



DEPARTMENT OF ORTHOPAEDIC SURGERY

**Saturday, June 16, 2018
The LSUHSC Learning Center
Lion's Building - 2020 Gravier Street
6TH Floor - Room #632**

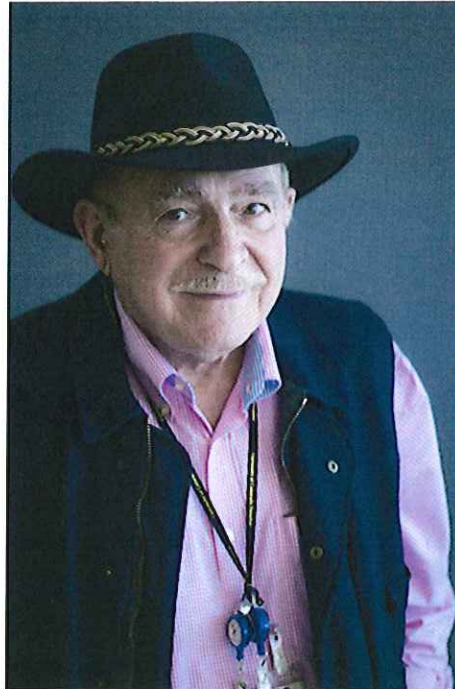


Faculty, Residents, & Staff 2017

15th ANNUAL ROBERT D. D'AMBROSIA LECTURESHIP & RESEARCH DAY

The Lectureship and Research is named in honor of:

Robert D. D'Ambrosia, M.D.



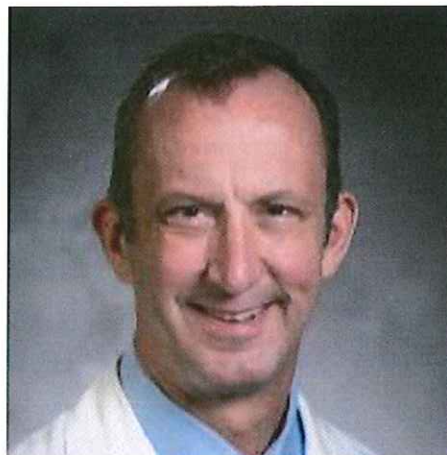
Dr. D'Ambrosia service to the LSU department of Orthopaedic Surgery has spanned over 30 years. While Chair of the Department, he trained and mentored over 100 LSU graduates. His contributions to the LSU program is long lasting and a lectureship and chair have been established in his honor. We are very grateful for Dr. D's contributions to LSU and to the department. He exemplifies leadership and humanity and we are proud to honor his legacy with our Fourteenth year of Lectureship Series.

**ROBERT D'AMBROSIA LECTURESHIP & RESEARCH DAY
AGENDA**

- 8:00am- 8:30am **BREAKFAST**
- 8:35am - 8:40am **Vinod Dasa, MD/ Director of Orthopaedic Research**
Introduction
- 8:45am – 9:15am* **Guest Speaker:** David S. Ruch, M.D. (Chief H. Surgery @ Duke)
Update on Scaphoid Fractures.
- 9:20am - 9:30am* **Matthew Delarosa, MD**
What is the Real Rate of Radial Nerve Injury After Humeral Nonunion Surgery?
- 9:35am – 9:45am* **Mary Fox, MD**
Wrist Motion Varies Between tasks Using Digital Versus Traditional Devices.
- 9:50am – 10:00am* **Rabun Fox, MD**
Does Marital Status Impact Outcomes After Total Knee Arthroplasty?
- 10:05am – 10:20am **BREAK**
- 10:20am – 10:30am* **Thomas Royals, MD**
Cost Savings Using Generic Small Fragment Plating in Lateral Malleolus Ankle Fractures at a Level I Trauma Center.
- 10:35am – 10:45am* **Muayad Kadhim, M.D.**
Serial Casting for Early Onset Scoliosis: Comparison of Three Casting Materials.
- 10:50am – 11:20am* **Guest Speaker:** Malwina Czarny-Ratajczak, PhD
Genomics and Transcriptomics in Orthopedics.
- 11:25am - 11:45am **ON THE HOT SEAT WITH DR. RUCH**
- 11:50am – 12:20pm* **Guest Speaker:** David S. Ruch, M.D.
Twenty Questions on Distal Radius Fractures.
- 12:25pm **Closing Remarks**
- *Denotes 5 minutes of Q & A
- 12:30pm Lunch @ Mother's Restaurant – 401 Poydras St.
Guest Speakers, Faculty, & PGY4 Residents

GUEST SPEAKER – DR. DAVID S. RUCH

Chief of Hand Surgery at Duke University



TOPICS: *Update on Scaphoid Fractures & Twenty Questions on Distal Radius Fractures*

DR. DAVID S. RUCH earned his Bachelor's degree in British Literature from Duke University and his Doctorate in Medicine from Bowman Gray School of Medicine at Wake Forest University in Winston-Salem, NC. Dr. Ruch also completed his residency at Wake Forest in the Department of Orthopaedic Surgery where he served as Chief Resident in 1992-1993. After residency, he completed a post-graduate Hand and Microvascular Surgery fellowship at Duke. He returned to Wake Forest where he served on the Orthopaedic Department faculty for 11 years, during which time he co-founded the Hand and Upper Extremity fellowship and served as its co-director. In 2005, Dr. Ruch became the Chief of Hand and Microsurgery at Duke for the Department of Orthopaedic Surgery and in 2016 assumed the role of the first combined Division Chief of Hand Surgery at Duke.

Dr. Ruch has authored or co-authored over 180 peer-reviewed articles and 40 book chapters and serves as a reviewer for nine journals. His scholarly interests include traumatic conditions of the hand, wrist and elbow. In addition, he has extensive experience in the management of avascular necrosis in young adults.

Dr. Ruch has served on numerous committees and boards. He is currently Chairman of the Membership Committee and on the executive board of the American Orthopedic Association, having previously served as Secretary for that board. He served for 5 years as the practice division director for the American Society for Surgery of the Hand and recently completed a term on the board of the American Association of Hand Surgery. He has also served as a representative to the American Academy of Orthopedic Surgery's Board of Specialties (BOS). Dr. Ruch is past President of the Southeastern Hand Club and the Duke Hand Club and is currently Executive Director of the Duke Hand Club, through which he has chaired the Duke Residents and Fellows Upper Extremity Review Course for the past nine years.

GUEST SPEAKER – Malwina Czarny-Ratajczak, Ph.D.



Topics: *Genomics and Transcriptomics in Orthopedics*

Dr. Malwina Czarny-Ratajczak received her MS degree in biotechnology at the Adam Mickiewicz University in Poznan, and Ph.D. degree in molecular genetics at the Poznan University of Medical Sciences, Poland in at the Tulane Center for Gene Therapy in New Orleans. Her early research focused on identification of new genes associated with multiple epiphyseal dysplasia 2000. During her Ph.D., she analyzed genes involved in cartilage development in patients with bone dysplasia's at the Department of Biochemistry, Collagen Research Unit, and University of Oulu, Finland. She carried out her postdoctoral studies with Dr. Leena Ala-Kokko and Dr. Darwin Prockop and primary osteoarthritis via wide-genome scan and linkage analysis. Currently, she is an Assistant Professor at the Center for Aging, Department of Medicine, Tulane School of Medicine, where her projects include identification of novel genetic and epigenetic mechanisms involved in premature cartilage aging, primary osteoarthritis and other connective tissue disorders. Her laboratory is equipped with next-generation sequencing technology, which allows to identify changes in the human genome and transcriptome that contribute to development of these disorders. Dr. Czarny-Ratajczak is an author of 35 publications and two book chapters, and she has contributed as PI and co-investigator to 11 grants in United States and Europe. She has well-established collaborations with orthopedists, radiologists and geneticists from US, Europe, Australia and South Africa.

Matthew Delarosa, MD



Anterior Cervical Plate Position and Clinical Outcomes after Anterior Cervical Discectomy and Fusion

Introduction:

The use of anterior plates has become standard in anterior cervical discectomy and fusion (ACDF) procedures. Previous biomechanical research has demonstrated no effect of plate positioning in the coronal plane on structural integrity. The aim of this study was to evaluate radiographic positioning of the anterior plate in the coronal plans and follow the clinical results utilizing a variety of parameters in a group of patients after ACDF.

Methods:

71 consecutive ACDF patients operated on by a single surgeon, for various pathologies consistent with accepted indications, were followed clinically utilizing a variety of outcome measures as well as via initial postoperative AP radiograph of the cervical spine. The post-operative angulation in the coronal plane was measured. Preoperative and postoperative outcomes data included: nerve distribution of radicular pain, Nurick score, pain scale score, usage of narcotic pain medicine, and location/severity of any motor deficits. Follow up visits occurred at the 2, 6, and 12, and 52 week mark.

Results:

Mean angulation of anterior plate on the AP radiograph was 2.657° (Range 0-9°). No significant relationship between plate angle and postoperative Nurick score when controlling for BMI, gender, and age ($p=0.822$). Also, there was no significant relationship to plate angle and the change in Nurick scores when the above controls were applied ($p=0.238$). No significant relationship between plate angle and pain scale, pain distribution, and motor deficit when the above control were applied (p values of 0.6734, 0.347, 0.0967). Utilizing odds ratios, the odds of using narcotics postoperatively as plate angle increased did not significantly differ from 1.

Conclusion:

There seemingly is no demonstrable clinical effect of off-axis anterior cervical plates. This could cut down on surgical time spent on obtaining numerous xrays for plate alignment or intraoperative hardware removal due to mispositioning. Additionally immediate postoperative radiography man not be necessary.

LOE: III

M. Patricia Fox, MD



Wrist motion varies between tasks using digital versus traditional devices

M. Patricia Fox MD¹, Pengju Wang², Evan Boatwright², Catherine Takawira², Thomas Lucak MD¹, Bryce Fugarino MD¹, Mandy Lopez DVM, MS, MD², Nick Pappas MD¹

¹Louisiana State University Health Science Center, New Orleans, LA

²Laboratory for Equine & Comparative Orthopedic Research, Department of Veterinary Clinical Sciences, Louisiana State University School of Veterinary Medicine, Baton Rouge, LA

Background:

The functional range of motion is defined as the minimum motion necessary to comfortably and effectively perform a task. Wrist range of motion for activities of daily living has been previously studied. However, maximum and minimum values necessary to complete contemporary tasks such as using a tablet or a smartphone has not been studied.

Methods:

Ten healthy adult subjects (five male and five female) participated. Among the subjects were two left-hand dominate males and two left-hand dominant females with the remaining being right-hand dominant. The average age (and standard deviation) was 28+/- 1.4 years. All were in good health without any history of upper extremity musculoskeletal disorder. Radiographs were not utilized. Dominant and non-dominant wrists were tested for all subjects. A three-dimensional motion analyzer, CODA system (Codamotion system, Codamotion Charnwood Dynamics Ltd, Leicestershire, UK), using eight optical markers were used in a single laboratory during data collection to record flexion-extension and radial-ulnar deviation for four paired tasks using digital versus traditional devices.

Results:

Wrist radial deviation was less when using a smartphone to answer a call (p=0.0287) and texting (minimum p= 0.0002; maximum p=0.0053). In addition, wrist radial-ulnar deviation was less when using a tablet to swipe backwards minimum (p=0.0207). More motion was seen when using the non-

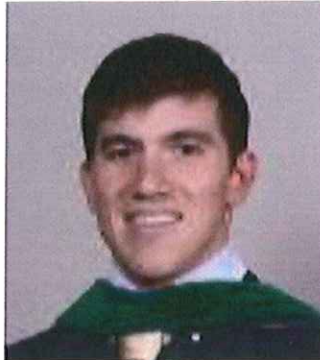
dominant hand versus the dominant hand in texting ($p=0.0386$), swiping forward ($p=0.0040$), and swiping backwards ($p=0.0065$).

Conclusions:

This study focused on the functional range of motion of the wrist in the digital age. It is the first to look at the wrist motion and digital devices. In addition, it is the first to compare wrist motion performing contemporary tasks using digital versus traditional devices. Overall, less wrist motion was used to perform contemporary tasks involving a smartphone and/or a tablet.

Level of Evidence: Clinical Relevance

Rabun S. Fox, MD



Does Marital Status Impact Outcomes After Total Knee Arthroplasty?

Roubion RC¹, Fox RS², Townsend LA¹, Pollock GR¹, Leonardi C³, Dasa V².

¹LSUHSC School of Medicine, New Orleans, Louisiana.

²Department of Orthopaedics, LSUHSC School of Medicine, New Orleans, Louisiana.

³LSUHSC School of Public Health, New Orleans, Louisiana.

Abstract

BACKGROUND:

There is a paucity of research on the relationship between marital status and patient outcomes following total knee arthroplasty (TKA).

METHODS:

This was a retrospective chart review of patients who underwent TKA by a single surgeon at a university-based orthopedic practice. Data abstracted included age, gender, marital status, body mass index, length of hospital stay, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), and Oxford Knee Score (OKS). The WOMAC and OKS were administered at the preoperative visit and at approximately 10, 30, 90, and 180 days after TKA. Multivariate analyses with patient-reported outcomes as repeated measures, marital status, day of assessment; and the interaction of marital status and day of assessment as fixed effects; and age, gender, body mass index, and length of hospital stay as covariates were conducted as well as analyses in which preoperative patient-reported outcomes were treated as fixed effects.

RESULTS:

Of 422 patients who underwent TKA during the study period, complete data were available for 249, of whom 124 were married and 125 unmarried. Married patients had significantly higher WOMAC scores than unmarried patients at all postoperative assessments, even after controlling for preoperative scores. Although married patients also had significantly higher postoperative OKS scores than their unmarried peers, differences between groups were attenuated after adjusting for preoperative OKS scores.

CONCLUSION:

This study found that married patients have better overall outcomes after TKA but yielded conflicting results as to whether the positive effects of marriage are specific to the postoperative period.

LEVEL OF EVIDENCE:

Level III

Thomas P. Royals, MD



Cost Savings Using Generic Small Fragment Plating in Lateral Malleolus Ankle Fractures at a Level I Trauma Center

Royals TP, Zura RD. Louisiana State University Health Sciences Center, New Orleans, LA

INTRODUCTION: In 2016, the orthopedic trauma market was estimated to be over 5 billion dollars and the plate and screw market over 2 billion dollars. Due to rising costs, some orthopedists are using generic implants to offset rising costs without compromising clinical outcome. We present our cost savings experience using generic small fragment plating (ITS, Austria) for lateral malleolus ankle fracture fixation compared to conventional vendors.

METHODS: Inclusion criteria included Weber B or Weber C lateral malleolus ankle fractures treated with open reduction internal fixation. Fixation methods were grouped into conventional anatomic locked plating, conventional tubular plate fixation, or generic small fragment locked plating constructs. Groups included fractures that were treated with or without interfragmentary screw fixation and with or without syndesmosis fixation. Cost analysis included costs of the plate and screws only.

RESULTS: There were 13 fractures treated with conventional anatomic locked plating construct, 15 fractures with conventional tubular plate non locked construct, and 10 fractures with generic small fragment locked plating construct. The average conventional anatomic locking plate constructs cost \$1150.83/case (\$954.54-1331.76), conventional non locked tubular plate constructs \$553.65/case (208.47-\$1010.64), and generic small fragment locked plating \$472/case (\$389-\$559). When comparing generic small fragment locked plating to conventional anatomic locked plating, there was an average cost savings of 59%/case or \$678.83/case ($p < 0.05$). When comparing ITS small fragment plating to conventional tubular non locked plating constructs, there was an average savings of %14.75/case or \$81.65/case ($p > 0.05$).

DISCUSSION: In conclusion, using generic small fragment locked plating constructs is saving our institution 59%/case when compared to conventional anatomic locked plating but there was no difference compared to conventional tubular non locking plate constructs.

Muayad Kadhim, MD

Serial Casting for Early Onset Scoliosis: Comparison of Three Casting Materials

Muayad Kadhim, William Accousti, Perry Mirillat, Andrew King, Michael Heffernan
Department of Orthopaedic Surgery, Children Hospital of New Orleans, New Orleans, LA

Introduction: Plaster of Paris (POP) is the historic gold standard material for derotational cast application in children with early onset scoliosis (EOS). At our institution, fiberglass has supplanted POP for spinal casting of EOS utilizing two different fiberglass techniques. The first method is done on a Risser-type traction table to facilitate rolling of the traditional fiberglass tape. The second method is done with manual traction on a standard flat-top table using a tubular fiberglass hybrid mesh material (OsteoFx) (Figure). We hypothesized that both fiberglass methods would achieve equivalent Cobb angle correction when compared to plaster of Paris.

Methods: This is a retrospective cohort study of all patients with EOS who were managed with serial casting at our institution from 1/2012 to 6/2017.

Results: Twenty-two consecutive children were identified (11 boys and 11 girls). Mean age at first cast was 18.7 ± 8.8 months (3.8 to 38.43 months). All patients were classified as idiopathic except for two syndromic, one congenital, one developmentally delayed, and one with a lipomatus filum terminale. Patients were grouped for analysis based on casting method (9 patients in the rolled fiberglass group, 7 POP, and 6 patients in the tubular fiberglass group). There was no significant difference in age and initial Cobb angle between the 3 groups ($p > 0.05$). Curve magnitude significantly reduced from $46.6^\circ \pm 14.7$ to $28.3^\circ \pm 18.1$ after the first cast application ($P < 0.0001$). Percentage of change in Cobb angle at presentation and after the first casting did not differ between the groups ($p > 0.05$). Three patients are still undergoing casting, 11 children were braced after casting was stopped, 4 improved after casting without bracing, one had growth friendly instrumentation and 3 were lost to follow up.

Discussion: The study shows that both traditional and tubular fiberglass were as effective as POP in Cobb angle reduction. Fiberglass casting material can be molded to adequately achieve Mehta casting elongation-derotation principles similar to POP. Fiberglass has the additional benefit of not only being lighter than POP, it can be made waterproof if appropriate padding is utilized. A major advantage to tubular fiberglass cast is that it can be effectively applied on a flat top table without the need for a specialized traction table.

Department of Orthopaedic Surgery

Residents, Faculty, & Staff

Residents

2018 Graduates

Matthew Delarosa, MD
M. Patricia Fox, MD
Rabun Fox, MD
Thomas Royals, MD

PGY-4's

Thomas Lucak, MD
Jack McKay, MD
Neuyen McLean, MD
Vikas Patel, MD

PGY-3's

Kirk Jeffers, MD
Samuel Klatman, MD
Daniel Plessl, MD
Luke Shelton, MD

PGY-2's

Ryan Dewitz, MD
Sagar Shah, MD
Thomas Stang, DO
Tyler White, MD

PGY-1's

Corinne Cloud, MD
Peter D'Amore, MD
Ryan Roubion, MD
Cristina Terhoeve, MD

Incoming Residents

Scott Barnett, MD
Rocio Crabb, MD
Stuart Schexnayder, MD
Patrik Suwak, DO

Faculty

William Accousti, MD – Associate Professor – *Pediatric Spine / Children’s Hospital of N.O.*

Rasheed Ahmad, MD – Clinical Assistant Professor – *Hand / Baton Rouge, LA*

Larry “Chip” Bankston, MD – Clinical Assistant Professor – *Sports Medicine / Baton Rouge, LA*

Alex Betech, MD – Assistant Professor – *Adult Reconstruction / Baton Rouge, LA*

Aimee Bronstone, Ph.D. – Assistant Professor – *Research*

Matthew Cable, MD – Assistant Professor – *Oncology*

Vinod Dasa, MD – Associate Professor & Director of Research – *Adult Reconstruction*

Henry Eiserloh, MD – Clinical Assistant Professor – *Adult Spine / Baton Rouge, LA*

Dominic Gargiulo, DO – Assistant Professor – *Pediatric Spine / Children’s Hospital of N.O.*

Michael Hartman, MD – Associate Professor & Program Director – *Sports Medicine*

Michael Heffernan, MD – Assistant Professor & Program Director for Peds Fellowship – *Pediatric Spine / Children’s Hospital of N.O.*

Andrew King, MD – Professor – *Pediatric Spine / Children’s Hospital of N.O.*

Peter Krause, MD – Associate Professor – *Trauma*

Abhishek Kumar, MD – Assistant Professor & Assistant Program Director – *Adult Spine*

James Lalonde, MD – Clinical Assistant Professor – *Foot & Ankle / Baton Rouge, LA*

Olivia Lee, MD – Assistant Professor – *Trauma*

Claudia Leonardi, Ph.D. – Assistant Professor of Research – *Statistician*

Christopher Marrero, MD – Associate Professor – *General*

Nicholas Pappas, MD – Clinical Assistant Professor – *Hand/Upper Extremity*

Michael Schutte, MD – Clinical Assistant Professor – *General / Lafayette, LA*

Meredith Warner, MD – Clinical Assistant Professor – *Foot & Ankle*

Robert Zura, MD – Department Head & Chairman – *Trauma*

Physician Assistants

Kerri Morris, PA

Heather Willis, PA

Staff

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Department Coordinator

Linda Flot

Residency Coordinator

Edwina Jackson

Administrative Coordinator

Cara Rowe

Research Coordinator

Dana Stewart

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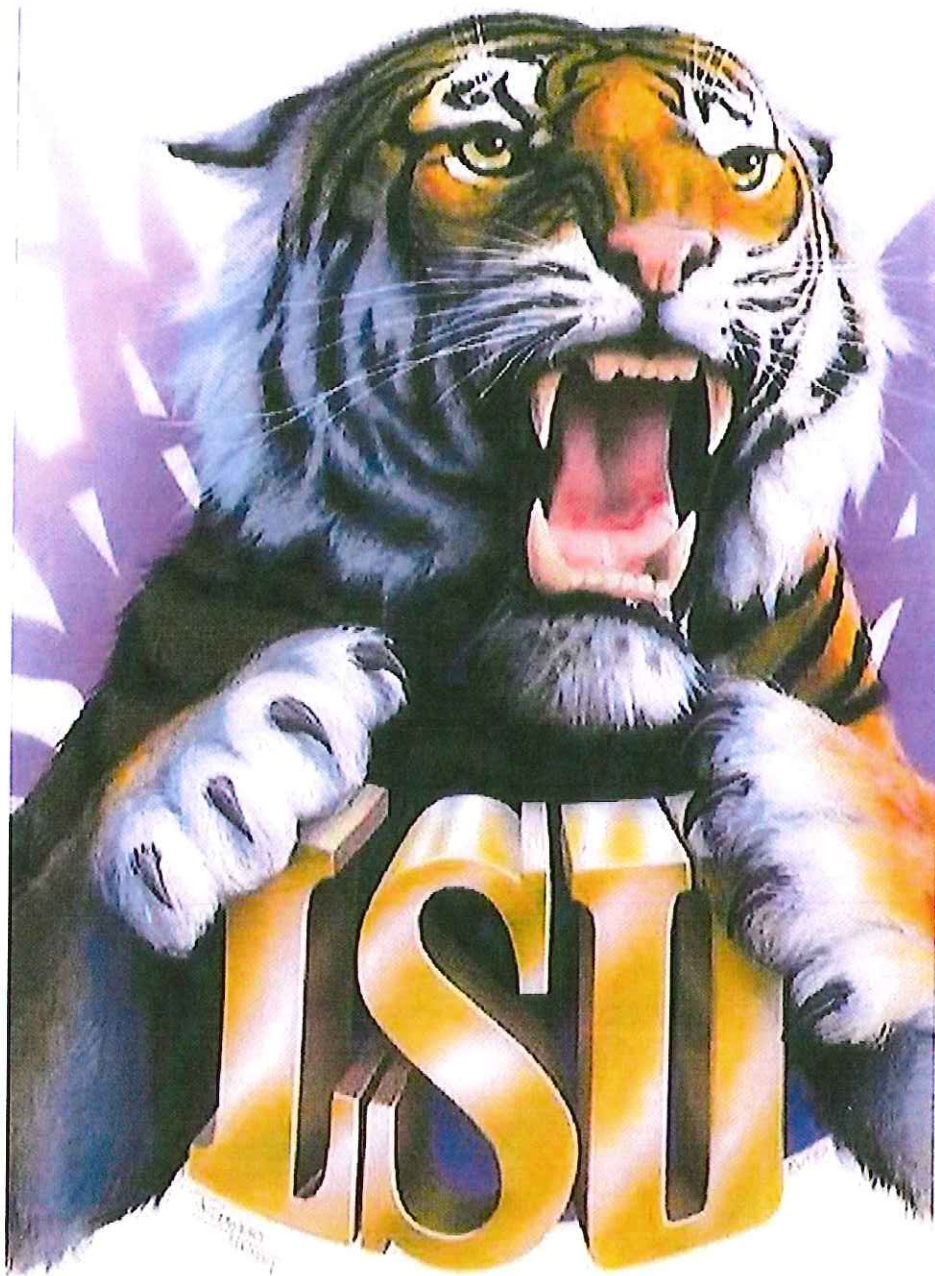
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Congratulations and Best Wishes

To Our

2018 Graduates!



Drs. Delarosa, M. Fox, R. Fox, Kadhim, & Royals