

PROTON



PHYSICS REPORT ON THINGS OF NOTE

VOLUME 8 NUMBER 2

In Memory

Arthur A. Broyles

*Contributed by Sergei Shabanov*

Arthur Broyles, UF Professor Emeritus of Physics, was born May 16, 1923, in Atlanta, Georgia, to Richard J. and Mary Jones Broyles. His family moved to Gainesville when he was in the 5th grade. He was a distinguished graduate of the P.K. Yonge School. His father was a minister, which, in his own words, contributed to Arthur's desire to become a physicist. He received his BS in Physics from the University of Florida in 1942 and was directly commissioned into the US Navy. He was trained at the MIT Radar School and became a radar officer at the USS Baxter, a large troop carrier in the Pacific. His warship participated in three invasions. During one of the invasions, radar skills of the officer Broyles saved his ship from a collision with another warship in the fog.

Arthur met Jenna Schneider (Broyles) in Cambridge, Massachusetts, during his radar training at MIT and married her on December 25, 1943, 11 months after their first dance. Last Christmas they celebrated their 65th anniversary. Arthur was younger than 21 years old and had to get consent from his parents to get married. A similar rule existed for girls too, but the age was 18. The young couple moved to San Francisco, California, where Arthur served as a navy radar officer.



He could have had a great navy career, but there was a small problem. He would often get seasick. So, after the war ended, Arthur resigned from the navy and went to the University of Wisconsin where he received his MS in

Physics after one year of study. He continued his education at the Physics Department at Yale University and received his PhD in Theoretical Physics in 1949. Shortly after, Dr. Broyles



Arthur Broyles (center) with Edward Teller (the H-bomb father) on the left

worked with the world renowned physicist, Edward Teller, on research projects involving the hydrogen bomb at Los Alamos, New Mexico. Later in his career, he performed research at the Rand Corporation in Santa Monica, California. The Rand Corporation was formed to offer research and analysis to the United States armed forces. Arthur's research projects involved studies of nuclear weapons and effects of nuclear fall off. The latter knowledge contributed greatly to Arthur's decision to become a Professor of Physics at the University of Florida in the early 1950's. Gainesville was supposed to be one of the safest places in the United States in case of any nuclear conflict at the time.

See Broyles on Page 4

**Spring 2009
SEMINAR
Schedule**

Astrophysics

Fridays @ 4:00pm
2165 NPB

**Condensed Matter
Physics**

Mondays @ 4:05pm
2205 NPB

**High Energy
Physics**

Tuesdays & Fridays
@ 2:00pm
2165 NPB

**Physics
Colloquium**

Thursdays @ 4:05
1002 NPB

Quantum Theory

Wednesdays @
4:05pm
2205 NPB

EDITORS

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Faculty News



Professor **Peter Hirschfeld's** article on 'Defects in Correlated Fermi Systems' was chosen for the cover of Reviews of Modern Physics January-March 2009 issue. To view please visit <http://rmp.aps.org/>.



Jacobo Konigsberg was invited to participate in a Symposium at the upcoming 2009 AAAS (American Association for the Advancement of Science) Annual Meeting in Chicago, February 12-16. Konigsberg will be presenting on a panel with several VIPs from the Experimental Particle physics community, including Fermilab's director, the person who built the LHC and other scientific leaders from other experiments. The title of the Symposium is: High-Energy Physics Discoveries: From the Tevatron to the Large Hadron Collider. Konigsberg will be presenting the discoveries and prospects from the

Tevatron. Info on the people and on the panel is located at:

<http://smaria.home.cern.ch/smaria/aaas09/aaas09.htm>

Information on the presentations is located at: <http://indico.cern.ch/conferenceDisplay.py?confId=50995>

There will also be a Press Conference on Monday, February 16th, as a follow up.

Upcoming Conferences

Emergence of Inhomogeneous Phases in Strongly Correlated Electron Systems (Glassy '09) - Paris, France



June 30 - July 3, 2009

Home	Topics	City of Paris Information
Organizers	<ul style="list-style-type: none"> Spin dynamics and glassy phases in underdoped cuprates. Impurities in correlated systems. Reconciling spectroscopic probes in underdoped cuprates. Inhomogeneous superconductivity. Nodal vs. antinodal scattering. Effect of disorder on the pseudogap phase. The possible role of low-E spin-charge dynamics to 2-Gap HTS. Nature of excitations near the $T_c = 0$ quantum critical point. 	
Invited Speakers		Paris Research Center
Program		
Deadlines and Fees	Venue	
Online Application	The University of Florida's Paris Research Center is centrally located at the heart of Paris's Montparnasse district and a few blocks from the Latin Quarter, in Columbia University's Reid Hall.	
Online Registration		
Housing	Announcements	
Excursions	Online applications are due by March 15. Due to limited space, the workshop will host a maximum of 60 participants. Some funding for junior researchers' travel is available via ICAM	



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Glassy '09

Emergence of Inhomogeneous Phases in Strongly Correlated Electron Systems (Glassy '09) will be held at UF's Paris Research Center in Paris, France, June 30 - July 3, 2009. Online applications are due by March 15. For more information visit: <http://www.phys.ufl.edu/paris-glassy/>. or contact Peter Hirschfeld at pjh@phys.ufl.edu

The 49th Annual Sanibel Symposium



The 49th Sanibel Symposium will be held February 26 - March 3, 2009. **The Symposium will once again be at The King and Prince Golf & Beach Resort on St. Simons Island, Georgia.**

For more information visit <http://www.qtp.ufl.edu/sanibel/>



Students & Alumni

UPCOMING SEMINARS

FOR TIMES PLEASE SEE PAGE 1 OR VISIT
<http://www.phys.ufl.edu/seminars>

COLLOQUIUM

FEB 5, ALAN DORSEY
 PHYSICS CHARMAN
 FEB 12, BARBARA JONES
 IBAM ALMADEN
 FEB 19, MARK BOWICK
 SYRACUSE UNIVERSITY
 FEB 26, KATHERINE FREESE
 UNIVERSITY OF MICHIGAN

CONDENSED MATTER

FEB 16, XIAOMEI JIANG, UF
 FEB 23, ANTON VORONTOSOV
 UW MADISON

HIGH ENERGY

FEB 20, MARK BOWICK
 SYRACUSE UNIVERSITY
 FEB 27, KATHERINE FREESE
 UNIVERSITY OF MICHIGAN

Alumni is Offered Position

Dr. N. Irges, has been offered the Assistant Professor position at the Polytechnique University of Athens, School of Applied Mathematics and Physical Sciences. Nick, a recent recipient of a Von Humboldt Fellowship, obtained his Ph. D. from UF in 1999, under the supervision of Distinguished **Professor Pierre Ramond**.



Physics Student Receives Metropolis Award

Chao Cao was recently awarded the 2008 Metropolis Award for Outstanding Doctoral Thesis Work in Computational Physics. Cao's thesis title was *First-Principles and Multi-Scale Modeling of Nano-Scale Systems*. Cao received the award for creatively using a variety of computational tools to reveal physical mechanisms in complex materials, and for developing a computing

architecture that allows massively parallel multi-scale simulation of physical systems. Cao was born and grew up in Hongzhou, China. He earned his Bachelors degree in Physics at Fudan University, Shanghai China, in 2003, when he entered the University of Florida for graduate study in the Department of Physics. He worked with Professor **Hai-Ping Cheng** of the Department of Physics and the Quantum Theory Project. Under her supervision, Chao worked on mechanical, electronic, and transport properties of quasi-one dimensional wires and on effects of external fields and environments. Chao developed a parallel computing framework for execution of multiple codes that allows multi-scale and multi-phenomena modeling and simulation. Chao has mastered a number of theoretical and computational methods and also worked on nano-magnets and high T_c materials during his Ph.D studies. Chao received his Ph.D in Physics in 2008. He is continuing his work in computational physics in the areas of nano-scale sciences, condensed matter, and materials.



Physics Major is Outstanding Scholar

Edward Miller, who double-majored in chemistry and physics, will be graduating with a 4.0 grade point average from the College of Liberal Arts and Sciences. He is currently applying to Ph.D. programs in computational biology and bioinformatics that he believes will challenge him to explore new topics in mathematics and computer science. He was a member of the platform party at the Fall 2008 commencement.

SUMMER 2009 REU

University of Florida Physics

Research Experience for Undergraduates (REU)

2009 Summer Program will offer...

- valuable research experience
- workshops on cutting-edge science and career choices
- tours of research facilities
- ten-week program from May 26 through July 31
- a \$4,700 stipend, paid housing and travel



Research opportunities in...

Materials Physics in Condensed Matter and Related Fields

Computer Modeling & Simulation



For more information...

Project descriptions and applications are online at www.phys.ufl.edu/reu

Questions?
 Contact Prof Selman Hershfield
selman@phys.ufl.edu



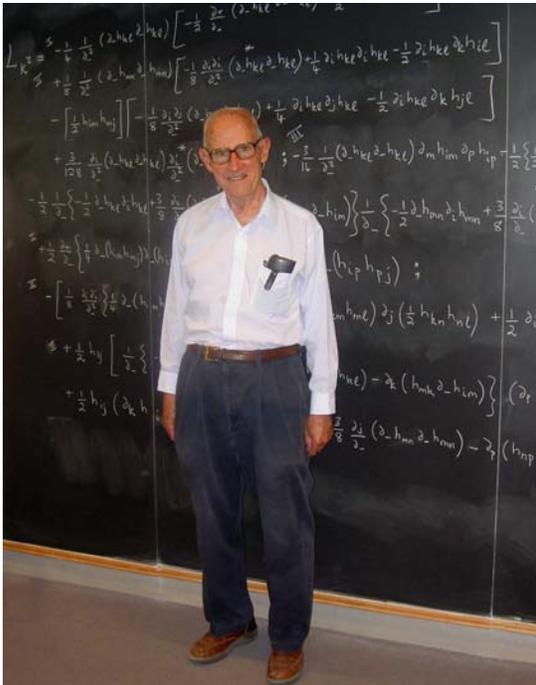


Broyles, Cont. from page 1

He became a vice chairman of the Florida Civil Defense Council and, in his spare time, built a nuclear shelter in his Gainesville home in which his son, David, played drums to avoid complaints from neighbors. Professor Broyles had a vision for the UF Department of Physics to create a strong High Energy Physics group. In the 1970's he put his energy and willpower into realizing his vision. Now the High Energy group of the Department is widely recognized and participates in various national and international projects.



Arthur Broyles with the author, Sergei Shabanov



During his tenure at UF, Arthur continued his collaboration with Edward Teller who was at the Lawrence Livermore National Laboratory. He spent many summers there as a research fellow as well as a sabbatical year. He authored about 70 research articles. After his retirement in 1989, Arthur remained active in research and the Department life as Professor Emeritus. His recent research work was devoted to foundations of quantum mechanics and quantum field theory. He was writing a book on the subject which, unfortunately, he did not finish.

Arthur and Jenna were blessed with four children, three daughters, Rhea, Bonnie, and Frances, and a son David. Arthur is survived by his five grandchildren, one great grandson and numerous nieces and nephews. Arthur Broyles will be remembered by his colleagues as a man of principles, a devoted researcher, and a kind and caring friend, and by his family as a loving husband, father, grandfather, and great grandfather. He made a difference in the lives of many people.



PHYSICS ALUMNI

We want to hear from you!

Visit our Alumni Registry at <http://www.phys.ufl.edu/alumni/survey.shtml> or send email to physicsnews@phys.ufl.edu and let us know what you are doing. A list of Physics PhD graduates can be viewed at <http://www.phys.ufl.edu/alumni/index.shtml>.



PHYSICS PUBLICATIONS

Physics 2009 publications will be posted at http://web.uflib.ufl.edu/msl/subjects/Physics/2009_bymonth.html. The librarian for Physics is Margeaux Johnson and she can be reached at marjohn@uflib.ufl.edu.