

ISAAC K. GANG, PHD

Biography in Brief

Dr. Isaac Gang is an Assistant Professor of Computer Science & Information Systems at Texas A&M University-Commerce's College of Science & Engineering, department of Computer Science & Information. He joined A&M-Commerce faculty in the fall of 2017 from the University of Mary Hardin-Baylor where taught Computer Science & Engineering for 6 years. Before coming to UMHB, Gang was an Adjunct Professor of computer science at the University of Southern Mississippi's School of Computing. His current primary teaching responsibilities at A&M-Commerce include teaching Algorithms Design and Advance Computer Games Programming. He is the Coordinator of the BS in Information Systems Program

Dr. Gang earned an Associate of Arts degree in computer science from Hinds Community College in 2000, Bachelor of Science degree in computer science from the University of Southern Mississippi in 2004, Master of Science degree in computer science from the University of Southern Mississippi in 2008, and Doctor of Philosophy in computational science from the University of Southern Mississippi in 2010.

His primary research agenda involves Cyber Security (Ransomware) and Big Data.

EDUCATION

Computational Science, PhD, 2010

The University of Southern Mississippi, Hattiesburg, Mississippi

Thesis: BEMDEC: An Adaptive and Robust Methodology for Digital Image Feature Extraction

Workload involved theoretical and practical studies of the required courses. Specific courses included advanced Database, Artificial Intelligence (AI), Data Handling Techniques, Parallel Computing, Advanced Algorithm, and Advanced Architecture, among others; extensive Research in the related areas, teaching, and guest lecturing. **GPA 4.0/4.0**

Computer Science, Master of Science (MS)

March 2005 – May 2008

The University of Southern Mississippi, Hattiesburg, Mississippi

Work involved theoretical and practical studies of the required coursework. Coursework included Distributed Database, Artificial Intelligence (AI), Expert Systems, Formal Methods, Analytical Models, and Visual Techniques, among others.

Technical Skills

Software
Adobe
Dreamweaver
Adobe
Photoshop
MS Office Suite
CSS

Languages

Proficient in:

HTML/XHTML
C
C++
C#
Java
JavaScript
Perl
PHP
ASP .Net
Visual Basic
Visual Basic
.NET
LATEX
Pascal

Have Used:

Shell scripting
JSP
XML/XSL
FORTRAN
Lisp
CLIPS

Computer Science, Bachelor of Science (BS)
The University of Southern Mississippi, Hattiesburg, Mississippi

August 2000 – December 2004

Work involved theoretical and practical studies of the required coursework. Coursework included C++, Artificial Intelligence (AI), Java, Operating System, Language Theory, and .Net Programming, among others.

Computer Science, Associate of Arts (AA)
Hinds Community College, Raymond, Mississippi

August 1998 – May 2000

Work involved taking basic courses of the required coursework.

Research/Research Interest

The following are my areas of research interest

Conducted, presented and publish research work in the areas of Genetic Algorithms, Mobile Agents, and Distributed databases. My current areas of research focus are

- Image/Signal Processing
- Big Data
- Cyber/Information Systems Security

Funded Grants:

- May 30, 2014 – May 31, 2015, “An Intelligent and Autonomous Desktop Organizer Software -ADOS,” UMHB, \$8,480.00; PI

Teaching Interest

The following are my areas of teaching interest

- Algorithms & Data Structures
- Robotics
- Database Management System
- Information Systems Security
- Big Data Analytics
- Web Programming
- Programming Language of Instruction
- Programming Languages
- Language Theory
- Image Processing
- Artificial Intelligence (AI)
- Introductory/Advanced Algorithms
- .NET Programming

Smalltalk Viva

MPI
OpenMP
6800 Assembly

Database Tools

IBM DB2
MySQL
Oracle
SQL
Apache/Tomcat

Operating Systems

Linux/UNIX
Windows

Applications

MS VS .NET
SQL Server
OpenOffice
Vim
Pico

- Scripting Languages
- HTML/XML
- Games Programming

EXPERIENCE

Teaching

Assistant Professor 2017---
Texas A&M University-Commerce, Dept. of Computer Science & Information Systems
 Commerce, Texas

Duties include teaching graduate and undergraduate courses with 6 hours (2 courses) course load, conducting research, and providing services to the department and university as needed. Current courses include:

- Algorithm Design (CSCI 532 01E)
- Advance Computer Games Programming (CSCI 497 01E)

Assistant Professor 2011 – 2017
University of Mary Hardin-Baylor, Dept. of Computer Science & Engineering, Belton, Texas

Duties include teaching 12 hours (four courses) and providing services to the department and university as needed. Courses taught include:

- Introduction to Computer Science (CISC2305)
- Structured Programming Fundamentals (CISC2330)
- Object-Oriented Programming (CISC3321)
- Systems Programming – Robotics (CISC3361)
- Algorithms & Data Structures (CISC 4305)
- Games Programming (CISC 4345)
- Game Production Development (CISC4348)
- Graphics Programming (CISC4345)
- Information Systems Security (BCIS6370)

Adjunct Faculty 2010 – 2011
The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi

Duties include teaching 12 hours (four courses) and providing services to the department and university as needed. Two of the courses were 200 and 300 levels respectively.

Assistant Coordinator, CSC 100 Redesign Research Project 2008 – 2010
The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi
 Helped with the research and assist the Project Coordinator in day to day running of the funded proj

Director, Diaspora Skill Transfer Program (DSTP) Research Project Summer – 2006
Academy for Educational Development (AED), Washington, DC

Designed and directed an introductory training course, known as Computer Literacy Accelerated Training (CLET) under the DSTP program funded by the United States Agency for International Development (USAID)

Graduate Assistant (Instructor) 2008 – 2010
The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi

Taught various courses within the department

- Introduction to Programming (CSC 101L) – Spring 2008
- Introduction to Computing (CSC 100) – Spring 2008
- Object Oriented Programming (CSC 317) – Fall 2008
- Introduction to Computing (CSC 100) – Fall 2008
- Introduction to Computing (CSC 100 – Redesign) – Spring 2009
- Introduction to Programming (CSC 101L) – Spring 2009
- Introduction to Computing (CSC 100 – Redesign) – Fall 2009 (4 sections)
- Introduction to Computing (CSC 100 – Redesign) – Spring 2010 (4 sections)
- Visual Basic Programming (CSS331) – Summer 2010

Teaching Assistant 2005 – 2008
The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi

Covered for the Professors in their absence, grade papers, exams, and quizzes for several classes (Algorithms, Database, C++ Programming II, and Artificial Intelligence). Help students with questions and other assignments related issues. Make assignments.

Guest Lecturer
The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi

Lectured in the following courses either by invitation or filling in for a Professor

- Internet Programming (CSS 405) – Fall 2007
- Advanced Distributed Database (CSC 733) – Spring 2007
- Analytical Models (CSC 623) – Spring 2008
- Introduction to Algorithm (CSC 513) – Spring 2008
- Artificial Intelligence (CSC 632) – Fall 2005
- Expert Systems (CSC 645) Spring 2006
- Parallel Computing (CSC 730) – Fall 2006
- Computer Architecture (CSC 726) – Spring 2007

Others

University Services:

Faculty Consultant – Science Education Research Center (SERC) 2012 –
Computer Science & Engineering Dept. Programming Teams Consultant/Coach
Member of the Diversity Committee
Member of Educational Technology Committee

Invited Talks:

College of Sciences Brown Bag Talk: 11/1/2011
Title of the presentation – *Robust Feature Detection Methodology Using Bidimensional Empirical Mode Decomposition (BEMD)*

The 51st Conference of ACET (2015) 10/30/2015
Title of the Talk – *The Future of Computing in Texas and the Role of ACET*

The 52nd Conference of ACET (2016) 10/29/2016
Title of the Talk – *State of ACET – Challenges and Opportunities in Developing the Next Generation of IT Leaders*

Intramural Sports Official 2003 – 2004
The University of Southern Mississippi, Recreational Sports, Hattiesburg, Mississippi

Officiated various sporting events (Basketball, Soccer, Baseball, Flag Football, etc.) during the intramural season

Refugees Youth Supervisor/Mentor 2000 – 2005
Catholic Charities, Inc., Jackson, Mississippi

Supervised and mentored youth from various countries (Sudan, Haiti, and Cuba). Responsibilities included explaining the American culture to them, importance of going and staying in school, help with homework, taking them places and contacting their teachers to check on their progress

Sales Representative 1998 – 2000
Vector Marketing, Pearl, Mississippi

Called customers and introduced the company products. Visited customers' homes and finalized sales. Managed group of Sales Representatives and helped train new hires.

ACTIVITIES & AWARDS

Judge: University of Southern Mississippi (Hattiesburg, MS):

Judged the Regional Science and Engineering Fair competition (2005)

Faculty Position Candidate Tour Guide

The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi

Took the candidates around to various departments within the university (2006)

High School Students Tour Guide

The University of Southern Mississippi, School of Computing, Hattiesburg, Mississippi

Took the visiting students around to various places on campus (2007)

Honors and Awards

- CSEM Scholarship recipient, The University of Southern Mississippi, (2000-2001)
- Dean's List, The University of Southern Mississippi, (Spring 2004)
- President's List, The University of Southern Mississippi, (2008-2010)
- Athletic (Track & Field) Scholarship recipient, The University of Southern Mississippi (2000-2002)

Memberships

- Association for Computer Educators in Texas (ACET), 2011 – Present
- Association for Computing Machinery (ACM), 2005 – Present
- Institute of Electrical and Electronics Engineers (IEEE), 2005 – Present
- National Honor Society (High School), 1995 – 1998
- Student Alumni Association (2001 – 2002)
- Alumni Association, 2009 – Present
- Track & Field Letterman (2000 – 2002)

Technical Skills

Code Management:

- GitHub
- SVN
- HG
- Code Review
- Issue Tracker

See the sidebar (starting on the first page – for complete list)

Journal Publications

I. Gang, A. Spurgeon, D. Ali, K. Roper and S. Nanda. NERD-DB: National Emergency Relief Distributed Database for Disaster Victims. *The Journal of Management and Engineering Integration*, 2008.

I. Gang, D. Dobson, J. Gourd, and D. Ali. Parallel Implementation and Analysis of Mandelbrot Set Construction. *The Journal of Management and Engineering Integration*, 2008.

I. Gang and D. Ali. Mobile Agent Paradigm: Is it the Solution? *The Journal of Management and Engineering Integration*, 2009.

Refereed

I. Gang, A. Spurgeon, D. Ali, K. Roper and S. Nanda. NERD-DB: National Emergency Relief Distributed Database for Disaster Victims. *In Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang, D. Dobson, J. Gourd, and D. Ali. Parallel Implementation and Analysis of Mandelbrot Set Construction. *In Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang and D. Ali. Mobile Agent Paradigm: Is it the Solution? *In Proceedings of the 2009 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang and D. Ali. Nature Inspired Approach to Fault Tolerance. *In Proceedings of the 2009 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL. Abstract accepted.

I. Gang and D. Ali. BEMD-Based Image Processing: A novel Approach to Color Image Edge Detection and Analysis Using Bicubic Interpolation. *In Proceedings of the 2010 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang and G. Alvesteffer. Balistical: A 2D Target Practice Simulator. *In Proceedings of the 2014 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang, G. Alvesteffer and S. Rinehart. Hostages Rescue Mission – A Multiplayer Gamemode for ArmA3. *In Proceedings of the 2014 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang, M. Liberty, C. Covington, and K. Smith. Real Time Employee Skills Tracking System. *In Proceedings of the 2010 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL.

I. Gang, and G. Alvesteffer. ADOS: An Intelligent and Autonomous Desktop Organizer Software For Faculty. *In Proceedings of the 2016 Conference of the Association of Computer Educators in Texas (ACET)*, Beaumont, TX.

H. Choi and I. Gang. Smart DNA Chips and its Potential Impact on Health Care. *ACET Journal of Computer Science & Research*, 2015.

Miscellaneous

Other information that may be relevant:

Citizenship – United States

Other Language Spoken – Nuer, Limited Spanish

References

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