Curriculum Vitae

PERSONAL DETAILS

Name Surname: Hilmi Yanar

Date of Birth: 15.04.1987

Nationality: TRNC / TR

Title: Asst. Prof. Dr.

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EDUCATION

Ph.D. (2012-2019)	MERSIN UNIVERSITY INSTITUTE OF SCIENCE / DEPARTMENT OF PHYSICS / PHYSICS Thesis title: Modelling of electroencephalographic brain activity on macroscopic scale. Supervisor: Prof. Dr. Ali Havare and Assoc. Prof. Dr. Yuriy Mishchenko
M.Sc. (2009-2012)	MERSIN UNIVERSITY INSTITUTE OF SCIENCE / DEPARTMENT OF PHYSICS / PHYSICS Thesis title: Bound states of relativistic particles for Pöschl-Teller potential in one dimension. Supervisor: Assoc. Prof. Dr. Ali Havare
B.Sc. (2004-2009)	MERSIN UNIVERSITY FACULTY OF ARTS AND SCIENCE / DEPARTMENT OF PHYSICS / PHYSICS Thesis title: Some Mathematical Concepts in Physics. Supervisor: Assoc. Prof. Dr. Ali Havare

SOFTWARE SKILLS

LaTeX; Mathematica; MATLAB.

ACADEMIC EXPERIENCES

Lecturer (2020-2022)	Girne American University/Faculty of Medicine/Department of Basic Medical Sciences/Biophysics
Asst. Prof. Dr. (2022-)	Girne American University/Faculty of Medicine/Department of Basic Medical Sciences/Biophysics

ADMINISTRATIVE EXPERIENCES

Medicine Program Chief Coordinator	Girne American University/Faculty of Medicine/Department of Basic Medical Sciences	(2021-)
Medicine Program Phase I Coordinator	Girne American University/Faculty of Medicine/Department of Basic Medical Sciences	(2021-)
Member of Faculty Executive Board	Girne American University/Faculty of Medicine	(2021-)
Member of Faculty Board	Girne American University/Faculty of Medicine	(2021-)

PROJECTS

1. "4th International Mersin Science Festival", TUBITAK 4007, Project No:218B595, 27.09.2019-28.09.2019. (Assistant staff at Sky Observation event with telescope)

2. "International Mersin Science Night (MERSCIN)", H2020-MSCA-Night, Project No:818725, 27.09.2019. (Assistant staff at Sky Observation event with telescope)

3. "3rd International Mersin Science Festival", TUBITAK 4007, Project No: 118B791, 28.09.2018-30.09.2018. (Assistant staff)

4. "Gezen Bilim Yollarda", TUBITAK, Project No:117B114, 01.07.2017 - 01.03.2018. (Assistant staff at Sky Observation event with telescope and at planetarium activities)

5. "Developing more efficient noninvasive brain machine interfaces", TUBITAK, Project No: 113E611, 01.07.2014-31.12.2017. (Scholarship PhD student)

6. "Fermion pair creation by electromagnetic fields", BAP, Project No: 2016-1-AP4-1425, 2017. (Researcher)

7. "Dark universe and the nature of entropy", BAP, Project No: 2015-AP4-1231, 2016. (Researcher)

8. "International Mersin Science Festival", TUBITAK, Project No:116B103, 29.09.2016-30.09.2016. (Assistant staff at planetarium activities)

9. "Bound states of relativistic particles for Pöschl-Teller potential in one dimension", BAP, Project No: BAP FBE F (HY) 2011-1 YL. (Researcher)

CERTIFICATES & COURSES

1. Pedagogical Formation Education Certificate, Mersin University Teacher Certification Program, 2018-2019.

2. Certificate of training, Certificate Program on Innovative Approach Applications in Teaching: "Mind-Intelligence Games Trainer Training", 22.01.2018-26.01.2018.

3. Certificate of achievement, Certificate Program on Mind Games Trainer Training, Istanbul University Continuing Education Application and Research Center, 22-23 January 2018.

4. Certificate of training, Certificate Program on TUBITAK ARDEB and TEYDEB Projects Trainer Training, Adana Science and Technology University Continuing Education Application and Research Center, 16.01.2017-20.01.2017.

5. Certificate of attendance, Winter School on Quantum Field Theory (QFT), Feza Gursey Theoretical Physics Institute Istanbul/Turkey, 03.02.2014-08.02.2014.

6. Certificate of attendance, TUBITAK 2237 "Project Preparation Training for Fundamental Sciences", Mersin University, 3-6/26-27 June 2013.

TEACHING EXPERIENCE

Academic Year	Term	Course Name	Hours/week	Language
2022-2023	Fall	Medical Physics	2	English
		Elementary Calculus	3	English
		Radiotherapy Physics I	3	Turkish
		Biophysics	5	English
		Physics	2	Turkish
2021-2022	Fall	Medical Physics	2	English
		Physics	3	English
		Elementary Calculus	3	English
		Heat and Light	2	Turkish
		Radiotherapy Physics I	3	Turkish
		Physics	2	Turkish
	Spring	Physics	3	English
		Elementary Calculus 1	3	English
		Research Methods and Techniques	3	Turkish
		Radiotherapy Physics II	3	Turkish
		Biophysics	3	English
		Medical Physics	3	English
2020-2021	Fall	Biophysics	4	English
		Physics	2	Turkish
		Elementary Calculus	3	English
	Spring	Biophysics	4	English
		Elementary Calculus	3	English
		General Physics	4	English

PUBLICATIONS

A1. Articles published in peer reviewed international journals (SCI & SCI-Expanded)

A1.1. **H. Yanar**, "Comment on 'Thermodynamic relations and ro-vibrational energy levels of the improved Pöschl–Teller oscillator for diatomic molecules." J. Phys. B: At. Mol. Opt. Phys., 55, 178001 **(2022)**.

A1.2. **H. Yanar**, "More accurate ro-vibrational energies for $SiF^{+}(X^{1}\Sigma^{+})$ molecule." Physica Scripta, 97, 045404 **(2022)**.

A1.3. H. Tilaver, **H. Yanar**, M. Salti, O. Aydogdu, "Energy-dependent one-dimensional potentials and scattering of relativistic particles." European Physical Journal Plus, 136, 140 **(2021)**.

A1.4. **H. Yanar**, A. Taş, M. Salti, O. Aydogdu, "Ro-vibrational energies of CO molecule via improved generalized Pöschl–Teller potential and Pekeris-type approximation." European Physical Journal Plus, 135, 292 **(2020)**.

A1.5. A. Tanisman, M. Salti, **H. Yanar**, O. Aydogdu, "D-dimensional cosmology via thermodynamics." European Physical Journal Plus, 134. 325 **(2019)**.

A1.6. H. Kisoglu, **H. Yanar**, O. Aydogdu, M. Salti, "Relativistic spectral bounds for the general molecular potential: application to a diatomic molecule." Journal of Molecular Modeling, 25, 143 **(2019)**.

A1.7. Y. Mishchenko, M. Kaya, E. Ozbay, **H. Yanar**, "Developing a Three- to Six-State EEG-Based Brain-Computer Interface for a Virtual Robotic Manipulator Control." IEEE Transactions on Biomedical Engineering, 66, 977-987 **(2019)**.

A1.8. M. Kaya, M. Binli, E. Ozbay, **H. Yanar**, Y. Mishchenko. "A large electroencephalographic motor imagery dataset for electroencephalographic brain computer interfaces." Scientific Data, 5, 180211 **(2018)**.

A1.9. Z. Ocak, **H. Yanar**, M. Salti, O. Aydogdu. "Relativistic spinless energies and thermodynamic properties of sodium dimer molecule." Chemical Physics, 513, 252-257 **(2018)**.

A1.10. O. Siginc, M. Salti, **H. Yanar**, O. Aydogdu, "Cosmology in scalar-tensor-vector theory via thermodynamics." Modern Physics Letters A, 33. 24 **(2018)**.

A1.11. M. Salti, O. Aydogdu, **H. Yanar**, K. Sogut, "Variable generalized Chaplygin gas in a 5D cosmology." Annals of Physics, 390, 131-142 **(2018)**.

A1.12. M Salti, O. Aydogdu, **H. Yanar**, F. Binbay, "Brans Dicke type teleparallel scalar-tensor theory." Modern Physıcs Letters A, 32, 34 **(2017)**.

A1.13. M. Salti, **H. Yanar**, O. Aydogdu, K. Sogut, "Dynamics of ghost scalar fields in Kaluza-Klein cosmology." Astrophysics and Space Science, 362, 207 **(2017)**.

A1.14. K. Sogut, **H. Yanar**, A. Havare, "Production of Dirac Particles in External Electromagnetic Fields." Acta Physica Polonica B, 48, 1493-1505 **(2017)**.

A1.15. M. Salti, **H. Yanar**, O. Aydogdu, K. Sogut, "Logarithmic-corrected Ricci and modified Chaplygin gas dark energy models in fractal framework." European Physıcal Journal Plus, 132, 225 **(2017)**.

A1.16. K. Sogut, **H. Yanar**, A. Havare, "Fermionic Particle Production by Varying Electric and Magnetic Fields." Communications in Theoretical Physics, 66, 521-525 **(2016)**.

A1.17. **H. Yanar**, M. Salti, O. Aydogdu, I. Acikgoz, E. Yasar, "Galactic entropy in extended Kaluza-Klein cosmology." Modern Physics Letters A, 31, 06 **(2016)**.

A1.18. **H. Yanar**, O. Aydogdu, M. Salti, "Modelling of diatomic molecules." Molecular Physics, 114, 3134- 3142 **(2016)**.

A1.19. M. Salti, O. Aydogdu, **H. Yanar**, "Kaluza-Klein nature of entropy function." Modern Physics Letters A, 30, 38 **(2015)**.

A1.20. O. Aydogdu, **H. Yanar**, "Bound and Scattering States for a Hyperbolic-Type Potential in View of a New Developed Approximation." International Journal of Quantum Chemistry, 115, 529-534 **(2015)**.

A1.21. **H. Yanar**, A. Havare, "Spin and Pseudospin Symmetry in Generalized Manning-Rosen Potential." Advances in High Energy Physics, Article ID: 915796 **(2015)**.

A1.22. E. Kangal, **H. Yanar**, A. Havare, K. Sogut, "Creation of vector bosons by an electric field in curved space-time." Annals of Physics, 343, 40-48 **(2014)**.

A1.23. **H. Yanar**, A. Havare, K. Sogut, "Scattering and Bound States of Duffin-Kemmer-Petiau Particles for q-Parameter Hyperbolic Pöschl-Teller Potential." Advances in High Energy Physics, Article ID: 840907 **(2014)**.

A2. <u>Articles published in peer reviewed international journals (ESCI)</u>

A2.1. M. Salti, O. Aydogdu, **H. Yanar**, "Reverse-engineered scalar fields in a D-dimensional framework." Turkish Journal of Physics, 43, 417-429 **(2019)**.

A2.2. O. Sığınç, M. Salti, **H. Yanar**, O. Aydogdu, "Nature of entropy in a scalar-tensor theory of gravity." Turkish Journal of Physics, 42, 621-630 **(2018)**.

B. <u>Proceedings</u>

B1. <u>International - Full text – Oral</u>

B1.1. O. Aydogdu, M Salti, **H. Yanar**, "Q-Independent General Molecular Potential." International Engineering and Natural Sciences Conference (IENSC 2019), 2019-11-06, 2019-11-08, Diyarbakır, Türkiye.

B1.2. O. Aydogdu, M Salti, **H. Yanar**, "An Improved Potential Energy Function for Diatomic Molecules." International IFS and Contemporary Mathematics Conference (IFSCOM 2019), 2019-06-07, 2019-06-10, Mersin, Türkiye.

B1.3. O. Aydogdu, M Salti, K. Sogut, **H. Yanar**, "Diatomic Molecules within Modified Shifted Improved Hellmann Potential." International Engineering and Natural Sciences Conference (IENSC 2018), 2018-11-14, 2018-11-17, Diyarbakır, Türkiye.

B1.4. M. Kaya, **H. Yanar**, Y. Mishchenko, "Developing computational infrastructure for an EEG-based brain computer." 24th Signal Processing and Communication Application Conference (SIU), 16.05.2016-19.05.2016, Zonguldak, Türkiye.

B2. International - Full text - Poster

B2.1. **H. Yanar**, Y. Mishchenko, "A hidden Markov model of electroencephalographic brain activity for advanced EEG-based brain computer interfaces." 24th Signal Processing and Communication Application Conference (SIU), 16.05.2016-19.05.2016, Zonguldak, Türkiye.

B3. International - Abstract - Oral

B3.1. A. C. Tanisman, M. Salti, **H. Yanar**, O. Aydogdu, "Generalized 2nd Law of Thermodynamics in D-Dimensional Framework." International Engineering and Natural Sciences Conference (IENSC 2018), 2018-11-14, 2018-11-17, Diyarbakır, Turkey.

B3.2. Z. Ocak, **H. Yanar**, O. Aydoğdu, M. Saltı, "Thermodynamics properties of a Schrödinger particle interacting with general molecular potential." IFSCOM2017, 03.05.2017-07.05.2017, Mersin, Turkey.

B3.3. E. Özbay, Y. Mishchenko, M. Kaya, **H. Yanar**, "Control of a virtual robotic hand manipulator using a non-invasive EEG-based brain machine." 1st International Mediterranean Science and Engineering Congress, 26.10.2016-28.10.2016, Adana, Turkey.

B3.4. M. Saltı, **H. Yanar**, O. Aydoğdu, "New Chaplygin Gas Model in Fractal Framework." 1st International Mediterranean Science and Engineering Congress, 26.10.2016-28.10.2016, Adana, Turkey.

B3.5. K. Sogut, **H. Yanar**, A. Havare, "Fermion Pair Production in the presence of electromagnetic fields." 1st International Mediterranean Science and Engineering Congress, 26.10.2016-28.10.2016, Adana, Turkey.

B3.6. **H. Yanar**, A. Havare, "Solution of the Dirac equation in three dimensions for the Generalized Manning-Rosen potential." Turkish Physical Society 31st International Physics Congress, 21.07.2014-24.07.2014, Muğla, Turkey.

B3.7. **H. Yanar**, O. Aydoğdu, "Scattering and bound states of Dirac particles for the Asymmetric Hulthen potential." Turkish Physical Society 31st International Physics Congress, 21.07.2014-24.07.2014, Muğla, Turkey.

B3.8. **H. Yanar**, A. Havare, "Scattering states of Schrödinger particles for the general q-parameter hyperbolic Pöschl-Teller potential." Turkish Physical Society 28th International Physics Congress, 06.09.2011-09.09.2011, Muğla, Turkey.

B4. International - Abstract - Poster

B4.1. Y. Mishchenko, M. Kaya, **H. Yanar**, E. Özbay, "Characterization of the key properties of electroencephalographic signal for noninvasive brain machine/computer interface applications." Society for Neuroscience Annual Meeting 2016, 12.11.2016-16.11.2016, San Diego, USA.

B5. National - Abstract - Oral

B5.1. M. Saltı, O. Aydoğdu, **H. Yanar**, "Fraktal Kuramda Holografik Quinstessence Skaler Alan." 29. Ulusal Matematik Sempozyumu, 28.08.2016-31.08.2016, Mersin, Türkiye.

REVIEWER FOR JOURNALS

International Journal [Year, Count]

1. Chemical Physics Letters [2020; 1] [2022; 1]

2. International Journal of Quantum Chemistry [2020; 2] [2022; 1]

3. Physica Scripta [2020; 1]

4. Canadian Journal of Chemistry [2020; 1]

5. Chemical Physics [2019; 1] [2022; 2]

6. Physical Science International Journal [2017; 1]

7. Asian Journal of Physical and Chemical Sciences [2017; 1]

8. Advances in High Energy Physics [2016; 1]

9. Zeitschrift Für Naturforschung A - A Journal of Physical Sciences [2016; 1] [2015; 1]