

Curriculum Vitae

Name: Serdar Nergiz

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Interest Areas:

Theoretical Physics: String Theory, Self-Dual Yang-Mills Fields; Monopole, Instanton and Vortex solutions.

Education:

- Ph.D. : Bogaziçi University, Physics Department (1989)
Ph.D. Thesis : *Vertex Operator Algebra in String Theory*
- MSc. : Rensselaer Polytechnic Institute, Physics Department (1985)
MSc Thesis : *Pion Electroproduction in the $\Delta^{3,3}$ Resonance Region.*
- B.Sc. : Ankara University, Physics Engineering Department (1982)

Academic Experience:

- Professor: Boğaziçi University, Physics Department (2001 - present)
- Associate Professor: Boğaziçi University, Physics Department, (1996 - 2001)
- Assistant Professor: Boğaziçi University, Physics Department, (1989 -1995)
- Research Assistant: Bogaziçi University, Physics Department, (1987-1989)
- Research Assistant : Ankara University, Physics Department, (1982)

Publications:

Nimai C. Mukhopadhyay, R. Davidson, R. Wittman, M. Bourdeau, S. Nergiz

Theory Of Photoproduction And Electroproduction Of Mesons: Problems And Prospects

Research Program at CEBAF, Report of the 1985 Summer Study Group (CEBAF, Newport News, Virginia, USA), Jan. 1986.

Energy Research Abstracts, **v.11, No 5, 1986, p.1387, Report Number: DOE/ER/40114-T2.**

Scientific and Technical Aerospace Reports, **v.24, No 17, 1986, p.2809.**

Cihan Saçlıoğlu, Serdar Nergiz. *On-Shell Three String Amplitudes and the Structure Constants of the Monster Lie Algebra* International **Journal Of Modern Physics A5 (1990) 2647-2666.**

DOI: [10.1142/S0217751X90001203](https://doi.org/10.1142/S0217751X90001203)

Serdar Nergiz. *Vertex Operators for Physical States of Bosonic String*. **Journal Of Mathematical Physics**, vol. 35 (1994) 5669-5673.

DOI: [10.1063/1.530703](https://doi.org/10.1063/1.530703)

Cihan Saçlıoğlu, Serdar Nergiz. *Are On-Shell 3-String Amplitudes the Structure Constants of the Fake Monster Lie Algebra?* **Lecture Notes In Physics: Strings and Symmetries**. vol. 447 (1994) 216-217 (Proceedings Of Gürsey Memorial Conference I, İstanbul, Turkey. Eds. G. Aktaş, C. Saçlıoğlu, M. Serdaroğlu.) *Springer-Verlag*.

DOI: [10.1007/3-540-59163-X_271](https://doi.org/10.1007/3-540-59163-X_271)

Cihan Saçlıoğlu, Serdar Nergiz. *Does the Gürsey-Tze Solution Represent a Monopole Condensate?* **Physics Letters B354** (1995) 345-349.

DOI: [10.1016/0370-2693\(95\)00682-B](https://doi.org/10.1016/0370-2693(95)00682-B)

Cihan Saçlıoğlu, Serdar Nergiz. *A Quasiperiodic Gibbons–Hawking Metric and Spacetime Foam*. *Physical Review D53* (1996) 2240-2243.

DOI: [10.1103/PhysRevD.53.2240](https://doi.org/10.1103/PhysRevD.53.2240)

Cihan Saçlıoğlu, Serdar Nergiz. *Liouville Vortex and φ^4 Kink Solutions of the Seiberg-Witten Equations*. **Journal of Mathematical Physics** vol. 37 (1996) 3753-3759.

DOI: [10.1063/1.531628](https://doi.org/10.1063/1.531628)

Cihan Saçlıoğlu, Serdar Nergiz. *Weierstrassian Functions in R^n , the Yang-Mills Monopole Condensate and Spacetime Foam*. **Turkish Journal of Physics** vol. 21 (1997) 494.

Cihan Saçlıoğlu, Serdar Nergiz. *Seiberg-Witten Monopole Equations and Riemann Surfaces*. **Nuclear Physics B503** (1997) 675-687.

DOI: [10.1016/S0550-3213\(97\)00457-4](https://doi.org/10.1016/S0550-3213(97)00457-4)

Supervised Research Projects:

Investigation of alternative cosmological theories to the Λ CDM and inflationary models
BAP Project No: 7128. (2013-2016)

Textbook Translation:

Translated textbook: “Physics : Classical and Modern. International Edition” by Frederick J. Keller , W. Edward Gettys , Malcolm J. Skove (McGraw-Hill, Inc. 1993)

Turkish title: “*Fizik 1. Cilt*” (ISBN-10: 9758431700), “*Fizik 2. Cilt*” (ISBN: 9799758431716)

(Literatür Yayınları, 1995))

Courses taught:

Undergraduate Courses:

- (1) **Phys101** Physics I (Mechanics)
- (2) **Phys102** Physics II (Waves&Thermodynamics)
- (3) **Phys130** Thermodynamics, Waves, Optics and Modern Physics
- (4) **Phys201** Physics III (Electricity and Magnetism)
- (5) **Phys202** Physics IV (Optics and Modern Physics)
- (6) **Phys221** Thermal Properties of Matter
- (7) **Phys290** Computer Applications in Physics
- (8) **Phys301** Classical Mechanics I
- (9) **Phys302** Classical Mechanics II
- (10) **Phys325** Mathematical Methods of Physics I
- (11) **Phys326** Mathematical Methods of Physics II
- (12) **Phys380** Introduction To Electromagnetic Radiation
- (13) **Phys48R** Selected Topics in Physics: Introduction to Relativity Theory
- (14) **Phys401** Electromagnetism I
- (15) **Phys402** Electromagnetism II
- (16) **Phys411** Quantum Mechanics I
- (17) **Phys412** Quantum Mechanics II
- (18) **Phys421** Statistical Mechanics
- (19) **Phys472** Elementary Particle Physics

Graduate Courses:

- (1) **Phys500** Readings in Physics
- (2) **Phys501** Classical Dynamics
- (3) **Phys511** Electromagnetic Theory I
- (4) **Phys531** Quantum Mechanics I
- (5) **Phys532** Quantum Mechanics II
- (6) **Phys582** Special Topics in Physics
- (7) **Phys665** Field Theory I
- (8) **Phys666** Field Theory II