Hassan Abd Salman AL-Dujaly

+9647800552540 / hassan.math@utexas.edu

EDUCATION

The University of Texas at Arlington Arlington, Texas

- Ph.D. Mathematics - Computational Mathematics 2013 – 2017
- M.Sc. Mathematics – General Mathematics 2013 – 2015

The University of Texas at Austin Austin, Texas

- Academic English Program (AEP) 2011 – 2012
- Graduate Program in Mathematics (Non-Degree Seeking) 2012 – 2013

University of Baghdad Baghdad, Iraq

- M.Sc. Mathematics – Applied Statistics 2006 - 2008

Institute for Post Graduate Studies in Informatics Baghdad, Iraq

- High Diploma. Computer Science/Informatics 2001- 2002

University of Baghdad Baghdad, Iraq

- B.S. Mathematics 1997 - 2001

WORK EXPERIENCE

Mustansiriyah University Baghdad, Iraq

- Associate Professor 2020 - Present
  - Applied Mathematics - Graduate Level (PhD)
  - Mathematical Physics - Graduate Level (Master)
  - Numerical Analysis I & II
  - Advanced Calculus
  - Mathematical Physics I & II
  - English Language (3rd level)
- Assistant Professor 2017 - 2020
  - Calculus I & II
  - Ordinary Differential Equation
  - Programing (Visual Basic – Matlab)
- In charge of the Division of Scientific Affairs 2019 – 2020
- In charge of the Division of Scholarships and Cultural Relations 2018 – 2020
- In charge or a member of more than (30) committees: Scientific, administrative, developmental, conference, etc. 2008 – 2022

The University of Texas at Arlington Arlington, Texas

- Graduate Teaching Instructor 2014- 2017
  - Math 1316: MATHEMATICS FOR ECONOMICS AND BUSINESS ANALYSIS
  - Math 1426: CALCULUS I
  - Math 2425: CALCULUS II

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Mustansiriyah University Baghdad, Iraq

- Lecturer 2008 - 2011
  - Fundamental of mathematics
  - Pre-Calculus
  - Calculus I
  - Introduction to statistics
  - Probability and statistics
  - Microsoft Excel and Access
  - Introduction to statistical programing
  - Statistical Package for the Social Sciences (SPSS)

- Division of statistics 2008 - 2011
  - Constructed database for the university
  - Prepared reports using statistical methods

Teacher Training Institute Aldujail, Iraq

- Lecturer 2006 - 2008
  - Introduction to college algebra
  - Discrete mathematics
  - Pre-Calculus
  - Calculus I

RESEARCH INTEREST

- Numerical Analysis and Compact Schemes
- Applied and computational Mathematics

PROFESSIONAL AFFILIATIONS

- Iraqi Association of Mathematics and Computer Science
- American Mathematical Society (AMS)
- Mathematical Association of America (MAA)
- The American Institute of Aeronautics and Astronautics (AIAA)

HONORS & AWARDS

- STEM Doctoral Fellowship (Scholarship) from The University of Texas, Arlington (UTA) 2014-2017
- Full scholarship from The Higher Committee for Education Development in Iraq (HCED) 2011-2017
- More than (10) Letters of Honor, Minister of Higher education 2008-2022
- More than (18) Letters of Honor, President of Mustansiriyah University 2008-2022
- More than (22) Letters of Honor, Deans of many colleges 2008-2022

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PUBLICATIONS

- "*DNS Study on Hairpin Vortex Structure in Turbulence*", 53rd AIAA Aerospace Sciences Meeting, AIAA SciTech, (AIAA 2015-1524) , with Chaoqun Liu and Yonghua Yan.
- "*Construction Methodology of Weighted Upwind Compact Scheme*", 54th AIAA Aerospace Sciences Meeting, AIAA SciTech, (AIAA 2016-2061), with Zhengjie Wang and Chaoqun Liu.
- "*Physics of multiple level hairpin vortex structures in turbulence*", Science China Physics, Mechanics & Astronomy, February 2016, 59:624703, with YiQian Wang , YongHua Yan , Ning Zhao, and ChaoQun Liu .
- "*Weighted Upwinding Compact Scheme for shock capturing*", 55th AIAA Aerospace Sciences Meeting, AIAA SciTech, (AIAA 2017), with Chaoqun Liu.
- *"Blow-Up Rate Estimates for a System of Reaction-Diffusion Equations with Gradient Terms"* International Journal of Mathematics and Mathematical Sciences, Volume 2019, Article ID 9807876, 7 pages, https://doi.org/10.1155/2019/9807876, with Maan A. Rasheed , and Talat Jassim
- *"The construction and analysis of compact and noncompact schemes"* IOP Conference Series Materials Science and Engineering, 2019: 571:012035, DOI: 10.1088/1757-899X/571/1/012035, with H.A., Jassim, A.T., Sabri, M.A., Hameed, S.Z.
- *"Some Results from the Upwinding Compact Scheme on Continuous and Non-continuous Functions"* September 2019 , Journal of Physics Conference Series 1294:032006 , DOI: 10.1088/1742-6596/1294/3/032006 , with H., Sabri, M.A., Hameed, S.Z
- *"Matrix form of deriving high order schemes for the first derivative" ,* September 2020 , Baghdad Science Journal, DOI: https://doi.org/10.21123/bsj.2020.17.3(Suppl.).1041 with Dong, Y.
- *"An approach of second derivative finite differences compact schemes" , (accepted and will be published in* September 2023 , Iraqi Journal of Science.

CONFERENCE PRESENTATIONS

- *Weighted Upwinding Compact Scheme for shock capturing* — Grapevine, Texas
  55th AIAA Aerospace Sciences Meeting — 1/2017

CERTIFICATIONS

- *STEM Teaching Associate from* UT-Arlington — Arlington, Texas
  CIRTL Network /ON-TRAC — 2017

SKILLS & INTERESTS

- ***Teaching and consultation skills:***
  - Create a student-centered educational environment based on mutual respect and collaboration
  - Meet deadlines and work with a high level of multicultural awareness and adaptability
  - Teach private lessons in math and computer science to high school and college students
  - Assist students select math classes and prepare appropriate projects and presentations

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- ***Online teaching and technology skills:***
  - Foster interaction and communication with and between students during the online learning experience
  - Modify the instructional practices and pedagogical techniques used in face-to-face settings for the online environment
  - Use telecommunication tools in support of instructional methodologies that can encourage student collaboration and knowledge acquisition
  - Devote time to assisting students by motivating them, counseling them, offering just-in-time support, and monitoring their performance
  - Manage collaborative groups and have excellent time management
  - Help to create effective learning environments that engage students

- ***Computer programing skills:***
  - Matlab, FORTRAN, Visual Basic, SAT, SPSS, Python.
  - Oracle Database, Microsoft Office.