy, we have been supervising a PhD student, whose name is Hale Paşaoğlu since October-2009. The concept of her thesis's topic is about “Hawking Radiation in the black holes and the resolution of the information loss paradox in those black holes”.

Supervisor: Atena Farahi's master thesis which was entitled as “Effect of the Dilaton on the Entropic Force”, September 2010-June 2011.

Certificate of Equality : Showing that my PhD Diploma is equivalent to a PhD Diploma attained in Turkey (TC Üniversiteler Arası Kurul, No: B.31.0.ÜAK.03/2065, 13th April 2005 by TÜBİTAK).

Diploma of Pedagogical Formation: Faculty of Education, Osmangazi University (June, 1998). (Total duration: 2 years including the teaching training in Eskişehir Atatürk Lycee as 3 months).

Member of Student Disciplinary Committee of EMU: October 2009- September 2010.

Member of Curriculum Committee of EMU: October 2010-Present.

National Duty (Being a soldier in Güv.K.K.) : 19 December 2005 – 19 December 2006.

Computational Skills

Proficient in MAPLE, GRTensor, Scientific Work Place and Microsoft Office.

Familiar with the basics of Mathematica and Matlab.

Publications in Peer Reviewed Journals

(All of the following journals are in SCI)

- [1] "The Dirac Equation in the Bertotti-Robinson Space-Time", I.Sakalli, Gen. Rel. Gravit., **35**, 1321 (2003).
- [2] "Cosmic Strings Coupled with a Massless Scalar Field", O.Gurtug and I.Sakalli, Int. J. Theo. Phys., **42**, 1875 (2003) (e-print arXiv: gr-qc/0210044).
- [3] "New Singular and Nonsingular Colliding Wave Solutions in Einstein-Maxwell-Scalar Theory", O.Gurtug, M.Halilsoy and I.Sakalli, Gen. Rel. Gravit., **35**, 2159 (2003) (e-print arXiv: gr-qc/0307021).
- [4] "Collision of Electromagnetic Shock Waves Coupled With Axion Waves: An Example", I.Sakalli and M.Halilsoy, Class. Quantum Grav., **20**, 1417 (2003) (e-print arXiv: gr-qc/0303102).
- [5] "Solution of the Dirac Equation in the Near Horizon Geometry of an Extreme Kerr Black Hole", I.Sakalli and M.Halilsoy, Phys. Rev. D **69**, 124012 (2004) (e-print arXiv: gr-qc/0403061).
- [6] "Chaos in Electrovac and Non-Abelian Plane Wave Spacetimes", I.Sakalli and M.Halilsoy, Phys. Rev. D **74**, 067501 (2006).
- [7] "Solution of the Dirac Equation in the rotating Bertotti-Robinson spacetime", A. Al-Badawi and I.Sakalli, J. Math. Phys., **49**, 052501 (2008).
- [8] "Effect of the Born-Infeld Parameter in Higher Dimensional Hawking Radiation", S.H. Mazharimousavi, I. Sakalli and M. Halilsoy, Phys. Lett. B **672**, 177 (2009).
- [9] "Exact Solutions to a Massive Charged Scalar Field Equation in the Magnetically Charged Stringy Black-Hole Geometry and Hawking Radiation", I. Sakalli and A. Al-Badawi, Can. J. Phys./Rev. **87**, 349 (2009).
- [10] "Hawking Radiation of Linear Dilaton Black Holes in Various Theories", H. Pasaoglu and I. Sakalli, Int. J. Theo. Phys., **48**, 3517 (2009).
- [11] "Dilatonic Interpolation Between Reissner-Nordström and Bertotti-Robinson Spacetimes with Physical Consequences", S.H. Mazharimousavi, M. Halilsoy, I. Sakalli and O. Gurtug, Class. Quantum Grav., **27**, 105005 (2010).
- [12] "Quantization of Higher-Dimensional Linear Dilaton Black Hole Area/Entropy From Quasinormal Modes", I. Sakalli, Int. J. Mod. Phys. A, **26**, 2263 (2011).
- [13] "Chaos in Kundt Type-III Spacetimes", I. Sakalli and M. Halilsoy, Chin. Phys. Lett., **28**, 070402 (2011).
- [14] "Dilatonic Entropic Force", I. Sakalli, Int. J. Theo. Phys., **50**, 2426 (2011).
- [15] "Entropy Conservation of Linear Dilaton Black Holes in Quantum Corrected Hawking Radiation", I.Sakalli, M. Halilsoy and H. Pasaoglu, Int. J. Theo. Phys., **50**, 3212 (2011).

E-Prints

- [1] "Scalar Field Solutions of Colliding Einstein-Maxwell Waves", M.Halilsoy and I.Sakalli, (e-print arXiv: gr-qc/0302011) (2003).
(This study is cited by the following monograph:
"Singular Null Hypersurfaces in General Relativity"
C.Barrebes and P.A.Hogan, World Scientific Publishing, (2003) (ISBN:981-238-737-4))
- [2] "Hawking Radiation for higher dimensional Einstein-Yang-Mills linear dilaton black holes" S.H. Mazharimousavi, I. Sakalli and M.Halilsoy, (e-print arXiv: 0808.0107, 2008).

Attended Workshops/Conferences

[1] “Quantization, Dualities and Integrable Systems”, Ankara University, Ankara-Turkey, 23-25 April, 2009. (<http://dualities.science.ankara.edu.tr>)

Title of My Talk: “Hawking Radiation of Higher Dimensional Linear Dilaton Black Holes in Einstein-Yang-Mills-Dilaton Theory”

[2] “Gravity- New Perspectives From Strings and Higher Dimensions”, Centro de Ciencias de Benasque Pedro Pascual, Benasque-Spain, 12-24 July, 2009. (<http://benasque.org/2009gravity>)

[3] “Quantization, Dualities and Integrable Systems”, Yeditepe University, İstanbul-Turkey, 23-25 April, 2010. (<http://qdis.yeditepe.edu.tr>)

Title of My Talk: “Information Loss and Entropy Conservation of Linear Dilaton Black Holes in Quantum Corrected Hawking Radiation”

[4] “Quantization, Dualities and Integrable Systems”, Eastern Mediterranean University, Gazimagosa-TRNC, 22-24 April, 2011. (<http://qdis.emu.edu.tr>) (*I was also one of the organizers of this workshop*)