

# Curriculum Vitae

## G. Scott Watson

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### Education

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#### **Ph.D. in Physics, Brown University, 2005**

Anticipate completion and defense of dissertation in May.

Advisor: Robert Brandenberger.

Thesis: *String Gases in the Early Universe.*

#### **Master of Science in Physics, Brown University, 2002**

#### **Bachelor of Science in Physics with honors, University of North Carolina at Wilmington (UNCW), 2000**

*Magna cum laude*

Honors Dissertation: *An Exposition on Inflationary Cosmology.*

#### **Bachelor of Science in Mathematics with honors, UNCW, 2000**

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### Awards and Honors

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- Brown University Dissertation Fellowship, 2004-2005
- National Science Foundation - NATO Advanced Study Travel Award, Summer 2004
- NASA Graduate Student Research Program Fellowship, 2001-2003
- Nicholson Award for Physics (Brown University), 2001
- Teaching Fellowship (Brown University), 2000
- Walter Schmid Award for Excellence in Physics (UNC-W), 1999-2000
- Fred Toney Scholar (UNC-W), 1999-2000
- UNCW Undergraduate Research Fellow, 1999-2000
- UNCW Physics Departmental Scholarship, 1998-2000

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### Invited Seminars

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- Brown University
- ISCAP, Columbia University
- Dartmouth University
- Princeton University
- North Carolina - Chapel Hill
- Syracuse University
- North Carolina - Wilmington
- Perimeter Institute
- Fermilab
- MIT
- ITP Stanford University

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## Talks at Conferences and Workshops

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- COSMO 2004, International Conference on Particle Physics and Cosmology, Toronto, Canada
- PASCOS 2004, International Symposium on Particles, Strings and Cosmology, Boston, MA
- 2004 Cargese String Workshop, Cargese, France
- 2003 PITP Summer School, Institute for Advanced Study, Princeton, NJ
- 2003 East Coast Gravity Meeting, College Park, MD
- 2002 APS Division of Particles, Fields, and Cosmology, Williamsburg, VA
- COSMO 2002, International Conference on Particle Physics and Cosmology, Chicago, IL

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## Selected Schools, Workshops, Conferences, and Extended Visits

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### 2004:

- 3rd and 4th Northeast Workshop on String Cosmology, Columbia University, NY
- COSMO 2004, International Conference on Particle Physics and Cosmology, CITA, Toronto, Ontario, Canada
- PASCOS 2004, International Symposium on Particles, Strings and Cosmology, Boston, MA
- Cargese Summer School, "String Theory: from Gauge Interactions to Cosmology"
- Visitor, Perimeter Institute
- Visitor, University of North Carolina - Wilmington

### 2003:

- 1st and 2nd Northeast Workshop on String Cosmology, Columbia University, NY
- Prospects in Theoretical Physics (PITP) Summer School, Institute for Advanced Study, Princeton, NJ
- East Coast Gravity Meeting, College Park, Maryland
- Visitor, University of North Carolina - Wilmington

### 2002:

- APS Division of Particles, Fields, and Cosmology, Williamsburg, VA
- COSMO 2002, International Conference on Particle Physics and Cosmology, Chicago, IL
- Visitor, CERN Theoretical Division, Geneva, Switzerland

### 2001-2000:

- PASCOS 2001, International Symposium on Particles, Strings and Cosmology, Chapel Hill, NC
- Visitor, University of North Carolina - Chapel Hill, NC

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## Professional Experience

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### **Referee, Journal of High Energy Physics (JHEP), 2003-Present**

### **Lecturer, Brown University, Providence, RI, 2003-04**

Brown University Extended Learning Program

Course for post-college graduates interested in the sciences, designed to give students an appreciation of the current ideas and trends in modern theoretical physics. Developed course and administered all grades.

### **Lecturer, Brown University, Providence, RI, 2002**

Brown University Summer School

Course for first year undergraduates and advanced high school students majoring in physics, designed to give students a quantitative introduction to past successes and recent advances in modern physics. Developed course structure and administered all grades.

### **Teaching Assistant, Brown University, Providence, RI, 2001-2003**

Courses included: Physics of Matter, Advanced Quantum Mechanics, Theoretical Mechanics, and General Relativity.

Graded all written work including final exam papers and held help sessions.

### **Teaching Assistant, University of North Carolina, Wilmington, NC, 2000**

*Introduction to Physics.*

Graded all written work including final exams and assisted with labs.

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## Other Professional Experience

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### **Computer Consultant, Providence, RI, 2001 - 2003**

Provided computer and network support, web development, and computer training to both private businesses and personal clients.

### **IT Professional, Corning Incorporated Fiber Optics Division, Wilmington, NC, 1997-2000**

Computer and network support for 2000+ users, problem solving under time sensitive conditions, information security, web development, computer training.

### **Computer Consultant, University of North Carolina, Wilmington, NC, 1997 - 2000**

Computer and Network Support, created and maintained physics department web site.

### **Computer Consultant, Richmond, VA, 1995 - 1997**

Provided computer and network support, web development, and computer training to both private businesses and personal clients.

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## Professional References

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Provided Upon Request.

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## Publications

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- [1] R. Brandenberger, Y. K. Cheung and S. Watson, “Moduli stabilization with string gases and fluxes,” arXiv:hep-th/0501032.
- [2] S. Watson, “Moduli stabilization with the string Higgs effect,” Phys. Rev. D **70**, 066005 (2004) arXiv:hep-th/0404177.
- [3] T. Battefeld and S. Watson, “Effective field theory approach to string gas cosmology,” JCAP **0406**, 001 (2004) [arXiv:hep-th/0403075].
- [4] S. Watson, “UV perturbations in brane gas cosmology,” Phys. Rev. D **70**, 023516 (2004) [arXiv:hep-th/0402015].
- [5] S. Watson and R. Brandenberger, “Linear perturbations in brane gas cosmology,” JHEP **0403**, 045 (2004) [arXiv:hep-th/0312097].
- [6] S. Watson and R. Brandenberger, “Stabilization of extra dimensions at tree level,” JCAP **0311**, 008 (2003) [arXiv:hep-th/0307044].
- [7] R. Brandenberger, G. Geshnizjani and S. Watson, “On the initial conditions for brane inflation,” Phys. Rev. D **67**, 123510 (2003) [arXiv:hep-th/0302222].
- [8] S. Watson and R. H. Brandenberger, “Isotropization in brane gas cosmology,” Phys. Rev. D **67**, 043510 (2003) [arXiv:hep-th/0207168].
- [9] G. S. Watson, “An exposition on inflationary cosmology,” arXiv:astro-ph/0005003.

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## Conference Proceedings

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- [1] S. Watson, “Stabilizing moduli with string cosmology,” Proceedings of PASCOS 2004: 10th International Symposium on Particles, Strings and Cosmology, to be published by World Scientific, 2004. arXiv:hep-th/0409281.
- [2] S. Watson, “Moduli Trapping and String Gas Cosmology,” Proceedings of Cargese Workshop: “String Theory: From Gauge Interactions to Cosmology,” to be published in the NATO Science series C.