

# Department of Physics - 1999 Publications

## Table of Contents

Astrophysics	1
Particle Physics	1
CLEO Collaboration – Experimental Particle Physics	2
Condensed Matter, Biological And Medical Physics	2
Relativity And Gravitation	3
Fundamentals of Physics	3

## Table of Faculty Publications

Artuso, Marina	19-30
Balachandran, AP	6-7
Bowick, Mark	8-10
Catterall, Simon	10-12
Goldberg, M	19-30
Lipson, Edward	31
Marchetti, Cristina	33-34
Marolf, Donald	40-47
Middleton, Alan	35-37
Moneti, Giancarlo	19-30
Rohrlich, Fritz	53-55
Saulson, Peter	48-49
Schechter, Joseph	13-16
Schiff, Eric	38
Skwarnicki, Tomasz	19-30
Sorkin, Rafael	50-52
Souder, Paul	17-18
Stone, Sheldon	19-30
Vidali, Gianfranco	1-5
Wellner, Marcel	39

## Astrophysics

1. V. Pirronello, C. Liu, J. Roser and **G. Vidali**, *Measurements of Molecular Hydrogen Formation on Carbonaceous Grains*, *Astronomy & Astrophysics* **344**, 681 (1999).
2. **G. Vidali**, “Experiments and Computer Simulations of Thin Film Growth,” invited review article for a special issue of the *Bulgarian Chemical Communication Journal* in honor of Ivan Stanski 100<sup>th</sup> birthday.
3. V. Pirronello, O. Biham, C. Liu, L. Shen, and **G. Vidali**, *Formation of Molecular Hydrogen: The Mother of All Molecules*, in *Exobiology: Matter, Energy, and Information in the Origin and Evolution of Life in the Universe*, Ed. by J.C. Flores and F. Raulin, 287 (1999).
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5. N. Natz, I. Furman, O. Biham, V. Pirronello, and **G. Vidali**, “Molecular Hydrogen Formation on Astrophysically Relevant Surfaces,” *Astrophysical Journal*, **55**, 305.

## Particle Physics

6. **A.P. Balachandran** and Sachindeo Vaidya, “Skyrmions, Spectral Flow and Parity Doubles,” *International Journal of Modern Physics* **A14**, 445 (1999).
7. **A.P. Balachandran**, G. Bimonte, T.R. Govindarajan, K. Gupta, V. John and S. Vaidya, “Current Oscillations, Interacting Hall Discs and Boundary CFT’s,” *International Journal of Modern Physics* **A14**, 1061 (1999).
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9. **M. Bowick** and Alex Travesset, “New Analytical Results on Anisotropic membranes,” *Nucl. Phys. B. Proc. Suppl.* **73**, 807 (1999).
10. **M. Bowick**, **S. Catterall**, S. Warner, G. Thorleifsson, and M. Falcioni, “Anisotropic Membranes,” *Nucl. Phys. B. Proc. Suppl.* **73**, 805 (1999).



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13. **J. Schechter**, D. Delphenich and S. Vaidya, "Pion-pion scattering in two dimensions," Phys. Rev. **D59**, 056004 (1999).
14. **J. Schechter**, D. Black, A.H. Fariborz and F. Sannino, "Putative light scalar nonet," Phys. Rev. **D59**, 074026 (1999).
15. **J. Schechter** and A.H. Fariborz, "Eta prime goes to eta pi pi decay as a probe of a possible lowest-lying scalar nonet," Phys. Rev. **D60**, 034002 (1999).
16. **J. Schechter** and F. Sannino, "Chiral phase transition for SU(N) gauge theories in an effective Lagrangian approach," Phys. Rev. **D60**, 056004 (1999).
17. K.A. Aniol,...**P. Souder**, ...*et al.*, "Measurement of the Neutral Weak Form Factors of the Proton," Phys. Rev. Lett. **82**, 1096 (1999).
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## CLEO Collaboration – Experimental Particle Physics

CLEO collaboration - M. Artuso, M. Goldberg, G. Moneti (Emeritus) T. Skwarnicki, S. Stone, A. Wolf

## Condensed Matter, Biological And Medical Physics

31. **E. Lipson**, D. Warner, and Y.-J. Chang, "Universal Interfacing System for Interactive Technologies in Telemedicine, disabilities, Rehabilitation, and Education" in *Medicine meets virtual reality the convergence of physical and informational technologies - options for a new era in healthcare*, Ed. by J. Westwood, H. Hoffmann, R. Robb, D. Stredney, Amsterdam: IOS Press, 205-211.

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35. David McNamara, **A. Alan Middleton**, and Chen Zeng, "Simulation of the Zero Temperature Behavior of a 3-Deimensional Elastic Medium," *Phys. Rev.* **B60**, 10062-10069 (1999).
36. **Alan Middleton**, "Numerical investigation of the thermodynamic limit for ground states in models with quenched disorder," *Physical Review Letters* **83**, 1672-1675 (1999).
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47. **D. Marolf**, "ITP Conference on Strong Gravitational Fields, Matters of Gravity," **14**, Fall 1999, pg. 16. (Matters of Gravity is an electronic newsletter of the GR community).
48. **P. Saulson**, (co-author, co-editor), *Gravitational Physics: Exploring the Structure of Space and Time*, National Academy Press (1999).
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50. **R. Sorkin**, A. Borde, H.F. Dowker, R.S. Garcia and S. Surya, "Causal Continuity in Singular Spacetimes," *Classical & Quantum Gravity*, **16**, 3457-3481 (1999).
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40. **D. Marolf**, "Space-time embedding diagrams for black holes," *Journ. Of Gen. Rel. and Grav.* **31**, 919 (1999).
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## Fundamentals of Physics

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55. **F. Rohrlich**, "Classical Self-Force", *Phys. Rev.* **D60**, 084017 (1999).