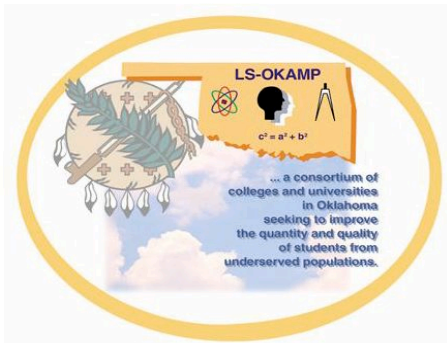


# THE LINK

Spring 2003



## LS-OKAMP STEM

LS-OKAMP WEBSITE: <http://ls-okamp.okstate.edu>

### LOUIS STOKES OKLAHOMA ALLIANCE FOR MINORITY PARTICIPATION IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

[Funded by the National Science Foundation]

*Oklahoma State University - Lead Institution))))))*

*Cameron University*

*East Central University*

*Langston University*

*Northwestern Oklahoma State University*

*Southeastern Oklahoma State University*

*Southwestern Oklahoma State University*

*University of Central Oklahoma*

*University of Oklahoma*

*University of Tulsa*

### Greetings from the Project Director

(Earl D. Mitchell, Jr., Associate Vice  
President for Multicultural Affairs;  
Professor of Biochemistry/Molecular  
Biology; Director, Talent Search Program)



We are in the 3<sup>rd</sup> year of Phase II of the Oklahoma Louis Stokes AMP. We have made several accomplishments in the program that are described in the PER (Performance Evaluation Report). We are proud of our engineering graduates, **Cara Cowan** and **Dawn Knight**, who took the initial leadership in getting the November 2002 AISES Conference in Tulsa. Many others were very helpful too. We also tip our hats to Dr. Carl Rutledge, Coordinator of the LS-OKAMP at East Central University whose former student, **Dr. Jennifer Mann** with a Ph.D. from the University of Arkansas, is now a faculty member at the University of Texas at Tyler.

One of the difficulties of all AMP programs is getting students to enter graduate programs rather than seeking employment. Our strong emphasis on preparation for graduate education is beginning to have an impact. One of our engineering students has a GEM scholarship and is presently applying for graduate programs at GEM institutions. He told me that the Department of Labor salary statistics for people holding BS, MS and doctorate degrees over a 40-year period was an eye opener for him. I usually provide students 4 reasons for the Ph.D: 1) high salary over a lifetime 2) being at the top of the profession educationally 3) being the best you can be in your field of study and 4) high employment opportunities.

Our Graduate Prep component is taking shape. **Ms. Valerie Shangreaux**, OSU Coordinator for 6 years, is preparing Grad Prep Modules that can be used by any program. Valerie is presently a Gates Millennium Scholar enrolled in the Educational Psychology Ph.D. program at Oklahoma State University.

We will be preparing for Phase III, which will have a stronger focus on Graduate Preparation and entrance into graduate programs. We have an IGERT Program and hope to have an AGEP program. We are now producing a critical mass of well qualified students for graduate training and the professoriate. The primary objective is to get them into graduate programs. This has been a very good year for the Oklahoma LSAMP program.

## LS-OKAMP Welcomes Newcomers

**Dr. Dana S. Craig** (*UCO Campus Coordinator*) is Assistant Professor in the Department of Mathematics and Statistics and Assistant Dean of the Joe C. Jackson College of Graduate Studies and Research.

**Dr. Rosemary K. Harkins** (*LU Campus Coordinator*) is Associate Professor of Biology and Interim Department Head.

**Ms. Rosemary Hayes** (*LS-OKAMP Evaluator*), Director of the Center for Institutional Data Exchange and Analysis, University of Oklahoma.

**Mr. Nidhin Kadavil** (*Graduate Assistant- Webmaster*), OSU, Computer Engineering.

**Mr. Paul De La Cerda** (*Graduate Assistant*), Developer of the SmartPET Door, OSU, MBA.

**Ms. Anna Gum**, *LS-OKAMP Secretary*.

## Student Recognitions

Congratulations to **Rebecca Johnson**, sophomore chemistry major at SEOSU, on being named the new *Chickasaw Princess last fall*. As she represented the Chickasaw Nation, she also represented SOSU and the NAC (Native American Council). Rebecca has been active in campus activities that include Student Government Association, NAC secretary, and Super Savage leader. She has also been recognized for outstanding academic achievement.

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**Joanne Gonzalez** and Mentor, Dr. Brian Campbell (SWOSU) presented a paper (spring '02) at the National Science Teachers Association meeting held in San Diego, CA. The presentation focused on LS-OKAMP at SWOSU and how it has impacted on Joanne's career goals.

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Twelve (12) participants in University of Oklahoma's LS-OKAMP program completed the fall '01 semester with an average GPA of 3.43. The students, majoring in engineering (mechanical, chemical, industrial, aerospace, electrical), computer science, and environmental science were:

**Tony Arango, Jennifer Coffey, Mariana Dionisio, Adrin Dockrey, Samuel Feldhake, Patrick Figaro, Hodge Zachary, Kyla Patterson, Mariam Raji, Freddie Stephens, Myron Stout, and Andre Williams.**

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**Elizabeth Turner** (UCO) interned last summer at the Dean McGee Eye Institute in OKC, completing the first two phases in a multi-phase process aimed at creating a transgenic mouse expressing the human protein, Cre-recombinase. She remained on the project in fall '01 through OCAST funding.

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**Jason Childress**, ECU Environmental Science major (spring '01) presented at last summer's *National Environmental Health Research Association (NEHA)* annual education conference in Atlanta. The presentation was entitled "Evaluating the Effect of Municipal Waste on the Sensitivity of Resident Microbes to Common Antibiotics" As a winner in the competition, Jason received a \$1500 stipend to cover conference travel and other expenses. *Currently, he is a graduate student at the University of Florida in the Department of Aquatics and Fisheries.*

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ECU's **April Hendley** is a graduate student in Physics at the University of Oklahoma. In the latter part of her undergraduate experience, she participated in the Summer Undergraduate Physics Institute at The Ohio State University. Her presented work was "Preparing for an Experiment on Higher Order Harmonics and Fluorescence".

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Among recipients of the Brown Mackin Scholarship in Physics were ECU OKAMP scholars **Erin Bevil, Heather Hannah, Kevin Bishop, April Hendley, and Jon Cloud**. Jon and Heather were also McNair scholars.

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**John Castro**, OSU Electrical Engineering senior, participated in the GEM '02 Summer Program at Stanford University. John was at Stanford also in summer '01 as a participant in the ERULF program at the Stanford Linear Accelerator Center.

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LS-OKAMP scholars attending the spring '01 National Conference on Undergraduate Research (NCUR) in Lexington, KY were **Elizabeth Turner** (UCO), **Quentin Smith** (OSU), **Kiamba Knowlin** (CU), **Joanne Gonzalez** (SWOSU), **Jalisha Booth** (UCO), **D'Moyer Smith** (LU), and **Terry Tidwell** (UT). Students were sponsored by Oklahoma EPSCoR.

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**Kervin Colbert**, OSU EE senior (fall '02), completed a summer internship at TechTrol, Inc. in Pawnee, OK. Under the mentorship of Paul De La Cerda (OSU '00, Civil Eng. and former OKAMP scholar), Kervin helped redesign the webpage for the SmartPET Door which was developed by De La Cerda.

He graduated in December and is currently employed at Tinker Air Force Base. He plans to enter graduate school in the near future.

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## 2002 Summer Interns

### Southeastern Oklahoma State University

B.J. Bench – SE Oklahoma State University  
Dominic Barrett - Oklahoma State University  
Athena Dawson – SE Oklahoma State University  
Chrystal Dixon – US Fish and Wildlife Service  
Joseph Barnett – US Fish and Wildlife Service  
Stuart Kemp – Choctaw Nation  
Carrie Dodd – US Army Corp of Engineers  
Wesley Jones – Haliburton, Inc.  
Brian Chavez – US Army Corp of Engineers

### Oklahoma State University

Tara Hamm- General Motors (OKC)  
Gerardo Myrin- Oklahoma Natural Gas (Tulsa)  
Thomas Patten- Mercury Marine (Stillwater)  
Mark Clytus- Techtrol Inc. (Pawnee, OK)  
Kervin Colbert- Techtrol Inc. (Pawnee)  
Sofiri Hart- Exxon-Mobile (Houston, TX)  
Brek Wilkins- Microbiology/Mol. Genetics -OSU  
Quentin Smith- Encompass Design Group, Inc. (Tulsa)  
Teneca Pleasant-Microbiology/Mol. Genetics-OSU  
Fred Beartrack- Kenia LNG Plant (Alaska)  
Rachel Allen- OU Health Sciences Center (Norman)  
Mark Clytus – TechTrol, Inc.

### University of Oklahoma

Joseph Steen – University of Oklahoma  
Mariam Raji – 3M  
Thomas Jones – University of Oklahoma  
Patrick Figaro – 3M  
Mariana Dioniaio – Exxon-Mobil  
Oscar Masters – University of Oklahoma  
Jemeca Price – Coca-Cola  
Zachary Hodge – 3M  
Samuel Feldhake – Boeing  
Jennifer Coffey – University of Oklahoma

### East Central University

Shenale Glenn – REU (University of Michigan)  
Clint Cook – R.S. Kerr Environmental Research Lab  
Ricky Davis – East Central University  
Susan Hood – R.S. Kerr Environmental Research Lab  
Richard Walkup – East Central University

### Cameron University

Kylie (Williams) Ward – Nat. Res./Envir. Div. (Fort Sill)  
Tiffani Veal – University of Oklahoma  
Rosemarie Culhane – Dynamic Research Corporation

### Southwestern Oklahoma State University

Joanne Gonzalez – University of Oklahoma Health Sciences Center

### Langston University

Argenia Doss – Langston University

## SWOSU Gets 2<sup>nd</sup> Place at NM AMP Conference

**Joanne Gonzalez** (SWOSU LS-OKAMP junior Biology major) attended the fall '02 Regional LSAMP conference at New Mexico State University in Las Cruces. Approximately 400 from 7 states were in attendance. Joanne's poster presentation entitled '*Microarray Analysis of Mouse Retinas with TGF- $\beta$ 1 Inhibited Vascular Development*' won **Second Place**. She was awarded a certificate, \$75, and a HP graphing calculator. Congratulations, Joanne! **Desiree Connely** also attended and participated in the poster section. Her presentation focused on the SWOSU Summer '02 Science and Mathematics Academy (of which she was an integral part).

## OKAMP ALUMNI FOCUS



**Jennifer Mann (ECU, 1996, Mathematics & Physics)** received the Ph.D. in Mathematics from the University of Arkansas in May '02. She and her husband, Casey, are Assistant Professors at the University of Texas at Tyler.

As an undergraduate in the summer of 1995, Jennifer did research as an intern with EPA's Dr. James Weaver at the Robert E. Kerr Environmental Research Center on the application of kinetic degradation models for the St. Joseph Superfund Site.

At the graduate level, she did research on commutative algebra at the University of Arkansas while working as a teaching assistant. This work was continued at the University of Nebraska.

Jennifer and Casey now live in Flynt, Texas with their daughter, Nyx.



**Suzanne Tunnel Estes** (ECU '97, Biology) received the Ph.D. in biology from University of Oregon in August 2002. Her dissertation focused on properties of genetic mutation and their consequences for the fitness and adaptive potential of populations.

Suzanne was awarded a 2-year postdoctoral fellowship by the National Science Foundation to study the population genetics and behavior of red-sided garter snakes in Manitoba, Canada, with two Organ State Professors.

While at ECU, she was a biology laboratory assistant at the Robert S. Kerr Laboratory

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**Sandra McNeil**, summer '00 Electrical Engineering OSU graduate, is currently employed as a Process Control Manager in the Body Operations Department at General Motors in Oklahoma City. Since fall '00, she has been enrolled as an unclassified graduate student at the University of Oklahoma. Sandra credits LS-OKAMP as *'...a great program that has helped me develop the skills and confidence needed for success'*.

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**Bobby Gramling**, former LU-OKAMP student and recent M.S. recipient in the Department of Biochemistry and Molecular Biology (OSU), received a 3<sup>rd</sup> place, graduate division presentation award at the 2002 joint meeting of the Nat'l Institute of Science, Beta Kappa Chi Scientific Honor Society, and the Brookhaven Semester Program. More than 700 undergraduates, graduates, and faculty attended the March '02 meeting in Columbia, SC. Travel for student participants was made possible through NIH funding.

**Acacia Bender**, Environmental Sciences major (College of Agricultural Sciences & Natural Resources) is employed by the Natural Resources Conservation Services (NRCS) in Waverly, Iowa. During the prior summer, Acacia was an NRCS intern and stepped into full-time employment immediately following graduation.

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**Barry Trotter** (LU '02) is a graduate student in Chemistry at Johns Hopkins University, Baltimore.

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**Cara Cowan (B.S., Mechanical Eng, OSU '97)** earned the Masters degree in Telecommunications Management from OSU-Tulsa, May '02. Currently, she works for Williams Communications (Tulsa) as Cable Facility Planning Engineer in Undersea Cable Development and Management. She is responsible for operations and maintenance, activations, restoration activities and cable

routing. Cara began her career at Hewlett Packard (Agilent Technologies) in Colorado Springs, CO as a New Product Introduction Mechanical Engineer for oscilloscopes.

As an undergraduate, Cara's involvements included LS-OKAMP, AISES (American Indian Science & Engineering Society), NASA (Native American Student Association); Tau Beta Pi and Golden Key Honor Society. In 1997, she was named *All-Around Engineering Student of the Year and Multi-Cultural Student of the Year*.

Cara remains active in AISES at national and local levels, having been instrumental in establishing the Oklahoma Professional Chapter (OPC) and serving as its first President. Currently, she is Vice President, information, and sponsorship conduit for the 2002 National AISES Conference in Tulsa (November 7<sup>th</sup>). She frequently speaks to community and student groups about AISES, scholarships, career and academic decisions, and life as a professional coming from a rural environment.

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**Byron Quinn**, 1997 Langston University Chemistry graduate, began graduate studies the following summer in the Department of Biochemistry and Molecular Biology at Oklahoma State. He earned the Masters in '00, and is currently working toward the Ph.D.



Dr. Mitchell and Adrain Casias (OSU '00, Chemical Engineer)

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### TU-OKAMP Students Win Top Awards at AISES

The American Indian Science and Engineering Society (AISES) held its National Conference in Tulsa, November 7-10, 2002. More than 3000 persons were in attendance.

Three (3) TU-OKAMP students won top awards in the *student paper oral competition*. **Crystal Elaine Redden**, Chemistry junior, won First Place; **John K. Hall**, senior in Biology, tied for Second Place; and **Matthew Joseph Morgan**, Computer Science junior, received Third Place.

## Six (6) OSU Students Attend '03 AISES Conference

OSU-OKAMP participants attending the AISES National Conference were: **LaDonna Longhorn, Fred Beartrack, Rachel Phillips, Clayton Bointy, Matt Beartrack, and Jessica Wisner.**

### Project Directors' Annual Meeting

Program Director, Earl D. Mitchell, Jr., and Program Manager, Zola Drain, attended the PI/PD annual meeting for NSF Programs in Arlington, VA during March 24-26, 2002. **The 2003 meeting is scheduled for March 24-25, 2003.** According to LSAMP Program Director, Dr. A. James Hicks, there are currently 29 Alliances (up from 27 a year ago), each comprised of multiple institutions.

## 7<sup>th</sup> ANNUAL RESEARCH SYMPOSIUM

Held Saturday, September 28, 2002  
Oklahoma State University, Noble Research Center

Total of **63** registrants from Cameron University, East Central University, Langston University, Northeastern Oklahoma University, Oklahoma State University, The University of Oklahoma, Southeastern Oklahoma State University, Southwestern Oklahoma State University, and The University of Tulsa; there were **17 oral presentations and 20 posters.**



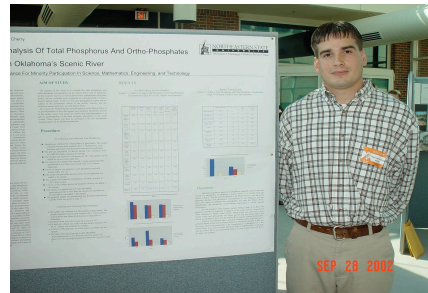
LS-OKAMP participants in Research Symposium '02.



In charge of registration: LaDonna Longhorn, Jessica Wisner, and Aquesha Williams



Michelle Nyla Stevenson, University of Tulsa



Alex Henry, Northeastern State University

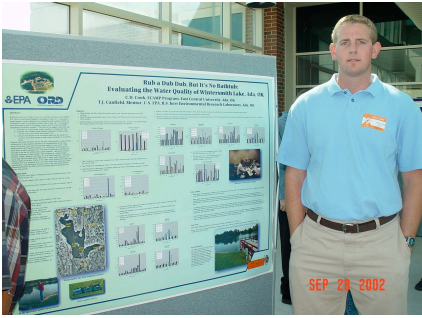


Tiffany Miller, Cameron University



Manssa Muhammad, Langston University





Clint Cook, East Central University



Michael Heppler, OSU Graduate College Assistant Director, presents workshop on *Keys to Successful Graduate and Professional School Applications*



Oscar Masters, University of Oklahoma



Program Director, Program Manager, and Campus Coordinators



Chrystal Dixon, Southeastern Oklahoma State University



Thomas Patten, Oklahoma State University



Dr. Mitchell, Program Director, presents participation certificate to Desiree Connelly, Southwestern OSU

## BRIDGE PROGRAM HIGHLIGHTS

*(Bridge Program funded, in part, by the Oklahoma State Regents for Higher Education)*

**Cameron University:** Ten (10) ethnically diverse high school graduates, of which 2 were male and 8 female. Eight (8) participants took 51 hours, with 35 hours of “A”; 15 hours of “B”; 3 hours of “C”, and 1 hour of “S”, earning a 3.82 GPA. There was difficulty in motivating two of the participants, both of whom were enrolled in 6 hours of remedial work. The recreational highlight of the program was a weekend canoe trip to Tahlequah. The trip was self-paid with subsidy provided by the CU Stokies Club. This outing provided an opportunity to get to know the students better in an informal setting. Bridge participants, including rural disadvantaged and first generation students, were mentored by OKAMP Campus Coordinator, Dr. T.E. Snider, along with Drs. Abbas Johari and James Johnson.

**East Central University:** Seven (7) participants; completed 34 hours of regular credit plus 3 remedial courses; average GPA was 3.09. All participants currently full-time students – 5 at ECU, 1 at OKCCC, and one at Oklahoma State University. Ethnic makeup: 3 Native Americans, 1 Hispanic, and 3 Caucasians. Participants received special instructions on how to succeed in college and were provided with a program to aid in making career decisions. They received daily tutoring and academic progress was monitored.

**Langston University:** Bridge Program will be implemented Summer '03.

**Oklahoma State University** (photo below): Twelve (12) incoming freshmen participated in the 2002 Summer Bridge Program, enrolling in either College Algebra or Trigonometry and English Composition (3 credit hours each); or Calculus I only (5 credit hours). The overall mean GPA was 3.50.



'02 OSU Bridge Participants with past Campus Coordinator Brent Adams

### SEOSU PARTICIPATES IN STATE MEETING

**Dominic Barrett, Anson Sutterfield, and Nathan Daniels** recently attended the Annual Meeting of the Oklahoma Chapter of the American Fisheries Society held February 5-7, 2003 in Tahlequah. The conference included a workshop on managing small impoundments, technical presentations by fish and wildlife professionals and graduate students, and a banquet.

The 3 Southeastern OKAMP Scholars were among the approximately 30 students and 50 professionals in attendance. Dr. Tim Patton, Assistant Professor of Biological Sciences and OKAMP Coordinator, also attended.

### EPSCoR Funds Travel to NCUR '03

Oklahoma EPSCoR (*Experimental Program to Stimulate Cooperative Research*) will fund the participation of 12 OKAMP students and 2 chaperones in the Annual NCUR (*National Conference for Undergraduate Research*) meeting. Scheduled for March 13-15, 2003, the meeting will be held at the University of Utah in Salt Lake City.

NCUR student attendees are: Britney Grayson, Benjamin Orozco, Matthew Morgan, Michelle Stevenson, and Eleazar Madrid (*all from University of Tulsa*); Joanne Gonzalez (*Southwestern Oklahoma State University*); B.J. Bench (*Southeastern Oklahoma State University*); Manssa Muhammad and Argenia Doss

(*Langston University*); Joe Gunn and Fred Brown (*University of Central Oklahoma*); and Ahmed El-deeb (*Oklahoma State University*).

Chaperones for the group are Dr. Rosemary Harkins, LS-OKAMP Coordinator at Langston University and Dr. J.C. Diaz, University of Tulsa Coordinator. Oral and poster presentations will be made by the Tulsa Scholars and Dr. Diaz. The group will travel on Wednesday, March 12, and return on Saturday, March 15.

### OKAMP STUDENTS PLAN FOR NSBE CONFERENCE

Several OKAMP Scholars at Oklahoma State are planning to participate in the annual meeting of the National Society of Black Engineers (NSBE) held in Anaheim, California March 19-23, 2003. NSBE's mission is to increase the number of culturally responsible Black engineers who excel academically, succeed professionally, and positively impact the community. The organization, with more than 10,000 members, is the largest student-managed organization in the country.

### AISES HIGH SCHOOL WEEKEND HELD

Tiffany Frieze, Fred Beartrack, Matt Beartrack, LaDonna Longhorn, Jessica Wisner, and Ed Hara were among the OKAMP Scholars involved in the total planning of the annual High School Weekend held January 24-26, 2003. This event, sponsored by the American Indians in Science and Engineering Society (AISES), is a great time for high school students to meet college students as well as faculty and staff. During the weekend, the 10 visiting students had the opportunity to view the campus, get information from various departmental representatives, and listen to many outstanding student leaders.

The closing event was a Banquet on Saturday night with Dr. Howard Shipp (Director of the Multicultural Development and Assessment Center at Oklahoma State). Banquet attendees included faculty and staff, AISES members, OKAMP participants, and other students.

**In 2002, student participation in the LSAMP Program reached an all time high of 201,615 enrollees and 21,704 graduates at the baccalaureate level.**

(Dr. A. James Hicks, LSAMP Program Director, National Science Foundation, Washington, DC)

## ALLIANCE ADMINISTRATION

### **Earl D. Mitchell, Jr., Ph.D., Program Director**

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### **Rosemary Hayes, Program Evaluator**

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## PARTNER INSTITUTIONS AND CAMPUS COORDINATORS

### **Cameron University**

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### **Langston University**

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### **Oklahoma State University (Lead Institution)**

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### **University of Central Oklahoma**

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### **University of Oklahoma**

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### **University of Tulsa**

Dr. J.C. Diaz, Professor, Computer-Mathematical Sciences  
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