



Jack H. Robinson started at USF in the Physical Science Program. Even though he is now a member of the Department of Educational Measurement, he is also an accomplished professional astronomer. He taught astronomy courses on the Bay Campus when USF had an Astronomy Department in Tampa. In 1979, when the Department was transferred to the University of Florida, he was asked to start teaching astronomy courses on the Tampa campus as well. Because of his professional expertise in science education and his dedication to teaching, Jack Robinson has consistently been an outstanding astronomy teacher. Out of his research in the field of archaeoastronomy, Dr. Robinson developed the course *Archaeoastronomy*. He was one of the first astronomers anywhere to develop such a course; many other astronomers have discussed the course with him and used some of his ideas. He is a member of the American Astronomical Society and of its Historical Astronomy Division, and is on the Editorial Board of the *Journal for the History of Astronomy*. He has published several papers and given many talks at national and international meetings on archaeoastronomy. One of his papers was given special attention in a front page article of *The Times* of London. When Dr. Robinson retires this Spring, we will lose this unique course, offered in only a very few universities. We hope that in addition to pursuing his research full time, which he is looking forward to, Jack Robinson will be able to return to teach USF students from time to time.

#### Departmental News

Dr. E. Clark presented a paper on "Blocking Sets in Finite Projective Spaces" and "Uneven Binary Codes" at the Southeastern Conference on Combinatorics, Graph Theory, and Computing during February 12-16. Dr. Clark also attended the annual meeting of the American

Mathematics Society in Boulder during the summer meeting of the AMS in Boulder, Colorado, an AMS short course on Cryptography and Theory in Boulder, and an AMS short course on Dynamical Systems in Boulder.

Dr. R. Darling gave a paper entitled "Random Ideals and Extensions of Sets" on February 18 at the Uiam Quarterly Meeting Conference at West Palm Beach.

March 15 at the SIAM Conference on Applied Probability in New Orleans. He contributed a paper on "Probability Models for the Intensity of Tropical Cyclones" March 16 at the Conference on Stochastic Flows in Orlando. Darling gave an invited lecture entitled "Stochastic Flows on Geometric Set."

Dr. M. Jamali gave colloquium talks at York University in Toronto in December, and at the University of Missouri in St. Louis and York University in Ottawa in February. Dr. Jamali assisted Paul Nave in the publication of "Orbital Perturbations: Theory and Practice" published in cooperation with the NATO Scientific Affairs Division. He attended the Special Session on Classical Analysis at the VI Meeting of the Canadian Mathematical Society in Montreal in December.

Dr. M. McWaters presented a short course on "Implementation of Computer Based Mathematics Laboratory to Supplement Classroom Instruction" at the MAAM annual meeting of the Louisiana State University section.

Dr. A. Muthaiah gave an invited talk at Palm Beach Atlantic School February 13, at the Conference on Stochastic Flows and Geometric Processes at the University of North Carolina at Charlotte on March 1, and at the Statistics Department Florida State University on April 1.

Dr. M. Parrot received a NSF (AWM) travel grant to attend and present a talk at the International Conference on Differential Equations and Applications to Bifurcation and Dynamical Systems during January 13-18 at Claremont, California.



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#### MAA News

The twenty-third Annual Meeting of the Florida Section of the Mathematical Association of America was held at Valencia Community College in Orlando on March 21 and 22. Among the speakers were Professors Ivan Jovan and Peter Hilton, the past president and past first vice president of MAA respectively, and Warren Page, former editor of the *Journal of Mathematical Education* and second vice president of the MAA. Those attending from USF included Dr. Kenneth Potkoven, who participated in the Meeting of College Clubs, and Dr. Fredric Bedard, who presided at the Student Paper Session. Ed Zela is State Coordinator of Student Chapters of the MAA news. Todd Piersall, who completed both a B.A. and M.A. in Mathematics this year, spoke on "An Introduction to p-Adic Numbers".

#### Student Clubs

The Florida Epion Chapter of Pi Mu Epsilon and the USF Student Chapter of the MAA have met monthly this semester. At the first meeting with W. Nguyen, President of the Student Chapter and in engineering major, spoke on "The Application of Integral Calculus in Deriving Formulas in Physics". The second meeting featured classes Professor Sara Mandel's discussion of "Mathematics & Philosophy in Classic Times". At the third meeting, Professor

Clara Williams, the assistant in the Mathematics Department presented a talk entitled "A Brief History of Lunar Theory". Mathematics Professor Gregory L. McColl, whose specialties include combinatorics, mathematical logic and theoretical computing, spoke on "Definitely Difficult Computing" at the fourth meeting. The fifth meeting featured Philip Wing, doctoral student in mathematics, discussing "Error Detecting Codes: Try, Fail, and Live a Little". At the sixth meeting, Professor Kent Agle drew on his knowledge of mathematical models in a Guest and Some Hard Words. The engineers' approach to solving differential equations was seen by Greg Matheman and the semester series of talks concluded with an address by Robert S. Martz, who was selected the outstanding Scholar of Pi Mu Epsilon, 1990. Robert discussed "Game Theory: A View of Linear Strategy". At the Pi Mu Epsilon Inductee Banquet held on the 20th, eleven new members were welcomed into the Mathematics Honorary. With the Hillborough County Teachers of Mathematics, the Student Clubs sponsored the Hillsborough County Mad Bowl Competition at May 1 at the University Center. The 3 public high schools in the county were represented by approximately 200 teachers and students.

#### Florida High-Tech and Industry Council Grant

A grant proposal submitted by Professor Steve Wang and Gabriele March with the title "Applications of Fractal Based Image Processing" was funded by the State of Florida's High Technology and Industry Council.

The initial amount of support is \$20,000 for 12 months. Martha Marotta, Project Director, says that Orlando has committed additional support to this research effort.

Science Foundation for Florida  
Mathematical Sciences Research  
Computational grant proposal was  
33000, matched by \$30,000 from  
University of South Florida  
of Sponsored Research.  
The funds have been used to  
purchase four SparcStation 1's (30  
MIPS, 1 MB, 8 MB, disks,  
7 monitors and one SparcStation  
4.3) (2.5 MB, 16 MIPS, 24 MB, 1  
31 disk, 2 monitor) made by Sun  
Microsystems. These arrived in  
February 1990 and were linked  
together with Ethernet. They  
connected two existing Sparc  
workstations in the Institute  
Department.

Research proposed in the grant  
includes studies in special  
functions, mathematical modeling  
of hierarchical structures,  
symbolic solution of  
problems in universal algebra,  
construction of distributed  
and algorithms for the  
study of long-term behavior of  
Hamiltonian systems. The  
researchers are now carrying out  
these investigations. Software  
available on the system to  
conduct the research include  
symbolic algebra packages, C and  
Pascal compilers, and Fortran  
compiler, as well as the many other  
analysis tools standardly available  
on the Unix operating system. For  
printing and communication

research results, the scientific  
typesetting program TeX is  
available. Also, the system has  
recently been connected to the  
Internet, providing the whole  
Department with electronic mail  
and remote file transfer and other  
facilities with other educational  
and scientific organizations  
worldwide.

The NSF grant was clearly a joint  
effort, but special thanks go to  
Dr. John Pedersen who was  
primarily responsible for  
physically setting up the  
equipment, creating "Sun"  
accounts for staff members, and  
providing the written instructions  
for logging onto the Sun and for  
using EMAIL.

### Alumni News

Paul A. Tola, BA 1981, MA  
1985. Currently employed by the  
Department of Defense as a Senior  
Mathematician and by the  
University of Maryland as an  
Adjunct Instructor of Computer  
Science. Paul programs and  
develops algorithms for the  
Department of Defense.

Catherine Panic, MA 1989.  
Currently an Instructor of  
Mathematics at Maratea Community  
College, South campus.

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