

## **CURRICULUM VITAE**

### **SONIA PABAN**

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**Citizenship:** USA

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#### **Education:**

9/84-12/88 Universidad de Barcelona (Spain).  
Ph. D. in Physics. Advisor: Rolf Tarrach.  
9/79-6/84 Universidad de Barcelona (Spain).  
Undergraduate degree.

#### **Employment:**

9/06 - Associate Professor at the University of Texas at Austin.  
9/00 - 8/06 Assistant Professor at the University of Texas at Austin.  
9/99 - 8/00 Research Associate at the University of Texas at Austin.  
9/98 - 8/99 Postdoc at the University of Texas at Austin.  
9/96 - 5/98 Visitor at the Institute for Advanced Study, Princeton.  
9/94 - 8/96 Postdoc at the University of Texas at Austin.  
9/92 - 5/94 Postdoc at the University of Minnesota at Minneapolis.  
9/91 - 8/92 Postdoc at the University of Texas at Austin.

#### **Fellowships and Grants:**

9/05- National Science Foundation.  
9/99-8/01 POWRE grant, National Science Foundation.  
9/89-8/91 Fulbright Fellowship at the University of Texas at Austin.  
9/84-8/89 Predoctoral Grant given by the Spanish Government.

### **Invited Talks Since 9/06:**

- Inflationary Theory and Its Confrontation with Data in the Planck Era; Aspen, CO; February 2012
- Dark Conference; Copenhagen, DK; August 2011
- PASCOS conference; Cambridge, UK; July 2011
- Aspects of Inflation Conference; Texas A & M University; April 2011
- Texas A & M University; April 2008

## Publications:

1. (with J. Distler) *On Uncertainties in Successive Measurements.* arXiv:1211.4169 [quant-ph]
2. (with D. Carney, W. Fischler, E. Kovetz and D. Lorshbough) *Rapid Field Excursions and the Inflationary Tensor Spectrum.* arXiv:1209.3848 [hep-th] **JHEP 1211 (2012) 042**
3. (with A. Dey) *Non-gaussianities in the Cosmological Perturbation Spectrum Due to Primordial Anisotropy II.* arXiv:1205.2758 [astro-ph.CO] . **JCAP 1210 (2012) 055**
4. (with D. Carney, W. Fischler and N. Sivanandam) *The Inflationary Wavefunctions and its Initial Conditions.* arXiv:1109.6566 [hep-th] . **JCAP 1212 (2012) 012**
5. (with A. Dey) *Non-gaussianities in the Cosmological Perturbation Spectrum Due to Primordial Anisotropy* arXiv:1106.5840 [hep-th] . **JCAP 1204 (2012) 039**
6. (with R. Flauger, D. Robbins and T. Wrase) *On Slow-roll Moduli Inflation in Massive IIA Supergravity with Metric Fluxes.* arXiv:0812.3886 [hep-th] . **Phys. Rev. D79 (2009) 886011.**
7. (with E. Dimastrogiovanni and W. Fischler) *Perturbation Growth in Anisotropic Cosmologies.* arXiv:0803.2490 [hep-th] . **JHEP 0807:045,2008.**
8. (with W. Fischler, C. Krishnan and M. Zanic) *Vacuum Bubble in an Inhomogeneous Cosmology.* arXiv:0711.3417 [hep-th] . **JHEP 0805:041,2008.**
9. (with W. Fischler) *Leptogenesis from Pseudo-Scalar Driven Inflation.* arXiv:0708.3828 [hep-th] **JHEP 0710:066,2007.**
10. (with C. Krishnan and M. Zanic) *Evolution of Gravitationally Unstable de Sitter Compactifications.* hep-th/0503025 **JHEP 0505:045, 2005**
11. (with W. Fischler and M. Zanic) *The energy density of “wound” fields in a toroidal universe.* astro-ph 0407349 **JHEP 0410:041,2004**
12. (with W. Fischler and A. Loewy) *The Entropy of the Microwave Background and the Acceleration of the Universe.* hep-th/0307031 **JHEP 0309:024,2003**
13. (with T. Banks and W. Fischler) *Recurrent nightmares? Measurement Theorey in de Sitter Space.* hep-th/0210160. **JHEP 0212:062,2002**
14. (with T. Banks, W. Fischler, A. Kashani-Poor and R. McNees) *Entropy of the Stiffest Stars.* hep-th 0206096. *Class. and Quantum Grav.* **19 (2002) 4717-4728.**

15. (with S. Sethi and M. Stern) *I Non-commutativity and Supersymmetry*. **hep-th 0201259**. **JHEP** 03:012,2002.
16. (with W. Fischler, A. Kahani-Poor and R. McNees) *The Acceleration of the Universe, a Challenge for String Theory*. **hep-th 0104181** .**JHEP** 0107:003,2001.
17. (with W.Fischler, E. Gorbatov, A. Kashani-Poor, R. McNees and P. Pouliot) *The Interplay Between Theta and T*. **hep-th 0003216** .**JHEP** 0006:032,2000.
18. (with W.Fischler, Joaquim Gomis, E. Gorbatov, A. Kashani-Poor and P. Pouliot) *Evidence for Winding States in Noncommutative Quantum Field Theory*. **hep-th 0002067**. **J. High Energy Phys.** 05 (2000) 024.
19. (with S.Sethi and M. Stern) *Summing Up Instantons in Three-Dimensional Yang-Mills Theories*. **hep-th 9808119**. **ATMP**. 3 (1999)343.
20. (with S. Sethi and M. Stern) *Supersymmetry and Higher Derivative Terms in the Effective Action of Yang-Mills Theories*. **hep-th 9806028**. **J. High Energy Phys.** 06 (1998) 012.
21. (with S. Sethi and M.Stern) *Constraints From Extended Supersymmetry in Quantum Mechanics*. **hep-th 9805018**. **Nucl. Phys.** **B534** 137-154 (1998).
22. (with D. Berenstein, R. Corrado, W. Fischler and M. Rozali) *Virtual D-branes*. **Phys. Lett.** **B384**, 93 (1996)
23. (with W. Fischler and M. Rozali) *Collective coordiantes for D-branes*. **Phys. Lett.** **B381**, 62 (1996)
24. (with W. Fischler and M. Rozali) *Collective coordinates in string theory*. **Phys. Lett.** **B352**, 298 (1995).
25. (with J. M. Cline and K. Kainulainen) *Stability of neutrinos in the singlet majoron model*. **Phys. Lett.** **B319**, 513 (1993).
26. (with J. M. Cline) *Is induced QCD really QCD? The cv preservation of asymptotic freedom by matter interactions*. **Phys. Lett.** **B316**, 158 (1993).
27. (with W. Fischler and S. Thomas) *Bounds on Microscopic Physics from P and T Violation in Atoms and Molecules*. **Phys. Lett.** **B289**, 373 (1992).
28. (with W. Fischler, G. F. Giudice, R. G. Leigh and S. Thomas) *The invisible Majoron*. **Phys. Lett.** **B266**, 408 (1991).

29. (with W. Fischler, G. F. Giudice and R. G. Leigh) *Neutrino masses and Baryogenesis*. Proceedings of “Quantum Mechanics of Fundamental Systems III”, Santiago de Chile. January, 1990.
30. (with W. Fischler, G. F. Giudice and R. G. Leigh) *Constraints on the Baryogenesis Scale from Neutrino Masses*. Phys. Lett. **B258**, 45 (1991).
31. (with R. G. Leigh and R. M. Xu) *Electric Dipole Moment of Electron*. Nucl Phys. **B352**, 45 (1991).
32. (with J. Dai, H. Dykstra, R. G. Leigh and D. A. Dicus) *CP violation from three gluon operators in the Supersymmetric Standard Model*. Phys.Lett. **B237**, 216 (1990); Erratum **B242**, 547 (1990).
33. (with R. Tarrach) *On the effective action and field renormalization for variational  $\lambda\phi^4$* . Phys Lett. **B213**, 48 (1988).
34. (with R. Tarrach) *A chance for interaction in  $\lambda\phi_{3+1}^4$ ,  $\lambda > 0$* . Phys. Lett. **B197**, 383 (1987); Erratum **B199**, 596 (1987).
35. (with R. Tarrach and E. Verdaguer) *Casimir effect between a plate and a straight line*. Phys. Lett. **B195**, 240 (1987).
36. (with J. I. Latorre and S. Narison)  *$O^{++}$  Triguonium sum rules*. Phys. Lett. **B191**, 437 (1987).
37. (with J. Taron and R. Tarrach) *On the existence of interacting perturbatively nonrenormalizable quantum field theories*. Z. Phys. **C34**, 85 (1987).