#### **CURRICULUM VITA**

# Thiab R. Taha Interim Director of the School of Computing

#### **EDUCATION:**

Ph.D.	Clarkson University, Potsdam, NY	Applied Mathematics, & Computer Science	1982
M.Sc.	The University of Jordan, Jordan	Mathematics (Num. Analysis)	1977
B.Sc.	The University of Jordan, Jordan	Mathematics	1972

# **Academic Appointments and Leadership:**

July 01, 2022 – June 30, 2023: Interim Director of the School of Computing at UGA.

I provided leadership and support to the School of Computing (SoC). Worked closely with the two Colleges. In Fall 2022, the SoC had more than 500 new incoming freshman and more than 50 incoming graduate students. In a short period of time, I was able to manage offering the necessary courses to accommodate these students. I took care of the Promotion application for two faculty members. Both of them are successfully approved for promotion by the Dean of the Franklin College. I spent a good amount of time training the new staff in the SoC. The SoC has been authorized to hire 5 tenure-track and 4 lecturers to start in August 2023. I Managed to form 5 search Committees and 6 job Ads. The SoC managed a successful SoC Research Day and the External Advisory Board Meeting. I formed a Research Committee to work with the College of Engineering, and several faculty took advantage of the seed grant from the College of Engineering. Published a newsletter.

July 01, 2013- June 30, 2022: Department Head of the Computer Science Department.

In Fall 2013, the number of computer science majors was 441 and the number of Graduate students was 126, and the number of faculty was 22.

In Fall 2022, the Department has nearly 1,500 majors and more than 290 minors, 235 graduate students, and 35 faculty. The Department became the 4th. largest Department, one of UGA's most popular department, and ranked the first growing Department on Campus. The number of credit hours production is tripled. New programs have been established such as a certificate in Applied Data Science with more than 500 students had enrolled in it, a B.S. and MS academic degree programs in Data Science jointly with the Statistics Department, an MS in Cyber security and Privacy, four Double Dawgs programs, Graduate and Undergraduate Certificates in Cyber security and Privacy, and MS in CS with a non-thesis option. In addition, an Institute of Cybersecurity and Privacy has been established and located in the Computer Science Department. The National Security Agency and Department of Homeland Security named the UGA Institute for Cybersecurity and Privacy a National Center of Academic Excellence in Cybersecurity. For the first time since the Department creation, two faculty have been named Distinguished Research Professors. During his tenure as a Department Head, he hired 26 faculty

I played a crucial role in the creation of the SoC. I Co-chaired the Two Planning Committees: The Academic planning Committee and the Scholarly Planning Committee. The result was an important document that was approved by the CS and Engineering faculty, and together with the SoC proposal, UGA approved and established the SoC(<a href="https://news.uga.edu/uga-establishes-school-of-computing/">https://news.uga.edu/uga-establishes-school-of-computing/</a>).

1994 – 2013 Professor, Department of Computer Science, UGA

1982-1988 Associate Professor, Department of Computer Science, UGA.

1982-1988 Assistant Professor, Department of Computer Science, UGA.

1995-96	Visiting Professor on a Fulbright Scholar to Jordan, Department of Computer Science, University of Jordan.
1985-86	Visiting Professor, College of Science and Technology, Jerusalem (on leave from the University of Georgia)
1982	Research Associate, Clarkson University (summer)
1978-82	Teaching Assistant, Clarkson University
1976-78	Instructor, Teachers' Training Institute, Jordan
1976-77	Instructor, University of Jordan
1974-78	Chairman and Instructor, Teachers' Training Institute, Jordan (summers)
1972-76	Secondary Education Teacher, Jordan

### **Other Positions:**

Director of the "CUDA Teaching Center (teachingcuda.uga.edu), UGA, 2011-present.Director of the "CUDA Research Center (cuda.uga.edu), UGA, 2014-present.

Director of the Big Data Consulting Services and Training center (http://research.franklin.uga.edu/bigdata/) at the University of Georgia, 2013-presnt. Member of the Faculty of Engineering at UGA.

Adjunct Professor, Institute of Bioinformatics - (July 1, 2002 - 2013) and a founding member.

Courtesy Faculty, Institute of Bioinformatics - (July 1, 2014 - Present)

Founding member of the Georgia Informatics Institute (GII), 2016- present

## **RESEARCH:**

Dr. Taha's areas of research are in the areas of Computational Science and Parallel Computing; software development for solving problems that model water waves, and optical fiber communication systems; and system biology. He published more than 90 journal and conference papers, and served as the Editor to more than 10 Special Issues in MATCOM, and APNUM journals. His research is supported by grants from DOE, NSF, DoD, and Northeastern University. Dr. Taha is the Vice President of IMACS, Co-Associate-Editor of the APNUM and IAJIT journals, and a Senior member of ACM. He is the recipient of the 1985 M. G. Michael Awards for Research in Science, and a 1995 Fulbright Scholar. At the University and College level, Dr. Taha served on the University Council for more than 20 years, Chair of the Faculty Affairs Committee, Chair of the Curriculum Committee, Chair of the Awards Committee, member of the Board of Directors of the University of Georgia Research Foundationof the UGARF foundation, and many others.

#### **HONORS and AWARDS:**

- 1. Program Chair and Conference coordinator of the 12<sup>th</sup>. IMACS International Conference on: "Nonlinear Evolution Equations and Wave Phenomena:" Computation and Theory", Athens, GA, March 30 April 01, 2022.
- 2. Co-Chair of the 2023 IMACS World Congress, September, 2023, Rome, Italy.
- 3. Co Editor-in-Chief for the APNUM journal, February 2017- present.
- 4. Associate Editor-in-Chief of The International Arab Journal of Information Technology (IAJIT), 2019 present.
- 5. Honorable appointment as the Guest Professorship of Harbin Engineering University, China, 2017 2020
- 6. A founding member of "The Georgia Informatics Institute (GII) from 2016-present.
- 7. Program Chair and Conference Coordinator of the IMACS International Conferences on "Nonlinear Evolution Equations and Wave Phenomena:" Computation and Theory", Athens, GA, 1999-2021.
- 8. The 1985 winner of the M. G. Michael Award for Research in the Sciences at UGA.
- 9. Listed in the International Who's Who of Professionals (1997), published by Gibralter Publishing, Inc., Vol. II, page 1-1288.
- 10. Listed in the 1998 edition of American Men and Women of Science, by R. R. BowkerData Collection Center.

- 11. Member of the Middle East Advisory Panel on the Fulbright Senior Scholar Program for CIES (Council for International Exchange of Scholars), 1999 present.
- Keynote Speaker: "Parallel Numerical Investigation of Fiber Optics Communication Systems", The 2000 Arab Conference on Information Technology (ACIT'2000), Oct. 31

  – Nov. 2, 2000, Zarka, Jordan.
- 13. Panel Session: "IT-The New Challenge to be or not to be", The 2000 Arab Conference on Information Technology (ACIT'2000), Oct. 31 Nov. 2, 2000, Amman, Jordan.
- 14. Awarded the Zarka Private University Emblem, Jordan, November 2000.
- 15. Keynote Speaker: "A Parallel Algorithm for Numerical Simulation of WDM Optical Fiber Communication Systems", The 2003 Arab Conference on Information Technology(ACIT'03), December 20-23, 2003, Alexandria, Egypt.
- 16. IMACS (International Association for Mathematics and Computers in Simulation)Events Coordinator, December 2005 present.
- 17. Keynote Speaker: The First International Conference on Mathematical Sciences, May15-17, 2006, Gaza, Palestine.
- 18. Member of the Board of Directors of the International Association for Mathematics and Computers in Simulation (IMACS), August 2005 present.
- 19. Invited lecture by the Italian INdAM, "Numerical Methods for Solving Nonlinear Evolution Equations", presented at the meeting on *Mathematical Models for ComplexSystems*, September 26-29, 2007, The Palazzone, Cortona (AR), Italy.
- 20. Chair and Conference Coordinator of the "IMACS World Congress on Computationaland Applied Mathematics & Applications in Science and Engineering", Athens, GA, August 3-7, 2009.
- 21. Chair and Workshop Coordinator of the "Workshop on Mathematical Biology and Numerical Analysis", August 1-2, 2009.
- 22. Vice President of International Association for Mathematics and Computers in Simulation (IMACS), August 2009 present.
- 23. Program Chair and Conference Coordinator of the Seventh IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena:" Computationand Theory", Athens, GA, April 3-7, 2011.
- 24. "The third IMACS 2011 Most Successful Papers Award" for the paper titled "Solitarywave solutions for a generalized KdV-mKdV equation with variable coefficients", MATCOM 80 (2010) 1867-1873.
- 25. Nomination for the IMACS Honor Member 2011.
- 26. Director of the "CUDA TEACHING CENTER, UGA, 2011-present.
- 27. An award from KING ABDULAZIZ UNIVERSITY (10,000 SAR = \$3,000 USD) forthe paper by Ismail, M. and Taha, T., "A Linearly Implicit Conservative Scheme for theCoupled Nonlinear Schrödinger Equations", Journal of Mathematics and Computers in Simulation, Vol. 74, issues 4-5 pp. 302-311, 2007 for its publication in a high impact factor Journal and number of citations.
- 28. The 2012 winner of the Outstanding Faculty Service Award from the Computer Science Department at the University of Georgia.
- 29. Member and Chair of the Georgia Advanced Computing Resource Center-Advisory Committee (GACRC-AC), UGA, 2011-2013.
- 30. Member of the Board of Directors of the University of Georgia Research Foundation (UGARF), 2011-2015.
- 31. Director of the "Big Data Consulting Services and Training center, UGA, 2013-present.
- 32. Director of the "CUDA RESEARCH CENTER, UGA, 2014-present.
- 33. Keynote speaker at the 8<sup>th</sup>. International Conference on InformationTechnology IOT, Al-Zaytoona University, Jordan, May 17-18, 2017
- 34. Keynote speaker at International Conference on new Trends in ComputingSciences (ICTCS 2017), Oct. 11-13, 2017. King Hussein University, Jordan.

- 35. Keynote speaker at the Tenth Jubilee Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and NaturalSciences, Albena, Bulgaria, June 20-25, 2018
- 36. Member of the Jordanian National Study group for the Improvement of Curricula and the Teaching of Mathematics.
- 37. Scholarship from the Jordanian Government for B.A. studies in Science/Math.

# **EXTERNAL GRANTS:**

- U.S. Army Research Office, "Interdisciplinary Study in Physical Mathematics", \$241,112 Oct. 1, 1987 Sept. 30, 1990. With M. Adams, R. L. Anderson, J. Dorfmeister, D. P. Landau, R. A. Kunze, M. H. Lee, and R. Varley. For administrative purposes the Principal Investigators are designated to be Anderson, Kunze and Lee. The proposal is an umbrella for six separate but related research topics. Taha authored one, "IST Numerical Schemes of Certain Nonlinear Partial Differential Equations", and co-authored (with Anderson) another, "Perturbation of IST Numerical Schemes and Their Applications".
- 2. National Science Foundation, "Hypercube Acquisition", \$163,250 (W.B. McRae, P.I.) Feb.15, 1988 July 31, 1989. Contributed the proposal "Numerical schemes for equations solvable by IST and their perturbed forms applied to other physically interesting equations" which, with four other proposals, formed the research justification for this instrumentation grant.
- 3. NSF, "Computer and Information Science and Engineering (CISE) Research Instrumentation", (R. W. Robinson, P.I.) \$27,525 (with an equal matching fund from the University) 1989 1990. Contributed the proposal "Numerical schemes for equations solvable by IST and their perturbed forms applied to other physically interesting equations which, with the other three proposals, formed the research justification for this instrumentation grant.
- 4. DOE, "Numerical Methods for Nonlinear Partial Differential Equations", Thiab R. Taha(PI), \$94,599, July 15, 1990 July 14, 1993.
- 5. Intel Corp., "Algorithms for IST Numerical Schemes", Thiab R. Taha (PI), \$14,939, fundsfor maintaining UGA's hypercube parallel system; contributed one of seven projects in support of the technical justification of the proposal, February 1991 February 1992.
- 6. NSF, "Mathematical Sciences Computing Research Environments", (Thiab R. Taha, PI) \$63,500 (with a matching fund of \$63,500 from the University) July 1, 1992 June 30,1995. Contributed the proposal "Parallel Algorithms for IST Numerical Schemes".
- 7. Intel Corporation, "Research Partner Grant in Computational Science" (Thiab R. Taha, PI) \$192,905, 1993. Contributed the proposal "Parallel Algorithms for IST NumericalSchemes".
- 8. Fulbright Scholar award in Jordan, 1995-96 academic year.
- 9. Fulbright Scholar award in Jordan (extension), June 26 August 26, 1996.
- 10. "Acquisition of a Symmetric Multiprocessor Scientific Computer System", NSF, DavidLandau (P.I.), Hamid R. Arabnia, David Lowenthal, W. D. Potter, Thiab R. Taha, et al, \$420,000 (with matching funds of \$314,899 from OVPR and \$157,200 from UCNS), September 15, 1997 September 14, 1999.
- 11. NSF, "The Second IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Thiab R. Taha (PI), \$13,817, Sept. 1, 2000 –Jan. 31, 2002.
- 12. International Engineering Consortium under a Faculty/Student grant for participation in the IEC@SUPECOM, June 3-6, 2002, Atlanta, GA., \$2,500.
- 13. NSF, "Support for the Third IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory Conference", Thiab R. Taha,(PI) \$15,000, August 1, 2002 October 31, 2003.
- 14. NSF, "Support for the Fourth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory Conference", Thiab R. Taha(PI), \$15,000, August 1, 2004 July 31, 2006.
- 15. NSF, "Support for the Fifth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory Conference", Thiab R. Taha(PI), \$18,000, August 15, 2006 July 31, 2008.

- 16. NSF, "Genomics and Computational Biology: a REU site", J. Arnold (PI), D. Logan, C. Teare-Ketter (Co-PIs), T. Taha, Senior Personnel, \$210,00, March 1, 2007 February 28,2010.
- 17. NSF, "MRI-Acquisition of a Computer Cluster for Bioinformatics research at UGA", YingXu (PI), Liming Cai, Jessica C. Kissinger, Russell L. Malmberg, Heinz-Bernd Schuttler, (CO-PI's), Thiab Taha (Senior Personnel), \$796,822 with \$344K matching fund from OVPR, August 1, 2008 July 31, 2011.
- 18. NSF, "Support for the Sixth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory Conference", Thiab Taha (PI)and Jerry Bona (Co-PI), \$25,000, April 1, 2009 March 31, 2010.
- 19. NSF, "Workshop on Mathematical Biology and Numerical Analysis", Thiab Taha (PI), JArnold (Co-PI), J. Prestegard (Co-PI), A. Sornborger (Co-PI), and A. Summers (Co-PI), \$30,000, September 1, 2009 August 31, 2011.
- 20. NSF, REU site: genomics and computational biology, \$318,012, 03/01/07 02/28/11,(Thiab R. Taha, senior personnel).
- 21. NSF, The Seventh IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Thiab Taha (PI) and Jerry Bona (Co-PI), \$25,000, 02/01/2011 01/31/2014
- 22. NSF, REU site: Genomics and Computational Biology, \$313,328, 03/01/11- 02/28/14,(Thiab Taha, Senior personnel).
- 23. NVIDIA Corporation, "CUDA TEACHING CENTER", Thiab R. Taha (PI), Nvidia provided 12 GPU cards, 18 text books and teaching and Training material, and \$6,085 for aTA in 2011.
- 24. NVIDIA Corporation, "CUDA TEACHING CENTER", Thiab R. Taha (PI), Nvidia provided 20 more GPU cards (\$6,572) in November 2012.
- 25. NSF, The Eighth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Thiab Taha (PI) and Jerry Bona (Co-PI), \$18,000, 01/15/2013 06/30/2015.
- 26. NSF, EAGER: Big Data Consulting Services and Training Center, Thiab R. Taha (PI), September 15, 2013 August 31, 2015, \$34,966.
- 27. NSF, REU site: genomics and computational biology, NSF Total Award Amount: \$662,610 Total Award Period Covered: 02/02/14-02/01/19, Jonathan Arnold (PI), (ThiabTaha, Senior Personnel)
- 28. NSF, REU site: genomics and computational biology, NSF Total Award Amount: \$364,707 Total Award Period Covered: 04/15/2020-03/31/2023, Jonathan Arnold (PI), (Thiab Taha, Senior Personnel)
- 29. Center for Inclusive Computing (CIC), Northeastern University. 2021-2023. Thiab Taha (PI), Bradley J. Barnes (Co-PI), Michael E. Cotterell (Co-PI), Manijeh Keshtgari (Co-PI), Eman Saleh (Co-PI), \$60,000. Center for Inclusive Computing Diagnostic Grant.
- 30. Dr. Taha is the PI on the USDA grant titled: Predicting co-selection of antibiotic resistance in Salmonella and Enterococcus, Fellowship, August01, 2021, June 30, 2022, \$37,000.
- 31. HEC Fellowship For 6 PhD students (FP00023221), PI. HIGHER EDUCATION COMM PAKISTAN, January 1, 2021–December 31, 2025

# **INTERNAL GRANTS:**

- 1. Faculty Research Grants Proposal, approved for the amount of \$3,112. February 15, 1984,titled "On Numerical and Analytical Aspects of Certain Non-linear Evolution Equations."
- 2. Research foundation of the University of Georgia, approved for the amount of \$813 topresent a paper at the International Symposium of Numerical Analysis held in Madrid, Spain, September 17-19, 1985.
- 3. Research Foundation of the University of Georgia, Foreign Travel Grant approved for theamount of \$1,215 to organize and chair a session and present a paper at the 13th IMACS World Congress on Computation and Applied Mathematics, Dublin, Ireland, July 1991.
- 4. The University Computing and Networking Services of the UGA, "Parallel Algorithms for IST

- Numerical Schemes", 80 hours of cpu time on the RS/6000 cluster along with 64MB ofdisk storage, July 15, 1992 July 14, 1993.
- 5. The University Computing and Networking Services of the UGA, RS/6000 Model 340 workstation. (with E. Rodney Canfield, Jay Arenson, Jon Higbie), 1992.
- 6. The University Computing and Networking Services of the UGA, Parallel Algorithms forBlow-up in a Generalized KdV equation, 2000 hours of wall clock on the SP2 along with64MB of disk storage on the RS/6000 cluster, Oct. 3, 1994 July 1, 1995.
- 7. Research Foundation of the University of Georgia, Foreign Travel Grant approved for the amount of \$1,519 to organize and chair a session and present a paper at the 15th IMACS World Congress on Computation and Applied Mathematics, Berlin, Germany, Aug. 24-29,1997.
- 27. Research Foundation of the University of Georgia, Foreign Travel Grant approved for theamount \$2,155 to chair a session and present an Invited Talk at the Seventh International Colloquium on Numerical Analysis and Computer Science with Applications, Plovdiv, Bulgaria, Aug. 13-17, 1998, and to present an Invited Talk at the Ninth International Colloquium on Differential Equations, Plovdiv, Bulgaria, Aug. 18-23, 1998.
- 28. Proposal for Research Funding Support for Research Equipment, D. K. Lowenthal (PI), H. R. Arabnia, S. M. Bhandarkar, J. Kececioglu, and T. R. Taha (Co-PIs), Arts and SciencesDeans Office, \$16,963, 1998.
- 29. Research Foundation of the University of Georgia, Foreign Travel grant approved for the amount \$2,150, to organize and chair a session and present a paper at the 16<sup>th</sup> IMACS World Congress on Computation and Applied Mathematics, Lausanne, Switzerland, August19-24, 2000.
- 30. UGA, President's Venture Fund, "Support for the ACM Southeast Conference" (with J.Miller and S. Smith), \$1,000, November, 2001.
- 31. UGA, President Venture Fund, "Support for the Third IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, \$2000, April 2003
- 32. Research Foundation of the University of Georgia, Foreign Travel grant approved for the amount of \$1,730 to give a Keynote speech and chair a session at the 2003 Arab Conferenceon Information Technology (ACIT'03), December 20-23, 2003, Alexandria, Egypt.
- 33. Research Foundation of The University of Georgia, "Support for the Fourth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, \$3000, April 2005.
- 34. University of Georgia Provost's Office, International Travel grant for a partnership in Jordan, \$1,000, 2004.
- 35. Research Foundation of the University of Georgia, Foreign Travel Grant approved for the amount of \$1,335 to organize and chair a session and present two papers at the 17<sup>th</sup> IMACSWorld Congress on computation and Applied Mathematics, Paris, France, July 11-15, 2005.
- 36. Research Foundation of the University of Georgia, Foreign Travel Grant approved for the amount of \$1,095.00 to present a paper at The International Arabic Conference on Information Technology ACIT'2005, Al Isra private University, Amman, Jordan, December6-8, 2005.
- 37. Research Foundation of the University of Georgia, Foreign Travel Grant approved for theamount of \$1,451.00 to present a paper at The First International Conference on Mathematical Sciences, Gaza, Palestine, May 15-17, 2006.
- 38. Contingency Fund from Engineering, UGA, \$500 for the travel to give a Keynote lecture at the first International Conference on Mathematical Sciences in Gaza, May 15-17, 2006.
- 39. Research Foundation of the University of Georgia, "Support for the Fifth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", \$3000, April 2007.
- 40. UGA, President Venture Fund, approved for the amount of \$2,277 to present an invitedpaper at The International Arabic Conference on Information Technology ACIT'2008, University of Sfax, Tunisia, December 16-18, 2008.
- 41. UGA, Franklin College of Arts & Sciences, "Support for the Sixth IMACS International Conference on Nonlinear Evolution Equations and wave Phenomena: Computation and

- Theory", \$2000, March 2009.
- 42. Research Foundation of the University of Georgia, "Support for the Sixth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", up to \$8000, March 2009.
- 43. UGA, President Venture Fund, Support for the IMACS World Congress on Computational and Applied Mathematics & Applications in Science and Engineering, \$4000, August, 2009.
- 44. Research Foundation of the University of Georgia, Foreign Travel Grant to present a paperat The International Arabic Conference on Information Technology ACIT'2009, \$2,641, Sana'a, Yemen, December 15-18, 2009.
- 45. Research Foundation of UGA, Foreign Travel Grant approved for the amount of \$2,001 topresent a paper at The Arabic Conference on Information Technology (ACIT'2010), Benghazi, Libya, December 14-16, 2010.
- 46. Travel grant from the Provost office for Academic Affairs for the amount \$2,500 to presentan invited talk at the MASCOT 2010 Conference, Las Palmas de Gran Canaria, Spain, October 20-22, 2010.
- 47. Research Foundation of UGA, "Support for the Seventh IMACS International Conferenceon Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", \$1,500, April 2011.
- 48. UGA, Franklin College of Arts & Sciences, "Support for the Seventh IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", \$1,500, April, 2011.
- 49. UGA, President Venture Fund, "Support for the Seventh IMACS International Conferenceon Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", \$2000, April 2011.
- 50. Travel grant from the Provost office for Academic Affairs for the amount \$2,000 and \$500 from the Franklin College of Arts and Sciences to present a Keynote talk at the MASCOT 2011, 11th Meeting on Applied Scientific Computing and Tools, Rome, Italy, October 19-21, 2011.
- 51. Research Foundation of the University of Georgia, Foreign Travel Grant to present a paperat The International Arabic Conference on Information Technology ACIT'2011, \$2,272, Riyadh, Saudi Arabia, December 11-14, 2011.
- 52. Travel grant from the Provost office for Academic Affairs, Franklin College of Arts and Sciences, and the CS Department to present an invited talk at the The International ArabicConference on Information Technology ACIT'2012, \$2,618, Zarqa University, Amman, Jordan, December 10-14, 2012.
- 53. Travel grant from the Provost Office for Academic Affairs, Franklin College, FYOS, \$3,922to present a paper at the 19<sup>th</sup> IMACS Congress, Spain, and August 26, 2013 August 30, 2013.
- 54. The Provost's 2014 Summer Research grants (summer 2014, fiscal year 2015), \$5,000.
- 55. Travel grant from the Provost office for Academic Affairs, Franklin College of Arts and Sciences, and the CS Department to present an invited talk at the The International ArabicConference on Information Technology ACIT'2014, \$2,500, Nazwa, Oman, December 9-11, 2014.
- 56. Travel grant from the Provost office for Academic Affairs, Franklin College of Arts and Sciences, and the CS Department to present an invited talk at the IMACS Congress in Xiamen, China, December 2016.
- 57. Travel grant from the Provost office for Academic Affairs, Franklin College of Arts and Sciences, and the CS Department to present an invited talk at The International Arabic Conference on Information Technology ACIT'2016, \$2,400, Amman, Jordan, December14-17, 2015.
- 58. Travel support from the Provost office for Academic Affairs, Franklin College of Arts and Sciences, and the CS Department to present an invited talk at the IMACS Congress, Xiamen, China in December 10-14, 2016
- 59. Travel support from the Provost office for Academic Affairs, Franklin College of Arts and Sciences, and the CS Department to present an invited talk at the ACIT 2017, \$3,260, Tunisia, December 22-24, 2017Research Foundation of the University of Georgia, Foreign Travel Grant to

- present aKeynote talk at The 8<sup>th</sup> International Conference on Information Technology ICIT 2017 IOT, May 17-18,2017, \$1,650, Jordan.
- 60. Research Foundation of the University of Georgia, Foreign Travel Grant to present An Invited Keynote speaker at International Conference on new Trends in Computing Sciences(ICTCS 2017), October 11-13, 2017, \$1,527, King Hussein University, Jordan.
- 61. Research Foundation of the University of Georgia, Foreign Travel Grant to present An Invited Keynote speaker at the second International Conference on new Trends in Computing Sciences (ICTCS 2019), October 09-11 October, 2019, \$1,700, King HusseinUniversity, Jordan.

# **INSTRUCTIONAL GRANTS:**

- 1. Office of Instructional Development at UGA, "Interactive Numerical Computation", Thiab R. Taha (PI), \$2,035, April 1991.
- 2. Office of Instructional Development at UGA, "Extension of MATLAB License", Thiab R.Taha (PI), \$250, April 1992.
- 3. Office of Instructional Development at UGA, "Color Graphical Display of Computational Results", Thiab R. Taha (PI), J. W. Smith (Co-PI), \$2,575, May 1993.
- 4. Office of Instructional Development at UGA, "Upgrading my PC for Instructional Development", Thiab R. Taha (PI), \$312.00, Sept. 1994.
- 5. Office of Instructional Development at UGA, "Dynamic Interactive Presentation Tool", Thiab R. Taha (PI), March 1995, \$2,500.00.
- 6. Learning Technology grant approved for the amount of, \$30,000 from Center for Teaching and Learning, UGA, + \$4,408 from Franklin College and CS Department at UGA, Thiab R.Taha (PI), T. Liu (Co-PI), Chris Plaue (Co-PI), FY 2011 and FY 2012.

# **GRANTS SUBMITTED, but not funded:**

- Sustaining diversified Crop production in a water-stressed Southeastern multi-state regionthrough water reuse and informed participation (FP00009005) USDA NIFA, *January 2*, 2017–January 1, 2022
  - Amount: \$4,984,401 (US), Role: Primary investigator of, Credit: 7%
  - Application date: August 4, 2016, Funding type: Research
- 2. NSF, Undergraduate Research Opportunities in Quantitative Biology at the University of Georgia, Andrew Sornborger (PI), Thiab Taha (Senior Personnel), \$987,543, July 1, 2010 –June 30, 2015.
- 3. NSF, "Workshop on Computational Methods for Nonlinear Waves", Thiab Taha (PI), Gino Biondini (Co-PI) and Bernard Deconinck (Co-PI),\$33,760, October 1, 2008 September 30,2009.
- 4. NSF, "II-NEW: Acquisition of a multicore system for research and training in simulation and power management", Thiab Taha (PI), S. Funk (Co-PI), M. Hybinette (Co-PI), K. Kochut (Co-PI), and J. Miller (Co-PI), \$204,525, January 1, 2009 December 31, 2011.
- 5. NIH, R25 Proposal "Summer School on Quantitative Methods for Biology", Liming Cai (PI), Thiab Taha (Senior Personnel), \$985,682, December 1, 2009 November 30, 2014.
- 6. NSF, "An Integrative Approach to Teaching Neuroimage Analysis", Tianming Liu (PI), Thiab Taha (Co-PI), \$178,835, January 1, 2010 June 30, 2013.
- 7. NSF, "Workshop on Mathematical Biology and Numerical Analysis II", Thiab Taha (PI), J.Arnold (Co-PI), J. Prestegard (Co-PI), A. Sornborger (Co-PI), and A. Summers (Co-PI), \$38,888, April 1, 2010 March 31, 2011.
- 8. Internal proposal submitted to OVPR, has been selected to be submitted to NSF as an MRIproposal from UGA, \$1,399,461.48 that includes \$419.838.44 matching fund from OVPR,(Thiab Taha, Co-PI), Dec. 2010.
- 9. NSF, MRI: Acquisition of a CPU/GPU high performance computing system for research andtraining at the interface of the Biological and Physical Sciences, \$1,399,461.48 that includes \$419.838.44 matching fund from OVPR, (Thiab Taha, Co-PI). 08/01/2011 07/31/2014.
- 10. NSF, Integrating Biomedical Image Analysis into Undergraduate Curricula, (Tianming Liu,PI), (Thiab Taha, Co-PI), 12/01/2010 11/30/2012, \$197,992.

- 11. NSF MRI: Acquisition of a CPU/GPU high performance computing system for research andtraining at the
  - interface of the Biological, Chemical, and Physical Sciences, Jonathan Arnold (PI), ThiabTaha (Co-PI), John Amster(Co-PI), Bernd Schuttler(Co-PI), Jim Leebens-Mack(Co-PI), \$3,149,395 that includes \$944,818 matching fund from OVPR and VPIT, 2014 2017.
- 12. NSF, MRI: Acquisition of a Regional Advanced, Computing Track 3 System(REACTS), A multi-institutional proposal led by Clemson University, Thiab-Taha(Senior Personal) contributed to two sections of the Project description, \$3,988,244, 09/01/2015 08/31/2018.
- 13. NSF, QuBBD: Effective Statistical Sampling and High Performance Computing for Analyzing Big FMRI Data, Wenxuan Zhong(PI), Thiab Taha(co-pi), with Ping Ma, TianmngLiu, Steffen Miller as Co- PIs, \$99,507, 05/01/16 to 04/30/2017
- 14. NSF, FEW: Balancing food, water, and energy budgets to enhance resiliency in a future ofclimatic uncertaint, Keshav (K.C.) Das(PI), Thiab Taha(Co-Pi), with Elizabeth Kramer, Craig E Landry, John Schramski as Co-PIs, \$77,047, 07/01/2015 to 06/30/2016
- 15. NSF, Workshop on Computational Science and Data Analytics, Thiab R Taha (PI), with Jonathan Arnold, Natarajan Kannan, Caner Kazanci, Jessica C Kissinger as Co-PIs, \$26,94606/01/2015 to 05/31/2015.16. Workshop on Open Science in Big Data (OSBD) (FP00009570), NATIONAL SCIENCE FOUNDATION, *December 5, 2016–December 4, 2017*, Amount: \$0 (US), Role: PI, investigator of, Credit: 20%Application date: October 7, 2016, Funding type: Research
- 16. Sustaining Diversified Specialty Crop Production in a Southeastern Multistate Region Under Water Stress (FP00005760), USDA NIFA, January 1, 2016–December 31, 2019
  Amount: \$ 8,136,218 (US), Role: Primary investigator of, Credit: 10% Application date: August 27, 2015, Funding type: Research
- 17. QuBDD (FP00005882), NATIONAL SCIENCE FOUNDATION, May 1, 2016–April 30, 2017 Amount: \$ 99,504 (US), Role: PI, Credit: 16% Application date: August, 2015, Funding type:
- 18. Research Sustaining diversified Crop production in a water-stressed Southeastern multi-state region through water reuse and informed participation (FP00009005), USDA NIFA, January 2, 2017–January 1, 2022, Amount: \$ 4,984,401 (US), Role: Primary investigator of, Credit: 7% Application date: August 4, 2016, Funding type: Research

# **PROFESSIONAL ACTIVITIES:**

- Member of the SIAM Activity Group on Computational Sciences and Engineering.
- Member of the SIAM Activity Group on Nonlinear Waves and Coherent Structures (NWCS).
- Member of the Society for Industrial and Applied Mathematics (SIAM).
- Member of the SIAM Activity Group on Supercomputing.
- Member of the IMACS technical committee on Dynamical Systems and Nonlinear Science, 1992 present.
- Member of the Association of Computing Machinery (ACM).
- Member of the International Association for Mathematics and Computers in Simulation (IMACS).
- Member of the Institute of Electrical and Electronics Engineers (IEEE), Inc.

# **EDITORSHIP:**

- 1. Guest Editor of the Special issue of the Journal Mathematics and Computers in Simulationon "Solitons, Nonlinear Wave Equations and Computation", vol. 37, No. 4-5, December 1994.
- 2. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Computation of Nonlinear Phenomena", Vol. 43, No. 1, January 1997.
- 3. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory", Vol. 55, No. 4-6, March 2001.
- 4. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon

- "Method of Lines", Vol. 56, Issue 2, May 2001.
- 5. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Optical Solitons", Vol. 56, Issue 6, July 2001.
- 6. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-II", Vol. 62, Issues 1-2, 2003.
- 7. Member of the Editorial Board of The International Arab Journal of Information Technology (IAJIT), 2002-2017.
- 8. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Optical Solitons-II", 2004.
- 9. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-III", Vol. 69, issues 3-4, June 2005.
- 10. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-IV", Vol. 69, issues 5-6, August 2005.
- 11. Senior Editor for the Journal Mathematics and Computers in Simulation, December 2004 present.
- 12. Member of the Board of Directors of the International Association for Mathematics and Computers in Simulation (IMACS), August 2005 present.
- 13. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-V", Vol. 74, Issue 2-3, March 2007.
- 14. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-VI", Vol. 74, Issue 4-5, March 2007.
- 15. Member of the Editorial Board of the International Journal of Nonlinear Dynamical Systems and Chaos (IJNDSC), 2006 present.
- 16. Associate Editor-in-Chief of the International Arab Journal of e-Technology (IAJeT), 2008 2017.
- 17. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-VII", 2009.

- 18. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-VIII, 2009-2011.
- 19. Guest Editor of the Seventh Volume of the International Arab Journal of Information Technology (IAJIT), 2009-2010.
- 20. Managing Editor of the Special Issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-IX", 2009-2012.
- 21. Managing Editor of the Special Issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-X", 2011-2012
- 22. Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulationon "Nonlinear Waves: Computation and Theory-IX", 2012-2016
- 23. Managing Editor of the Special Issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-IX", 2012-2016
- 24. Editor-in-Chief of the Applied Numerical Methods (APNUM) journal, March 2017 present.
- 25. Guest Editor of the Special Issue of the Journal Applied Numerical Methods (APNUM) on "Nonlinear Waves: Computation and Theory-X", 2016-2018
- 26. Managing Editor of the Special Issue of the Applied Numerical Methods (APNUM), "Nonlinear Waves: Computation and Theory-X", 2016-2018
- 27. Guest Editor in the special issue "Recent Trends in Special functions and Analysis of Differential Equations" (https://www.hindawi.com/journals/mpe/si/285732/) which will beopen in Mathematical Problems in Engineering, as an Annual Issue Category 2020-2021.
- 28. Managing Editor of the Special Issue of the Journal Applied Numerical Methods (APNUM) on "Nonlinear Waves: Computation and Theory-XI", 2022-2023

# **ORGANIZER/SESSION CHAIR:**

- 1. The 8th annual Southeastern-Atlantic Regional Conference on Differential Equations, University of Georgia, Athens, GA, November 4-5, 1988.
- 2. The 13th IMACS World Congress on Computation and Applied Mathematics, Dublin, Ireland, July 22-26, 1991.
- 3. The 7th IMACS International Conference on Computer Methods for PDEs, New Brunswick, NJ, June 22-24, 1992.
- 4. The 2nd IMACS International Conference on Computational Physics, St. Louis, MO, October 6-9, 1993.
- 5. The 14th IMACS World Congress on Computation and Applied Mathematics, Atlanta, GA,July 11-15, 1994. (Two multiple sessions)
- 6. The First International Conference on Neural, Parallel, and Scientific Computations, Atlanta, GA, March 28-31, 1995.
- 7. International Conference on Pure and Applied Mathematics (ICPAM95), Bahrain, Nov. 19-22, 1995.
- 8. The 11th International Conference on Mathematical and Computer Modelling and Scientific Computing (ICMCM & SC), Washington, DC, March 31 April 3, 1997.
- 9. The 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics, Berlin, Germany, Aug. 24-29, 1997.
- 10. Seventh International Colloquium on Numerical Analysis and Computer Science with Applications, Plovdiv, Bulgaria, Aug. 13-17, 1998.
- 11. Session Chair: Introducing one of the key speakers at the IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 12-15, 1999.
- 12. Chairman and Conference Coordinator of the IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 12-15, 1999.
- 13. The 16th IMACS World Congress on Computation and Applied Mathematics, Lausanne, Aug. 21-25, 2000.

- 14. The First SIAM conference on Computational Science and Engineering, Washington, DC, Sept. 21-24, 2000.
- 15. Chairman and Conference Coordinator of the Second IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 9-12, 2001.
- 16. Session Chair: Introducing the first key speaker at the Second IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 9-12, 2001.
- 17. Publicity Chair of the 39th Annual ACM Southeast Conference, Athens, GA, March 16-17,2001.
- 18. Session chair: The 39th Annual ACM Southeast Conference, Athens, GA, March 16-17,2001.
- 19. Chairman and Conference Coordinator of the Third IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 7-10, 2003.
- 20. Session chair: The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'02: Las Vegas, June 2002).
- 21. Session Chair: Introducing the first key speaker at the Third IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 7-10, 2003.
- 22. Program chair and conference coordinator of the Third IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 7-10, 2003.
- 23. Session Chair: The 2003 Arab Conference on Information Technology (ACIT'03), December 20-23, 2003, Alexandria, Egypt.
- 24. Session organizer and chair: "Nonlinear waves: computation and theory" at the 17<sup>th</sup> IMACSWorld Congress, Paris, France, July 11-15, 2005 (with Bratsos Athanasios).
- 25. Session Chair: The 2005 Arab Conference on Information Technology (ACIT'05), December 6-8, 2005, Amman, Jordan.
- 26. Session Chair at the meeting on "Mathematical Models for Complex Systems", The Palazzone, Cortona (AR), Italy, September 26 to 29, 2007.
- 27. Session Chair: The 2008 Arab Conference on Information Technology (ACIT'08), December 16-18, 2008, Tunis, Tunisia.
- 28. Session Chair: Introducing one of the keynote speakers at the Sixth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 23-26, 2009.
- 29. Session Chair: "Internet and The Web", December 15, 2009 at The 2009 Arab Conferenceon Information Technology (ACIT'09), December 15-17, 2009, University of Science and Technology, Sana'a, Yemen.
- 30. Session Chair: Introducing the First Key Speaker, December 16, 2009, at The 2009 Arab Conference on Information Technology (ACIT'09), December 15-17, 2009, University o9fScience and Technology, Sana'a, Yemen.
- 31. Session Chair: Introducing the Second Key Speaker, December 17, 2009 at The 2009 Arab Conference on Information Technology (ACIT'09), December 15-17, 2009, University of Science and Technology, Sana'a, Yemen.
- 32. Session Chair: Introducing the first keynote speakers at the Seventh IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 03-07, 2011.
- 33. Session Chair I: at the MASCOT 2011, 11th Meeting on Applied Scientific Computing and Tools, Rome, Italy, October 19-21, 2011.
- 34. Session Chair II: at the MASCOT 2011, 11th Meeting on Applied Scientific Computing and Tools, Rome, Italy, October 19-21, 2011.
- 35. Session Chair: "AI& Expert Systems and Information Security" at The International Arabic Conference on Information Technology ACIT'2011, Riyadh, Saudi Arabia, December 11-14, 2011.
- 36. Session chair: "Tools for HPC(CP2)" at the SIAM Conference on Parallel Processing for

- Scientific Computing (PP12), Savannah, Georgia, February 15-17, 2012,
- 37. Director of the Minisymposia and workshops on Nonlinear Waves track at The 19th IMACS World Congress Real Centro Universitario El Escorial-Maria Cristina, Spain, August 26, 2013 – August 30, 2013
- 38. Session Chair: Introducing the First Keynote Speaker, December 10, 2012 at The 2012 Arab Conference on Information Technology (ACIT'13), December 10-14, 2012, Zarqa University, Amman, Jordan.
- 39. An organizer and a moderator for the Big Data Meeting as a chair of the GACRC-AC, December 5, 2012. This meeting was supported by OVPIT and OVPR at UGA.
- 40. Session Chair at the 19th IMACS World Congress real Centro Universitario El Escorial-Maria Cristina, Spain, August 26, 2013 – August 30, 2013
- 41. Session Chair: "Algorithms and Applications", at The 2013 Arab Conference on Information Technology (ACIT'14), December 17-19, 2013, Sudan University of Scienceand Technology. Sudan.
- 42. Session Chair: Introducing the First Keynote Speaker, December 18, 2013 at The 2013 Arab Conference on Information Technology (ACIT'14), December 17-19, 2013, Sudan University of Science and Technology. Sudan.
- 43. Session Chair: Introducing the First Keynote Speaker, March 25, 2013 at The Eighth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, March 25-28, 2013, Athens, GA, USA
- 44. Session organizer and chair: "Numerical simulations for solving nonlinear waves equations", at The Eighth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, March 25-28, 2013, Athens, GA, USA (with Constance Schober).
- 45. Session Chair: Numerical simulations for 1+2 dimensions coupled nonlinear Schrodingertype equations, Conference in Numerical Analysis 2014 (NumAn 2014), September 2-5, 2014 Chania, Greece
- 46. Session Chair: "SOFTWARE ENGINEERING", at The 2014 Arab Conference on Information Technology (ACIT'15), December 9-11, 2014, Nazwa University, Oman.
- 47. Session Chair: "SOFTWARE ENGINEERING", at The 2015 Arab Conference on Information Technology (ACIT'16), December 14-17, 2015, Amman, Jordan.
- 48. Session organizer and chair: "Numerical simulations for solving nonlinear waves equations", at The Ninth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, April 01-04, 2015 Athens, GA, USA.
- 49. Session Chair: Introducing the First Keynote Speaker, April 01, 2015 at The Ninth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, April 01-04, 2015, Athens, GA, USA
- 50. Session Chair: Introducing the First Keynote Speaker, at The 2016 Arab Conference on Information Technology (ACIT'16), December 6-8, 2016, Sultan Moulay Slimane University, Beni-Mellal, Morocco.
- 51. Session Chair: Introducing one of the Keynote Speakers, at The 2016 Arab Conference on Information Technology (ACIT'16), December 6-8, 2016, Sultan Moulay Slimane University, Beni-Mellal, Morocco.
- 52. Session Organizer and Chair: "Nonlinear Evolution Equations and Wave Phenomena", at The IMACS World Congress, December 10-14, 2016, Xiamen, China
- 53. A member of the organizing Committee of "The Georgia Informatics Symposium", GeorgiaCenter for Continuing Education, October 11th, 2016.
- 54. Session organizer and chair: "Numerical simulations for solving nonlinear waves equations", at The Tenth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, March 29- April 01, 2017Athens, GA, USA.
- 55. Session Chair: "Information Technology" at The 2017 Arab Conference on Information Technology (ACIT'17), December 22-24, 2017, Tunisia.
- 56. Session Chair: "IOT and Security" at The 8th International Conference on Information Technology ICIT 2017 IOT, May 17-18, 2017, Jordan

- 57. Session Chair: "Computer and Network Security II" at the international Conference on newTrends in Computing Sciences (ICTCS 2017), Oct. 11-13, 2017. King Hussein University, Jordan.
- 58. Session Chair: at the MASCOT 2018 Meeting on Applied Scientific Computing and Tools, Rome, Italy, October 2-5, 2018.
- 59. Session Chair: The International Conference on Fractional Differentiation and its Applications(ICFDA), University of Jordan, 16-18 July 2018.
- 60. Program chair and conference coordinator of the for the Twelfth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, March 30, April 01, 2022, Athens, GA.
- 61. Session Chair: Introducing the First Keynote Speaker, March 30, 2022 at the Twelfth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, March 30, April 01, 2022, Athens, GA
- 62. Session Chair: Introducing a Keynote Speaker, November 23, 2022 at the 2022 ArabConference on Information Technology (ACIT2022), November 22-24, Abu Dhabi campus of Al-Ain University, UAE.

# **REFEREE FOR JOURNALS:**

- AIMS Book Series: Differential Equations and Dynamical Systems, 2006 2007.
- Journal of Computational Physics
- SIAM Journal on Scientific and Statistical Computing
- SIAM Journal on Applied Mathematics
- Applied Numerical Mathematics (IMACS Journal)
- Computers and Mathematics with applications
- Mathematics and Computers in Simulation
- Numerical Mathematics for Partial Differential Equations
- IEEE Software
- Institute of Physics Publishing Research Journal, UK, 1997 present
- Simulation: The Journal of the Society for Computer Simulation, Hong Kong
- Journal of Science and Technology/Sultan Qaboos University of Oman
- Derasat/Journal of Sciences, University of Jordan, Jordan
- Journal of Physics A: Mathematical and General
- Journal of Physics B: Molecular and Optical Physics
- Numerical Algorithms, C. Brezinski, Editor-in-Chief, France.
- Reviewer of a database book by Munib Qtaishat published by the University of Jordan, Amman, Jordan, May 1999.
- The Korean Journal of Computational and Applied Mathematics.
- Journal of Parallel and Distributed Computing.
- IEEE Transactions on Systems, Man, and Cybernetics.

#### REVIEWER FOR CONFERENCES/PROGRAM COMMITTEE MEMBER:

- 1. Symposium on Computers and Information Sciences, May 5-6, 1986, College of Scienceand Technology, Jerusalem.
- 2. The 13th IMACS World Congress on Computation and Applied Mathematics, Dublin, Ireland, July 22-26, 1991.
- 3. The 12th International Symposium on Distributed Computing Systems, Pacific ConventionPlaza, Yokahoma, Japan, June 9-12, 1992.
- 4. The 21st Annual International Conference on Parallel Processing, Ann Arbor, MI, August 17-21, 1992.
- 5. The 7th IMACS International Conference on Computer Methods for Partial Differential Equations, June 22-24, 1992, Rutgers University, New Brunswick, New Jersey.
- 6. Program Committee member of The 2nd IMACS International Conference on

- Computational Physics, St. Louis, MO, October 6-9, 1993.
- 7. The 14th IMACS World Congress on Computation and Applied Mathematics, Atlanta, GA,July 11-15, 1994.
- 8. The First International Symposium on High-Performance Computer Architecture (HPCA), Raleigh, North Carolina, Jan. 22-25, 1995.
- 9. The 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics, Berlin, Germany, Aug. 24-29, 1997.
- 10. Program Committee member of the First Southern Symposium on Computation, University of Southern Mississippi, Hattiesburg, MS, Dec. 4-5, 1998.
- 11. Chair of the Scientific Program Committee of the IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 12-15, 1999.
- 12. The 16th IMACS World Congress on Computation and Applied Mathematics, Lausanne, Aug. 21-25, 2000.
- 13. Chair of the Scientific Program Committee of the Second IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 9-12, 2001.
- 14. The 39th Annual ACM-SE Conference, Athens, GA, March 16-17,2001.
- 15. A member of the Steering Committee of the 2000 Arab Conference on Information Technology (ACIT' 2000) Oct. 31 Nov. 2, 2000, Zarka, Jordan.
- 16. A member of the Steering Committee of the 2001 Arab Conference on Information Technology (ACIT' 2000) Nov. 13 15, 2001, Jordan University of Science and technology, Jordan.
- 17. Chair of the Scientific Program Committee of the Third IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 7-10, 2003.
- 18. A member of the Steering Committee of the 2002 Arab Conference on Information Technology (ACIT'2002) December 16-19, 2002, Doha, Qatar.
- 19. A member of the Review Committee of Applied Mathematics, Operational Research and Optimization Symposium held under the CESA'2003 in Lille, France, July 9-11, 2003.
- 20. A member of the Steering Committee of the 2003 Arab Conference on Information Technology (ACIT'2003) December 20-23, 2003, Alexandria, Egypt.
- 21. A member of the Steering Committee of the 2004 Arab Conference on Information Technology (ACIT'2004) December 12-15, 2004, Mentouri University of Constantine, Algeria.
- 22. A reviewer for the 2004 Arab Conference on Information Technology (ACIT'2004) December 12-15, 2004, Mentouri University of Constantine, Algeria.
- 23. Program Chair and conference coordinator of the Fourth IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 11-14, 2005.
- 24. A reviewer for the 17th IMACS World Congress, Paris, France, July 11-15, 2005.
- 25. A member of the International Program Committee for the 17<sup>th</sup> IMACS World Congress, Paris, France, July 11-15, 2005.
- 26. A member of the Steering Committee of the 2005 Arab Conference on Information Technology (ACIT'2005), Al-Isra Private University, Jordan December 6-8, 2005.
- 27. A reviewer for the 2005 Arab Conference on Information Technology (ACIT'2005) December 6 8, 2005, Al-Isra Private University, Jordan.
- 28. A reviewer for the 2006 Arab Conference on Information Technology (ACIT'2006) December 19-21, 2006, Yarmouk University, Jordan.
- 29. A member of the Steering Committee of the 2006 Arab Conference on Information Technology (ACIT'2006), December 19-21, 2006, Yarmouk University, Jordan.
- 30. Program Chair and conference coordinator of the Fifth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 16-19, 2007.

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- 31. Chair of the Scientific Program Committee of the Fifth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 16-19, 2007.
- 32. A Member of the Program Committee of the 3rd International Conference on IT; ICIT 2007, Al-Zaytoonah University, Jordan, May 9-11, 2007.
- 33. A member of the Steering Committee of the 2007 Arab Conference on Information Technology (ACIT'2007), November 26-28, 2007, Arab Academy for Science and Technology, Lattakia, Syria.
- 34. A member of the Steering Committee of the IACeT'2008 International Arab Conference one-Technology, October 15-16, 2008, Arab Open University, Amman-Jordan, Jordan.
- 35. A member of the Steering Committee of the 2008 Arab Conference on Information Technology (ACIT'2008), December 16-18, 2008, University of Sfax, Hammamet City-Tunisia, Tunisia.
- 36. A Reviewer for the 2008 Arab Conference on Information Technology (ACIT'2008), December 16-18, 2008, University of Sfax, Hammamet City-Tunisia, Tunisia.
- 37. Program Chair and Conference Coordinator of the Sixth IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena:" Computation and Theory", Athens, GA, March 23-26, 2009.
- 38. Member of the Program Committee of the 3rd International Conference on IT; ICIT 2009, Al-Zaytoonah University, Jordan, June 3-5, 2009.
- 39. Program Chair and Conference Coordinator of the "IMACS World Congress on Computational and Applied Mathematics & Applications in Science and Engineering", Athens, GA, August 3-7, 2009.
- 40. Program Chair and Workshop Coordinator of the "Workshop on Mathematical Biology and Numerical Analysis", Athens, GA, August 1-2, 2009.
- 41. Chair of a Session at the MASCOT 2010 Conference, Las Palmas de Gran Canaria, Spain,Oct 22-22, 2010.
- 42. Member of the Steering Committee for The 11th International Arab Conference on Information Technology (ACIT 2010), Benghazi-Libya, December 14-16, 2010.
- 43. Program Chair and Conference Coordinator of the Seventh IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena:" Computation and Theory", Athens, GA, April 3-7, 2011.
- 44. Chair of the Scientific Program Committee of the Seventh IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA,
- 45. Member of the International Program Committee of The 5<sup>th</sup> International Conference on Information Technology, May 11-13, 2011, AL-Zaytoonah University of Jordan, ICIT'11, Amman, Jordan.
- 46. Member of the Steering Committee for the 12th International Arab Conference on Information Technology (ACIT 2011), Riyadh, December 11-14, 2011.
- 47. Member of the Steering Committee for the 13th International Arab Conference on Information Technology (ACIT 2012), Zarqa University, Amman, Jordan, December 10-14,2012.
- 48. Program Chair and Conference Coordinator of the Eighth IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena:" Computation and Theory", Athens, GA, March 25-28, 2013.
- 49. Member of the Scientific Program Committee of the Eighth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena:" Computation and Theory", Athens, GA, March 25-28, 2013.
- 50. A member of the organizing committee of The 19th IMACS World Congress Real Centro Universitario El Escorial-Maria Cristina, Spain, August 26, 2013 – August 30, 2013
- 51. A member of the International Program Committee of The 19th IMACS World CongressReal Centro Universitario El Escorial-Maria Cristina, Spain, August 26, 2013 – August 30, 2013.
- 52. A member of the Scientific Committee of the "Conference on Nonlinear Systems and Summer School" in Katmandu, Nepal, May-June 2013.
- 53. Program Chair and conference coordinator of the Eighth IMACS International Conferenceon 16

- "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 25-28, 2013.
- 54. Chair of the Scientific Program Committee of the Eighth IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 25-28, 2013.
- 55. A member of the Steering Committee for the 2013 Arab International Conference on Information Technology (ACIT'14), December 17-19, 2013, Sudan University of Scienceand Technology,
- 56. A member of the International Program Committee for The Fifth International Symposiumon Innovations in Information & Communications Technology (ISIICT 2014),22-24 April, 2014, Philadelphia University, Amman Jordan
- 57. A member of the Steering Committee for the 2014 Arab International Conference on Information Technology (ACIT'15), December 9-11, 2014, Nazwa, Oman
- 58. A member of the Steering Committee for the 2015 Arab International Conference on Information Technology (ACIT'16), December 15-17, 2015, Al-Isra University, Jordan
- 59. Program Chair and conference coordinator of the Ninth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 01 - 04, 2015.
- 60. Member of the International Scientific Program Committee of the 20th IMACS World Congress, December 10-14, 2016, Xiamen University, China
- 61. A member of the organizing Committee of the 20th IMACS World Congress, December 10-14, 2016, Xiamen University, China
- 62. A member of the Steering Committee for the 2016 Arab International Conference on Information Technology (ACIT'16), December 6-8, 2016, Beni-Mellal, Morocco.
- 63. A member of the International Advisory Committee for the 8th. International Conference on Information Technology, Al-Zaytoona University, Jordan, May 17-18, 2017
- 64. Program Chair and conference coordinator of the Tenth IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 29 - April 01, 2017.
- 65. A member of the Steering Committee for the 2017 Arab International Conference on Information Technology (ACIT'17), December 22-24, 2017, Tunisia.
- 66. Chair of the Scientific Program Committee of the Tenth IMACS International Conferenceon "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 29 - April 01, 2017.
- 67. A Program Committee member of the second workshop on Open Science in Big Data, or OSBD 2017 (https://osbd.github.io/2017), at the international *IEEE BigData* conference inDecember 11-14, 2017.
- 68. A Program Committee member of the Southern Data Science Conference (SDSC18), April13-14, 2018. Atlanta, USA
- 69. A member of the Scientific Committee for The MASCOT 2018 Meeting on Applied Scientific Computing and Tools, Rome, Italy, October 2-5, 2018.
- 70. A member of the Steering Committee for the 2018 Arab International Conference on Information Technology (ACIT'18), November 28-30, 2018, Lebanon.
- 71. Chair of the Scientific Program Committee of the Eleventh IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 17-19, 2019.
- 72. A member of the Steering Committee for the 2019 Arab International Conference on Information Technology (ACIT'19), 3-9 December, 2019, Abu Dhabi, UAE.
- 73. A member of the International Advisory Committee for The Second International Conference on New Trends in Computing Sciences (ICTCS2019), October 9-11, 2019, Amman, Jordan.
- 74. A member of the International Advisory Board for the Ninth International Conference on Modeling, Simulation and Applied Optimization in Morocco, March 24th-26<sup>th</sup>, 2021.
- 75. Co-Chair of the 2019 IMACS World Congress, October 3-6, 2020, Rome, Italy.
- 76. A Program Committee member of the second workshop on Open Science in Big Data, or OSBD 17

- 2019 (https://osbd.github.io/2019), at the international IEEE BigData conference in 2019.
- 77. A member of the Steering Committee for the 2020 Arab International Conference on Information Technology (ACIT'20), November, 2020, Egypt.
- 78. A member of the Steering Committee for the 2021 Arab International Conference on Information Technology (ACIT'21), December, 2021, Oman.
- 79. A member of the International Advisory Board for the Ninth International Conference on Modeling, Simulation and Applied Optimization in Morocco, March 23th-26th 2022 (http://www.icmsao.org)
- 80. A member of the Scientific Committee for the 2022 Arab International Conference on Information Technology (ACIT'22), November 2022, UAE.
- 81. A member of the International Advisory Board for the 9th ICMSAO conference 2023, April 26-28, Marrakesh, Morocco.
- 82. Co-Chair of the 2022 IMACS World Congress, September 11-15, 2023, Rome, Italy.

# **REVIEWER FOR FUNDING AGENCIES:**

- NSF grant proposals
- External reviewer of a grant proposal submitted to the Sultan Qaboos University, Muscat, Oman.
- External Reviewer: Board of Regents Support Fund (RCS proposals) for Fiscal Year 2002-03, Louisiana.
- Member of an NSF Numerical Computing Panel, July 31 August 1, 2006.
- Member of an NSF BigData Panel, July, 2015.
- Member of an NSF Panel, October 16-18, 2018.

#### **REVIEWER FOR PUBLISHING COMPANIES:**

- Brooks/Cole publishing: reviewer for Ward Cheney and David Kincaid's Numerical Mathematics and Computing, 6<sup>th</sup> edition, 2006.
- West Educational Publishing, a division of West Services, Inc.
- Macmillan Publishing Company, a division of MacMillan, Inc.
- PWS-Kent Publishing Company
- Kluwer Academic Publishers
- Addison Wesley Publishers
- Elsevier Publishing

# **OTHER ACTIVITIES:**

- 1. External evaluator for promotion of a computer science faculty member at the University of Jordan, Amman, Jordan, 1999.
- 2. External evaluator for promotion of a computer science faculty member at the Zarka Private University in Jordan, 1999.
- 3. External evaluator for a promotion of a computer science faculty member at the Princess Summya University College for Technology, Jordan, April 2000.
- 4. External evaluator for a promotion of a computer science faculty member at the SultanQaboos University, Muscat, Oman, May 2000.
- 5. External evaluator for promotion of a computer science faculty member at the Zarka Private University in Jordan, 2000.
- 6. External evaluator for promotion of a computer science faculty member at the Zarka Private University in Jordan, 2002.
- 7. External evaluator for a promotion of a computer science faculty member at the SultanQaboos University, Muscat, Oman, October 2004.
- 8. Evaluator of the Excellence in Research by Graduate Students Award nominees, UGA, 2004.

- 9. External evaluator for a promotion of a Computer Science faculty member at King AbdulAziz University, Jeddah, Kingdom of Saudi Arabia, December 2005.
- 10. Judge for the Who's Who competition, Graduate School at UGA, 2005, 2006.
- 11. External evaluator for promotion of a computer science faculty member at the Al IsraPrivate University in Jordan, 2006.
- 12. External evaluator for promotion of a computer science faculty member at the Philadelphia University in Jordan, 2006
- 13. External evaluator for a promotion of a computer science faculty member at the SultanQaboos University, Muscat, Oman, May 2006.
- 14. External evaluator for a promotion of a computer science faculty member at the Open Arab University, Kuwait, August, 2007.
- 15. External evaluator for the Quality Improvement Fund (QIF) for the Palestinian Tertiary Education Project that is funded by The World Bank International Development Association, and the European Union (EU), June 2007.
- 16. External evaluator for promotion of a computer science faculty member at the University of Jordan, Amman, Jordan, 2007.
- 17. External evaluator for promotion of a Computer Science faculty member at the University of Jordan, Amman, Jordan, April, 2008.
- 18. External evaluator for promotion of a Computer Science faculty member at the University of Jordan, Amman, Jordan, May, 2008.
- 19. External evaluator for promotion of a Computer Science faculty member at the Middle East University for Graduate Studies, Amman, Jordan, June, 2008.
- 20. External evaluator for promotion of a Computer Science faculty member at the University of Jordan, Amman, Jordan, July, 2008.
- 21. External evaluator for promotion of a Computer Science faculty member at the University of Jordan, Amman, Jordan, August, 2009.
- 22. External evaluator for promotion to a Full Professor for Adel Boules, University of NorthFlorida, August 2010.
- 23. External evaluator for promotion to a Full Professor of a Computer Science faculty memberat the University of Jordan, Amman, Jordan, May 2010.
- 24. External evaluator for promotion to an Associate Professor of a Computer Science facultymember at the Zarka Private University, Jordan, May 2010.
- 25. External evaluator for promotion to a Full Professor for Adel Boules, University of NorthFlorida, August 2011.
- 26. External evaluator for promotion to a Full Professor of a Computer Science faculty memberat the University of Jordan, Amman, Jordan, February 2011.
- 27. External evaluator for promotion to a Full Professor of a Computer Science faculty memberat the University of Jordan, Amman, Jordan, February 2012.
- 28. External evaluator for promotion to a Full Professor for Baofeng Feng, Math Department, The University of Texas-Pan American, USA, 2012
- 29. Attending the Coalition for Academic Scientific Computing (CSCS) Spring Meeting, VA, February 29th March 2nd 2012 and Fall meeting in Arlington, VA, October 3rd 5th, 2012on behalf of the GACRC at UGA. CASC is an educational nonprofit organization with 71 member institutions representing many of the nation's most forward- thinking universities and computing centers. CASC is dedicated to advocating the use of the most advanced computing technology to accelerate scientific discovery for national competitiveness, globalsecurity, and economic success, as well as develop a diverse and well prepared 21st century workforce.
- 30. Attending the SIAM Conference on Nonlinear Waves and Coherent Structures, June13-16,2012, The University of Washington, Seattle, WA, USA. This is in part supported from myNSF grant (**Award Number:** 1048816) to recruit underrepresented participants for the Eighth IMACS conference to be held in March 25-28, 2013, UGA, Athens, Georgia.
- 31. Attending the yearly meeting of the Deans of the Information Technology of the Arab Universities who are members of the Arab league universities, December 09., 2012, Zarqa University, Jordan.

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- 32. Attending the third annual GPU Technology Conference (GTC) sponsored by Nvidia, the world's most important event showcasing breakthroughs in computational science with the GPU (graphics processing unit), San Jose's McEnery Convention Center, May 14-17, 2012.
- 33. A member of the External Review Team for Accreditation of Diploma in Information Technology in University of Sharjah (UoS), 20–24 October 2013
- 34. External evaluator for promotion of a computer science faculty at the University of Jordan, Amman, Jordan, 2014.
- 35. External evaluator for promotion of a computer science faculty at the Zarka Private University in Jordan, 2014.
- 36. A member of the External Review Team for Renewal of Accreditation Master of Science in Information Systems, Ajman University of Science and Technology December 16-20, 2016.
- 37. External evaluator for promotion to Associate Professor of a computer science faculty at the Hail University in Saudi Arabia, 2017.
- 38. External evaluator for promotion to Associate Professor of a computer science faculty atKuwait University in Kuwait, 2019.
- 39. External evaluator for the promotion of a computer science faculty member at The Alahlia University, Jordan, April 2020
- 40. External evaluator for the promotion of a computer science faculty member at the University of Hail, Saudi Arabia, December 2021
- 41. External evaluator for the promotion of a computer science faculty member at the University of Hail, Saudi Arabia, July 2022
- 42. External evaluator for the promotion of a computer science faculty member at the University of Hail, Saudi Arabia, October 2022
- 43. External evaluator for the promotion of a computer science faculty member at the University of Texas, USA, December 2022
- 44. External evaluator for the promotion of a computer science faculty member at the Khalifa University of Science and Technology, UAE, November, 2022
- 45. External evaluator for the promotion of a computer science faculty member at The Hashemite University, Jordan, April 2022

# TRAINEE COURSES ON PARALLEL COMPUTERS:

- 1. Cyber 205 Training Seminar, University of Georgia, ACMC, August 31 September 4, 1987.
- 2. A short course on Parallel Computation, organized by Lloyd Fosdick, SIAM 35th Anniversary Meeting, Denver, Colorado, October 11, 1987.
- 3. IBM 3090 Vector Seminar, University of Georgia, March 23-24, 1988.
- 4. Two Intel scientific computer training courses on the Hyper-cube, Beaverton, Oregon, June 13-17, 1988.
- 5. Teaching Parallel Computing, Portland, Oregon, April 28 May 1, 1991.
- 6. Forum on Parallel Computing Cirricula, Wellesley College, MA, March 31 April 1, 1995.
- 7. SGI Origin 2000 Seminar, University of Georgia, Jan. 22-23, 1998.

#### **Workshops:**

- 1. Computational Science Education Project (CSEP) Workshop for Educators, August 15-17,1994 at Cornell Theory Center, Ithaca, NY. Sponsored by the Department of Energy and Co-sponsored by the National Science Foundation \$1,206.75.
- 2. 1995 Academic Affairs Faculty Symposium "Peer Review: The Scholarship of Teaching", sponsored by UGA, Helen, GA, April 7-8, 1995.
- 3. Method of Lines for Time-Dependent Problems, University of Kentucky, May 31 June 4,1995.
- 4. Workshop on Teaching Calculus Using Computers, Mutah University, Jordan, April 8-10,1996.
- 5. Symposium on "Preparing the Fulbright Exchange Program for the 21st Century", Emory University, The Carter Center, Atlanta, GA, De**2**06, 1996.

- 6. Workshop on ABET accreditation, Clemson University, SC, Aug. 2009.
- 7. MathWorks: Workshop on Parallel Computing with Matlab at the University of Georgia, 10/25/2011.
- 8. OPENACC GPU Programming workshop that has been sponsored by The Pittsburgh Supercomputing Center, the National Institute for Computational Sciences and GeorgiaTech University of South Carolina, SC, October 16-17, 2012.
- 9. Organized two workshops on "CUDA programming for GPUs", March 2012, UGA.
- 10. Organized two workshops on "CUDA programming for GPUs", April 2013, UGA.
- 11. Workshop Organizer, CUDA programming for GPU's (Athens, GA), April 2014.

# **REFEREED JOURNAL PUBLICATIONS:**

- 1. Amirian, Soheyla, Thiab R. Taha, Khaled Rasheed, and Hamid R. Arabnia, "Generative Adversarial Network Applications in Creating a Meta-Universe", in Computational Science and Computational Intelligence; 2021 International Conference on IEEE CPS (IEEE XPLORE, Scopus), IEEE, 2021.
- 2. Amirian, Soheyla, Thiab R. Taha, Khaled Rasheed, and Hamid R. Arabnia, "An Integrated Approach for Video Captioning and Applications", The 2021 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'21), IEEE, 2021.
- 3. Taha, Thiab, Triki:Comment on: "Exact analytic solitary wave solutions for the RKL model" [Mathematics and Computers in Simulation, Vol 80, Issue 4 (2009)849—854, Mathematics and Computers in Simulation, MATCOM-D-20-00894, V 182, 234-234, 2021
- 4. A.S. Hendy, M.A. Zaky, Thiab R. Taha, Energy preservation computational approach forthe acceleration of the universe expansion model in de Sitter spacetime, March 2021, accepted in the Journal of Computational and Applied Mathematics.
- Hendy, A. S., Taha, T. R., Suragan, D., & Zaky, M. A. (2022). An energy-preserving computational approach for the semilinear space fractional damped Klein-Gordon equation with a generalized scalar potential. APPLIED MATHEMATICAL MODELLING, 108, 512-530. doi:10.1016/j.apm.2022.04.009
- 6. Amirian, S., Rasheed, K., Taha, T. R., & Arabnia, H. R. (2020). Automatic Image and Video Caption Generation with Deep Learning: A Concise Review and Algorithmic Overlap. *IEEE ACCESS*, 8, 218386-218400. doi:10.1109/ACCESS.2020.3042484
- 7. Amirian, Soheyla, Khaled Rasheed, Thiab R. Taha, and Hamid R. Arabnia (2020), "Automatic Generation of Descriptive for Video Clips Using Deep Learning," in Transactions on Computational Science Computational Intelligence; Series Title: Advances in Artificial Intelligence Applied Cognitive Computing; Springer ID: 89066307 (Book ID: 495585 1 En), in press.
- 8. A Short Review on Image Caption Generation with Deep Learning", The 23rd International Conference on Image Processing, Computer Vision and Pattern Recognition(IPCV'19), Amirian, Soheyla, Khaled Rasheed, Thiab R. Taha and Hamid R. Arabnia (2019), World Congress in Computer Science, Computer Engineering and Applied Computing (); ISBN: 1-60132-506-1, pp. 10-18, Las Vegas, Nevada, USA
- 9. A NEW GENERAL FRACTIONAL-ORDER DERIVATIVE WITH RABOTNOV FRACTIONAL-EXPONENTIAL KERNEL, Yang Xiao-Jun, Ragulskis Minvydas, TahaThiab, Thermal Science **2019** Volume 23, Issue 6 Part B, Pages: 3711-3718
- 10. Discovering regulators in Post-Transcriptional control of the Biological Clock of Neurospora crassa using Variable Topology Ensemble Methods on GPUs; <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8471097">https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8471097</a>, Ahmad Al-Omari, James Griffith, Cristian Caranica, Thiab Taha. H-Bernd Schuttler, & Jonathan Arnold: IEEE access 6, 54582-54594, 2018
- 11. Discovering Regulatory Network Topologies Using Ensemble Methods on GPGPUs WithSpecial Reference to the Biological Clocksip of Neurospora crassa, AHMAD AL-OMARI, JAMES

- GRIFFITH, MICHAEL JUDGE, THIAB TAHA, JONATHAN ARNOLD, AND H-BERND SCHÜTTLER, IEEE ACCESS, Received January 16, 2015, accepted February 1, 2015, date of publication February 3, 2015, date of current version February 18, 2015. *Digital Object Identifier*, 10.1109/ACCESS.2015.2399854.
- 12. M. S. Ismail and Taha, Thiab R., "Parallel Methods and Higher Dimensional NLS Equations", Abstract and Applied Analysis Journal, Volume 2013 (2013), Article ID 497439, http://dx.doi.org/10.1155/2013/497439.
- 13. Al-Omari, Ahmad, Schuttler, Heinz-Bernd, Arnold, Jonathan, and Taha, Thiab, "Solving Nonlinear Systems of First Order Ordinary Differential Equations Using a Galerkin Finite Element Method", *IEEE ACCESS*, May 2013, pp. 408-417.
- 14. Al-Omari, J. Arnold, T. Taha, and H.-B. Schuttler. 2013. Solving large Nonlinear Systems of First-order Ordinary Differential Equations with Hierarchical Structure Using Multi-GPGPUs and an Adaptive Runge Kutta ODE Solver. IEEE Access. DOI 10.1109/ACCESS.2013.2290623
- 15. Arnold, Jonathan, Taha, Thiab and Deligiannidis, Leonidas, "GKIN: A Tool for DrawingGenetic Networks", Network Biology Journal, 2012, 2(1):26-37.
- 16. Triki, Houria and Taha, Thiab, "Solitary Wave Solutions for a Higher Order Nonlinear Schrödinger Equation", Journal Mathematics and Computers in Simulation,82(2012), pp.1333-1340.
- 17. Triki, Houria, Taha, Thiab and Wazwaz, A., "Solitary Wave Solutions for a GeneralizedKdV-mKdV Equation with Variable Coefficients", *Mathematics and Computers in Simulation*, 80(9): 1867-1873, 2010.
- 18. Triki, Houria and Taha, Thiab, "Exact Analytical Solitary Wave Solutions for the RKL Model", *Journal Mathematics and Computers in Simulation*, 80(2009), pp. 849-854.
- 19. B. Aleman-Meza, Y. Yu, H-B. Schuttler, J. Arnold, and T. Taha, "KINSOLVER: A Simulator for Computing Large Ensembles of Biochemical and Gene Regulatory Networks", *Computers and Mathematics with Applications*, Vol 57 (2009), pp. 420-435
- 20. Triki, Houria and Taha, Thiab, "On the Calculation of the Timing Shifts in the Variable-coefficient Korteweg-de Vries Equations", *Journal Mathematics and Computers in Simulation*, Vol. 80, Issue 1, 2009, pp. 212-222.
- 21. Triki, Houria and Taha, Thiab, "Calculation of Timing and Amplitude Jitter in a Dispersion-manage Korteweg-de Vries System", the *Journal Mathematics and Computers in Simulation*, 80(2009), pp. 660-665.
- 22. Triki, Houria and Taha, Thiab, "The sub-ODE method and soliton solutions for a higherorder dispersive cubic-quintic nonlinear Schrödinger equation", *Chaos, Solitons & Fractals*, 42(2009), pp. 1068-1072.
- 23. Ismail, M. and Taha, T., "A Linearly Implicit Conservative Scheme for the Coupled Nonlinear Schrödinger Equations", *Special Issue: Nonlinear Waves: Computation and Theory VI, Journal of Mathematics and Computers in Simulation*, Vol. 74, issues 4-5, pp.302-311, 2007.
- 24. Taha, Thiab R. and Xu, Xiangming, "Parallel Split-Step Fourier Methods for the CoupledNonlinear Schrödinger Type Equations", *The Journal of Supercomputing*, Vol. 32, No. 1,pp. 5 23, 2005.
- 25. Xu, Xiangming and Taha, Thiab R., "Parallel Split-Step Fourier Methods for Nonlinear Schrödinger Type Equations", *Special issue on Computational Science and Applications of the Journal of Mathematical Modeling and Algorithms* (JMMA), pp. 1-17, 2003.
- 26. A.-M. Wazwaz and Taha, T.R., "Compact and Non-compact Structures in a Class of Nonlinearly Dispersive Equations", *Special Issue of The Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-II"*, Vol. 62,Issues 1-2, pp. 171-190, 2003.
- 27. Guo, J. and Taha, T.R., "Parallel Fourier Algorithms for Solving Higher KdV Equations", Special Issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-II", Vol. 62, Issues 1-2, pp. 41-52, 2003.
- 28. Ismail, M. S. and Taha, T. R., "Numerical Simulations of Coupled Nonlinear Schrödinger Equation", *Special Issue of the Journal Mathematics and Computers in Simulation on "Optical Solitons"*, Vol. 56, Issue 6, 2001, pp. 547-562.
- 29. Ismail, M. S. and Taha, T. R., "A Numerical Study of Compactons", Journal

- Mathematics and Computers in Simulation, (47) 6 (1998) pp. 519-530.
- 30. Arabnia, H. R. and Taha, T. R., "A Parallel Numerical Algorithm on a ReconfigurableMultiring Network", *Telecommunication Systems Journal*, Special issue: High Performance Computing and Interconnection Network, 10 (1998) 1, 2 pp. 185-202.
- 31. Taha, T. R., "A Parallel Algorithm for Numerical Simulations of KdV-like Equations", *Special Issue of the Journal Mathematical Modelling and Scientific Computing*, vol. 8, (ISSN 1067-0688) 1997.
- 32. Taha, T.R., "Inverse Scattering Transform Numerical Schemes for Nonlinear Evolution Equations and the Method of Lines (MOL)", *Applied Numerical Mathematics*, Vol. 20,Nos. 1-2 (1996) 181-187
- 33. Thiab R. Taha, "Numerical Simulations of the KdV-MKdV Equation", *International Journal of Modern Physics C*, Vol. 5, No. 2 (1994) 407-410.
- 34. Thiab R. Taha, "Numerical Simulations of the Complex Modified Korteweg-de Vries Equation", Special issue, "Solitons, Nonlinear Wave Equations and Computation" *Mathematics and Computers in Simulation*, 37 (1994) 461-467.
- 35. Thiab R. Taha, "A Differential-Difference Equation for a KdV-MKdV Equation", *Journal Mathematics and Computers in Simulation*, 35 (1993) 509-512.
- 36. Taha, T.R., and Peiqing Jiang, "Parallel Algorithms for Solving Banded Toeplitz Linear Systems", *International Journal of Neural, Parallel & Scientific Computations*, Vol. 1,(1993) 199-208.
- 37. Taha, T.R., "A Numerical Scheme for the Nonlinear Schrödinger Equation", *Computers and Math. Application*, Vol. 22, No. 9, (1991) 77-84.
- 38. Taha, T.R., "Numerical Simulation of the Nonlinear Schrödinger Equation", *The Journal Mathematics and Computers in Simulation*, Vol. 32, 3, (1990) 309-312.
- 39. Taha, T.R. and Ablowitz, M.J., "Analytical and Numerical Aspects of Certain Nonlinear Evolution Equations. IV. Numerical, Modified Korteweg-de Vries Equation", *J. Comp. Phys.*, 77, (1988) 540-548.
- 40. Taha, T.R., "Numerical Schemes for Nonlinear Evolution Equations", *The College Journal of Science & Technology* (Jerusalem), 2, (1986) 105-116.
- 41. Satsuma, J., Taha, T.R., and Ablowitz, M.J., "On a Backlund Transformation and Scattering Problem for the Modified Intermediate Long Wave Equation", *J. Math. Phys.*, 25, (1984) 900-904.
- 42. Taha, T.R. and Ablowitz, M.J., "Analytical and Numerical Aspects of Certain Nonlinear Evolution Equations. I. Analytical", *J. Comp. Phys.*, 55, (1984) 192-202.
- 43. Taha, T.R. and Ablowitz, M.J., "Analytical and Numerical Aspects of Certain Nonlinear Evolution Equations. II. Numerical, Nonlinear Schrödinger Equation", *J. Comp. Phys.*, 55, (1984) 203-230.
- 44. Taha, T.R. and Ablowitz, M.J., "Analytical and Numerical Aspects of Certain Nonlinear Evolution Equations. III. Numerical, Korteweg-deVries Equation", *J. Comp. Phys.*, 55, (1984) 231-253.
- 45. Nakamura, A. and Taha, T.R., "Another Form of the Generalization of the KdV Equationinto the Integro Differential Equations", *J. Phys. Soc.* Japan, 51, (1982) 681-683.
- 46. Nakamura, A. and Taha, T.R., "Another Form of the Generalization of the KdV Equationinto the Integro-Differential Equations", *J. Phys. Soc.* Japan, 51, (1982) 2695-2696.
- 47. Salah, M. and Taha, T., "Reactant Concentration in Channels", *Egyptian Computer Journal*, (1979).

# **BOOK OR BOOK CHAPTERS:**

- 1. Arnold, J., Schüttler, H.-B., Logan, D.A., Battogtokh, D., Griffith, J., Arpinar, I.B., Bhandarkar, S., Datta, S., Kochut, K.J., Kraemer, E., Miller, J.A., Sheth, A., Strobel, G., Taha, T., Aleman-Meza, B., Doss, J., Harris, L., and Nyong, A., 2004, Metabolomics in Chapter 22 of *Handbook of Industrial Mycology*, Marcel-Dekker, NY, pp. 597-633.
- 2. Taha, T.R., "A Parallel Algorithm for an Investigation of a Self-Focusing Singularity of Higher KdV Equations", Fifth International Symposium on Domain Decomposition Methods for

- PDES, (D. Keyes et al. eds.) SIAM, Philadelphia, PA, (1992) 597-604.
- 3. Taha, T.R., "A Differential-difference Equation for Higher Order Nonlinear Schrödinger Equation", *Computational and Applied Mathematics II Differential Equations*, (W.F. Ames and P. J. van der Houwen, eds.), (1992) 361-364.
- 4. Taha, T.R., "A Partial-Difference Equation for the Complex Modified Korteweg-deVries Equation", *Advances in Computer Methods for Partial Differential Equations VII* (R. Vichnevetsky, ed.) IMACS, (1992) 721-725.
- 5. Taha, T.R. and Ablowitz, M.J., "IST Numerical Schemes for Nonlinear Evolution Equations of Physical Interest", in *Numerical Approximation of Partial Differential Equations* (E. L. Ortiz, ed.) North-Holand, Amsterdam, (1987) 425-433.
- 6. Taha, T.R. and Ablowitz, M.J., "Numerical Simulations of the Modified Korteweg-de Vries Equation", in *Advances in Computer Methods for Partial Differential Equations -VI* (R. Vichnevetsky and R.S. Stepleman, eds.) IMACS, (1987) 217-219.
- 7. Taha, T.R. and Ablowitz, M.J., "Numerical Simulations of Certain Nonlinear Evolution Equations of Physical Interest", in *Advances in Computer Methods for Partial Differential Equations V* (R. Vichnevetsky and R. S. Stepleman, eds.) IMACS, (1984)318-321.

# **REFEREED CONFERENCE PUBLICATIONS:**

- 1. Zengyan Wang, Fangyu Li, Thiab R. Taha, Hamid R. Arabnia; "2D Multi-Spectral Convolutional Encoder-Decoder Model for Geobody Segmentation"; Proceedings of International Conference on Computational Science and Computational Intelligence (CSCI2018: December 2018, USA); "Artificial Intelligence" Research Track (CSCI-ISAI); IEEECPS, Double-blind reviewed, Regular Reearch Paper, 6 pages; 19% paper acceptance rate, IEEE CPS (IEEE Xplore, ...), 2018.
- Soheyla Amirian, Zengyan Wang, Thiab R. Taha, Hamid R. Arabnia; "Dissection of Deep Learning with Applications in Image Recognition"; Proceedings of International Conferenceon Computational Science and Computational Intelligence (CSCI 2018: December 2018, USA); "Artificial Intelligence" Research Track (CSCI-ISAI); IEEE CPS, Double-blind reviewed, Regular Reearch Paper, 7 pages; 19% paper acceptance rate, IEEE CPS (IEEEXplore, ...), 2018.
- 3. Aguar, K., Arabnia, H. R., Gutierrez, J. B., Potter, W. D., & Taha, T. R. (2016). Making CS Inclusive: An Overview of Efforts to Expand and Diversify CS Education. In *Proceedings of the 2016 International Conference on Computational Science and Computational Intelligence (CSCI'16)* (pp. 321-326). USA: IEEE CPS. doi:10.1109/CSCI.2016.66
- 4. Aguar, K., Arabnia, H., Gutierrez, J. B., Potter, W., & Taha, T. (2017). Towards Interest-based Adaptive Learning and Community Knowledge Sharing. In *Proceedings of the 2017International Conference on Frontiers in Education: Computer Science and Computer Engineering* (pp. 58-61). Las Vegas, Nevada.
- 5. Zengyan Wang, Hamid R. Arabnia, Thiab R. Taha, Review of Person Re-identification Methods (541-546), December 12-14, 2017 International Conference on Computational Science and Computational Intelligence.
- 6. Aguar, K., Safaei, S., Arabnia, H., Gutierrez, J., Potter, W., and Taha, T., *Reviving Computer Science Education through Adaptive, Interest-based Learning*, December 12-14, 2017, 1161-1166, International Conference on Computational Science and Computational Intelligence.
- 7. Hersonky S, Arabnia, H, Taha, TR, Proceedings of the 2017 International Conference on Computational Science and Computational Intelligence. IEEE CPS. 8 pages. 01 Feb 2018
- 8. A. Mukhopadhyay, C-W Lim, S.M. Bhandarkar, H. Chen, A. New, T. Liu, K. Rasheed and T. Taha, Analysis of Surface Folding Patterns of DICCCOLS Using the GPU-Optimized Geodesic Field Estimate, *Proc. MICCAI Workshop on Mesh Processing in Medical ImageAnalysis*, September 26, 2013, Nagoya, Japan.
- 9. Thiab R. Taha and Harini Medikonduru, "Numerical Simulations for 1+2 Dimensional Coupled Nonlinear SchrodingerEquation", *Proceeding of the 13th. International Arab Conference on Information Technology ACIT 2012*, December 10-13, 2012, Zarqa University,

- Jordan.
- 10. Thiab Taha, Wei Yu, "Finite Difference Methods for Numerical Simulations for 1+2 Dimensional NLS Type Equations", *Proceedings of the 12th. International Arab Conference on Information Technology*, ACIT 2011, pp. 129 133, December 11-14, 2011, paper #2723.
- 11. T. Taha, W. Yu, M. Ismail, "Numerical Simulations for 1+2 Dimensional Nonlinear Schrodinger Type Equations", *Proceedings of the ACIT 2010*, December 14-16, 2010, paper#759.
- 12. Triki, Houria and Taha, Thiab, "Solitary Wave Solutions for the NLSE with Higher OrderEffects", *Proceedings of the International Arabic Conference on Information Technology ACIT '2008*, University of Sfax, Tunisia, December 16-18, 2008, paper #56.
- 13. Leonidas Deligiannidis, Thiab R. Taha, Boanerges Aleman-Meza, Yihai Yu, H.-B. Schuttler, Jonathan Arnold, "GKIN: A Graphical User Interface for KINSOLVER", *Proceedings of The International Arabic Conference on Information Technology ACIT'2005*, Al Isra Private University, Amman, Jordan, December 6-8, 2005, pp. 245-251.
- 14. Ismail, M., Taha, T.R., "A Linearly Implicit Conservative Scheme for the CNLS Equation", *Proceedings of the 17<sup>th</sup> IMACS World Congress on Computation and Applied Mathematics*, Paris, France, July 11-15, 2005
- 15. Taha, T.R. and Liu, R., "Parallel Split-step Fourier Methods for the CMKdV Equation", *Proceedings of the 17<sup>th</sup> IMACS World Congress on Computation and Applied Mathematics*, Paris France, July 11-15, 2005.
- 16. T. Taha and R. Liu, "Parallel Split-Step Fourier Methods for the CMKD Equation", the *Proceedings of the 2003 International Conference on Parallel and Distributed Processing Techniques and Applications*, (PDPTA'03: Las Vegas, USA, June 2003), pp. 1317-1323.
- 17. Taha, Thiab R. and Xu, Xiangming, "A Parallel Split-Step Method for the CNLS Equation", *Proceedings of the International Arabic Conference on Information Technology ACIT'2002*, University of Qatar, Doha Qatar, pp. 1052-1059, December 16-19, 2002.
- 18. X. Xu and T. Taha, "Parallel Split-Step Fourier Methods for the Nonlinear Schrödinger Equation", the *Proceedings of the 2002 International Conference on Parallel and Distributed Processing Techniques and Applications*, (PDPTA'02: Las Vegas, USA, June2002), pp. 132-139.
- 19. Guo, J. and Taha, T.R., "A Parallel Implementation of the Split-Step Fourier Method forSolving Higher KdV Equations", *Proceedings of the 39<sup>th</sup> ACM Southeast Conference*, Athens, GA, March, 2001.
- 20. Ismail, M. S. and Taha, T. R., "Finite Element Method for a Numerical Simulation of the Coupled Nonlinear Schrödinger Equation", *Proceedings of the 16th IMACS2000 World Congress*, Lausanne, Aug., 21-25, 2000.
- 21. Bratsos, A. G. and Taha, T. R., "A Parametric Linearized Finite-Difference Method for the Solution of the Nonlinear Schrödinger Equation", *Proceedings of the 16th IMACS2000 World Congress*, Lausanne, Aug., 21-25, 2000.
- 22. M. S. Ismail, and T. R. Taha, "A Numerical Study of Korteweg-de Vries Like Equations", Proceedings of the 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics, Vol. 2 (1997) 131-136 (A. Sydow, editor) Berlin, Germany, Aug 24-29, 1997.
- 23. Taha, T. R. and Schiesser, W. E., "Methods of Lines Solution of the K(2,2) Compacton(KdV-type) Equation", *Proceedings of the 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics*, vol. 2 (1997) 127-130 (A. Sydow, editor) Berlin, Germany, Aug 24-29, 1997
- 24. Taha, T.R., "A Parallel-Vector Algorithm for IST Numerical Schemes", *Proceedings of theFirst International Conference on Neural, Parallel, and Scientific Computations*, V. 1 (1995) pp. 449-452(S. K. Aityan, etc. eds.) Atlanta, GA, March 28-31, 1995.
- 25. Taha, T.R. and Peng Lu, "A Parallel Algorithm for Solving a 4-Diagonal Toeplitz LinearSystem of Equations", *Proceedings of the 1994 Transputer Research and Applications*, 7(NATUG7): 91-96 (H. R. Arabnia, ed.), Athens, GA, Oct. 23-26, 1994.
- 26. Taha, T.R., "IST Numerical Schemes", *Proceedings of the 14th IMACS World Congress on Computation and Applied Mathematics*, Vol. 3, 1513-1516 (W. F. Ames, ed.) Atlanta, GA,(1994).
- 27. Taha, T.R. and Arabnia, H.R., "Exploiting a Ring-Based MIMD Multicomputer For Numerical

- Problems", *Proceedings of the 1993 IEEE Region 10 International Conferenceon Computers, Communication, Control and Power Engineering*, (Ed. Yuan Baozong) Beijing, China, Vol. 1, pp. 221-225, 1993. Refereed and Invited paper.
- 28. Taha, T.R., and JerJiann Liaw, "An Algorithm for Solving a 4-Diagonal Toeplitz Linear System of Equations on Vector Computers", *Proceedings of the Sixth SIAM Conference on Parallel Processing for Scientific Computing*, (R. Sincovec, etc., Eds.) Norfolk, VA, (1993)510-514.
- 29. Taha, T.R., and Peiqing Jiang, "A Parallel Algorithm for Solving Periodic Tridiagonal Toeplitz Linear Systems", Proceedings of the Sixth SIAM Conference on Parallel Processing for Scientific Computing, Norfolk, VA, (1993) 491-496.
- 30. Taha, T.R., "A Parallel-Vector Algorithm for Solving Periodic Tridiagonal Linear Systems of Equations", in the *Proceedings of the Sixth Distributed Memory Computing Conference*, (Q. Stout and M. Wolfe, eds.), Portland, Oregon (1991) 506-509.
- 31. Taha, T.R., "A Differential-Difference Equation for Higher Nonlinear Schrödinger Equation", in the *Proceedings of the 13th IMACS World Congress on Computation and Applied Mathematics*, (R. Vichnevetsky, J.J.H. Miller, eds.) Dublin, Ireland (1991) Vol 2,844-845.
- 32. Taha, T.R., "Solution of Periodic Tridiagonal Linear Systems of Equations on a Hypercube", in the *Proceedings of the Fifth Distributed Memory Computing Conference* (D. W. Walker and Q. F. Stout, eds.), Charleston, SC, (1990), Vol. 1, 346-350.
- 33. Taha, T.R., "A Parallel Algorithm for Solving Higher KdV Equations on a Hypercube", in the *Proceedings of the Fifth Distributed Memory Computing Conference* (D. W. Walker and Q. F. Stout, eds.), Charleston, SC, (1990) Vol. 1, 564-567.
- 34. Taha, T.R. "A Parallel Algorithm for the IST Schemes", *The Proceedings of the Fourth Conference on Hypercubes, Concurrent Computers, and Applications*, Monterey, CA (1990) 1223-1226.
- 35. Taha, T.R., "A new IST Numerical Scheme for the Nonlinear Schrödinger Equation", *Proceedings of the IMACS 1st International Conference on Computational Physics*, Boulder, CO., (1990) 154-159.
- 36. Hasegawa, A., Kodama, Y. and Taha, T.R., "Optimization of bit rate in optical fiber using optical solitons", *Proc. 6th Topical Meeting on Integrated and Guided-Wave Optics*, (1982)pp. 1-3.

#### **OTHER PUBLICATIONS:**

- 1. Book of Abstracts for the Twelfth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 30- April 01, 2022.
- 2. Book of Abstracts for the Eleventh IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, 2019.
- 3. Book of Abstracts for the Tenth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, 2017.
- 4. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-IX", Vol. 127:1-1, September 2016.
- 5. Book of Abstracts for the Ninth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April 01-04, 2015.
- 6. Book of Abstracts for the Eighth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 25-28, 2013.
- 7. Book of Abstracts for the Seventh IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, April03-07, 2011.
- 8. Book of Abstracts for the "IMACS World Congress on Computational and Applied Mathematics & Applications in Science and Engineering", Athens, GA, August 3-7, 2009.
- 9. Book of Abstracts for the Sixth IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, GA, March 23-26, 2009.
- 10. Book of Abstracts for the Fifth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, 2007, Athens, GA.
- 11. Book of Abstracts for the Fourth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation 26d Theory, April 2005, Athens, GA.

- 12. Book of Abstracts for the Third IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, 2003, Athens, GA.
- 13. Book of Abstracts for the Second IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, 2001, Athens, GA.
- 14. Book of Abstracts for the First IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, April1999, Athens, GA.
- 15. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-X", Vol. 82, Issue 7, pp. 1149, March 2012.
- 16. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-IX", Vol. 82, Issue 6, pp. 945, February 2012.
- 17. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-VIII", Vol. 80, Issue 2, pp. 647, December 2009.
- 18. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-VII", Vol. 80, Issue 1, pp. 1, September 2009.
- 19. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-V", Vol. 74, Issue 2-3, pp. 71, March 2007.
- 20. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-VI", Vol. 74, Issue 4-5, pp. 265, March 2007.
- 21. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-IV", Vol. 69, issues 5-6, pp. 423, August 2005.
- 22. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-III", Vol. 69, issues 3-4, pp. 223, June 2005.
- 23. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory II", Vol. 62, No. 1-2, March 2003.
- 24. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Optical Solitons", Vol. 56, Issue 6, July 2001.
- 25. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Method of Lines", Vol. 56, Issue 2, May 2001.
- 26. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory", Vol. 55, No. 4-6, March 2001.
- 27. Book Review, "An Introduction to Parallel Computational Fluid Dynamics", S. Succi and F.Papetti, Nova Science Publishers, Commack, N.Y., 1997, IEEE Concurrency, Parallel, Distributed & Mobile Computing/October December 1998, No. 4, p. 78.
- 28. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Computation of Nonlinear Phenomena", Vol. 43, No. 1, Jan. 1997.
- 29. Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Solitons, Nonlinear Wave Equations and Computation", Vol. 37, No. 4-5, Dec. 1994.

#### **INVITED PRESENTATIONS:**

- 1. Optimization of Bit Rate in Optical Fiber Using Optical solitons, by A. Hasegawa, Y. Kodama, and Thiab R. Taha, presented at the conference "Sixth Topical Meeting on Integrated and Guided-Wave Optics", (Jan. 6-8, 1982), Asilomar Conference Center, PacificGrove, California.
- 2. On comparisons between numerical schemes which are based on the Inverse scattering transform and certain known numerical schemes for the KdV and nonlinear Schrödinger equations, Florida State University, April 5, 1982, Mathematics Colloquium.
- 3. On numerical and analytical aspects of certain nonlinear evolution equations. I. University of Georgia, Physics Department, September 29, 1982.
- 4. On numerical and analytical aspects of certain nonlinear evolution equations. II. University of Georgia, Physics Department, October 6, 1982.
- 5. On Comparison between numerical schemes which are based on the IST and certain known numerical schemes for the Korteweg-de Vries and the nonlinear Schrödinger equations, Taha, T. and Ablowitz, M., First International conference on Mathematics in the Gulf area, Riyadh, Saudi

- Arabia, October 17-21, 1982.
- 6. On comparison between IST scheme, and other schemes for the KdV and NLS equations. Department of Statistics and Computer Science, University of Georgia, October, 1982.
- 7. On Solitons and exactly solvable nonlinear partial differential and partial difference equations, Ablowitz, M., and Taha, T., The fifth IMACS International Symposium on Computer Methods for PDE's, Bethlehem, PA, June 1984.
- 8. Numerical simulations of certain nonlinear evolution equations of physical interest, Taha, T., and Ablowitz, M., The fifth IMACS International Symposium on computer methods for PDE's, Bethlehem, PA, June 1984.
- 9. On Comparisons between numerical schemes which are based on the Inverse scattering transform and other known numerical schemes for certain nonlinear evolution equations, SIAM Summer Meeting, July 16-20, 1984, University of Washington, Seattle.
- 10. IST numerical schemes for nonlinear evolution equations of physical interest, by Thiab R.Taha and Mark J. Ablowitz, presented at the SIAM Spring Meeting, June 24-26, 1985, Pittsburgh, Pennsylvania.
- 11. IST numerical schemes for nonlinear evolution equations of physical interest, by Thiab R.Taha and Mark J. Ablowitz, presented at the ISNA, Sept. 17-19, 1985, Madrid, Spain.
- 12. IST numerical schemes for solving nonlinear evolution equations. Computer Sci. Dept., University of Jordan, Amman, Jordan, April 13, 1986.
- 13. On Comparison of numerical methods for solving Quasi-Tridiagonal systems of equations, presented at the Symposium on Computers and Information Sciences, May 5-6, 1986, College of Science and Technology, Jerusalem.
- 14. Numerical schemes for nonlinear evolution equations, presented at the Symposium on computers and Information Sciences, May 5-6, 1986, College of Science and Technology, Jerusalem.
- 15. Numerical simulation of the Modified Korteweg-de Vries equation, The sixth IMACS International Symposium on computer methods for PDE's, Bethlehem, PA, June 1987.
- 16. Numerical methods for solving differential equations, presented at the SIAM 35th Anniversary Meeting, Denver, Colorado, October 12-15, 1987.
- 17. Derivation and implementation of numerical methods for nonlinear evolution equations solvable by IST, University of Georgia, Seminar in Mathematics, Physics, and Computations, January 28, 1988.
- 18. On comparison of numerical methods for solving differential equations subjected to periodic boundary conditions, The 8th annual Southeastern-Atlantic Regional Conference on Differential Equations, University of Georgia, Athens, GA, November 4-5, 1988.
- 19. A parallel algorithm for the IST schemes, presented at the Fourth Conference on Hypercube Concurrent Computers and Applications, Monterey, California, March 6 9, 1989.
- 20. A new IST numerical scheme for the nonlinear Schrödinger equation, presented at the 1989SIAM Annual Meeting, July 17-21, 1989, San Diego, California.
- 21. A parallel algorithm for solving higher KdV equations on a Hypercube, presented at the Fifth Distributed Memory Computing Conference, Charleston, SC, April 9-12, 1990.
- 22. Solution of Periodic Tridiagonal Systems of Equations on a Hypercube, presented at the Fifth Distributed Memory Computing Conference, Charleston, SC, April 9-12, 1990.
- 23. A new IST numerical scheme for the Nonlinear Schrödinger equation, presented at the IMACS International Conference on Computational Physics, Boulder, CO, June 11-15,1990.
- 24. Parallel Processing with the Intel Hypercube, presented at the Center for SimulationalPhysics Workshop, Univ. of Georgia, Athens, GA, 1991.
- 25. A Parallel-Vector Algorithm for Solving Periodic Tridiagonal Linear Systems of Equations, presented at the Sixth Distributed Memory Computing Conference, Portland, OR, April 28 -May 1, 1991.
- 26. A Parallel algorithm for an Investigation of a Self-Focusing Singularity of Higher KdV Equations, presented at the Fifth Conference on Domain Decomposition Methods for PDES, Norfolk, VA, May 6 8, 1991.
- 27. A Differential-Difference Equation for Higher Nonlinear Schrödinger Equation, presented at the 13th IMACS World Congress on Computation and Applied Mathematics, Dublin, Ireland, July 22-26,

1991.

- 28. A Parallel-Vector Algorithm for an Investigation of a self focusing Singularity of HKdV Equation, presented at the Tenth Parallel Circus, Oak Ridge, October 25-26, 1991.
- 29. Parallel Processing with the Intel Hypercube, presented at the Center for SimulationalPhysics Workshop, Univ. of Georgia, Athens, GA, February 17-21, 1992.
- 30. A Parallel-Vector Algorithm for solving higher KdV Equations, presented at the PermianBasin Supercomputing Conference, Odessa, Texas, March 13-15, 1992.
- 31. Nonlinear Evolution Equations, presented at the Georgia Tech-UAB International Conference on Differential Equations and Mathematical Physics, Atlanta, GA, April 22-28,1992.
- 32. A Partial-Difference Equation for the Complex Modified Korteweg-de Vries Equation, presented at the 7th IMACS International Conference on Computer Methods for PDEs, NewBrunswick, NJ, June 22-24, 1992.
- 33. Parallel Processing with the Intel Hypercube, presented at the Center for Simulation Physics Workshop, University of Georgia, Athens, GA, February 22-26, 1993.
- 34. An Algorithm for solving a 4-Diagonal Toeplitz Linear System of Equations on Vector Computers, presented at the Sixth SIAM Conference on Parallel Processing for Scientific Computing, Norfolk, VA, March 22-25, 1993.
- 35. A Parallel Algorithm for Solving Periodic Tridiagonal Toeplitz Linear Systems, presented at the Sixth SIAM Conference on Parallel Processing for Scientific Computing, Norfolk, VA, March 22-24, 1993.
- 36. IST Numerical Schemes for Nonlinear Evolution Equations, presented at the First International Conference on Dynamic Systems and Applications, Atlanta, GA, May 26-29,1993.
- 37. Nonlinear Differential-Difference Equations for Certain Nonlinear Evolution Equations, presented at the 2nd IMACS Conference on Computational Physics, St. Louis, MO, October6-9, 1993.
- 38. A Parallel-Vector Algorithm for an Investigation of a self-focusing singularity of HKdV equation, presented at the 1994 Scalable High Performance Computing Conference, Knoxville, TN, May 23-25, 1994.
- 39. IST Numerical Schemes, presented at the 14th IMACS World Congress on Computationand Applied Mathematics, Atlanta, GA, July 11-15, 1994.
- 40. A Parallel Algorithm for Solving a 4-Diagonal Toeplitz Linear System of Equations, presented at the 1994 Transputer Research and Applications 7 (NATUG7), Athens, GA,Oct. 23-26, 1994.
- 41. A Parallel-Vector Algorithm for IST Numerical Schemes, presented at the First International Conference on Neural, Parallel, and Scientific Computations, Atlanta, GA, March 28-31, 1995.
- 42. IST Numerical Schemes for Nonlinear Evolution Equations and the Method of Lines, presented at the Workshop on The Method of Lines for Time-Dependent Problems, Lexington, KY, May 31, 1995 June 3, 1995.
- 43. Method of Lines Solution of the K(2,2) Compacton (KdV-type) Equation, presented at the ICIAM95, The Third International Congress on Industrial and Applied Mathematics, July 3-7, 1995 Hamburg, Germany.
- 44. A Survey of IST Numerical Methods (Invited Talk), presented at the International Conference on Pure and Applied Mathematics (ICPAM95), Bahrain, Nov. 19-22, 1995.
- 45. Parallel Computing, Al-Zaytoonah University, Amman, Jordan, Dec. 25, 1995.
- 46. Parallel Processing, Universite Cadi Ayyad, Marrakkech, Morocco, April 19, 1996, (Invitedby the Moroccan-American Commission for Educational and Cultural Exchange (MACECE).
- 47. IST numerical methods, Universite Cadi Ayyad, Marrakkech, Morocco, April 23, 1996,(Invited by the (MACECE).
- 48. A parallel algorithm for Numerical Simulations of KdV-like equations, 11th International Conference on Mathematical and Computer Modelling, and Scientific Computing (ICMCM&SC), Washington, DC, March 31 April 3, 1997.
- 49. Methods of Lines Solution of the K(2,2) Compacton (KdV-type) Equation, 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics, Berlin, Germany, Aug. 24-29, 1997.

- 50. A Numerical Study of Korteweg-de Vries Like Equations, 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics, Berlin, Germany, Aug. 24-29,1997.
- 51. Impact of the Internet on Education, presented as the **keynote** lecture on the second conference on Information Technology in Higher Education in Palestine at An-Najah University, Palestine, May 21-23, 1998.
- 52. A Parallel Algorithm for HKdV equations, presented at the second conference on Information Technology in Higher Education in Palestine at An-Najah University, Palestine, May 21-23, 1998.
- 53. A Parallel Algorithm for Numerical Simulations of KdV-Like Equations, presented as an **invited** 40 minute lecture at the Seventh International Colloquium on Numerical Analysisand Computer Science with Applications, Plovdiv, Bulgaria, Aug. 13-17, 1998.
- 54. Numerical Simulations of KdV-Like Equations, presented as an **invited** 40 minute lecture at the Ninth International Colloquium on Differential Equations, Plovdiv, Bulgaria, Aug. 18-23, 1998.
- 55. A survey of Inverse Scattering Transform Numerical Schemes, presented at the 1999 IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 12-15, 1999.
- 56. Numerical Simulations of Coupled Nonlinear Schrödinger Equation, presented at the 1999SIAM Annual Meeting, Atlanta, GA, May 12-15, 1999.
- 57. Numerical Simulations of Compacton Equations, presented at the 1999 SIAM Annual Meeting, Atlanta, GA, May 12-15, 1999.
- 58. A Parametric Linearized Finite-difference Method for the Solution of the Nonlinear Cubic Schrödinger Equation, presented at the 16<sup>th</sup> IMACS World Congress on Computation andApplied Mathematics, Lusanne, Aug. 12-15, 2000.
- 60. A Finite Element Solution for the Coupled Schrödinger Equation, presented at the 16<sup>th</sup> IMACS World Congress on Computation and Applied Mathematics, Lusanne, Aug. 12-15,2000.
- 61. Spit-step Fourier Algorithms for the Complex Modified Korteweg-de Vries Equation Numerical Simulations, the Second IMACS International Conference on Nonlinear Evolution equations and Wave Phenomena: Computation and Theory, Athens, GA, April 9-12, 2001.
- 62. Parallel Split-Step Fourier Methods for the Nonlinear Schrödinger Equations, The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'02: Las Vegas, June 2002).
- 63. A Parallel Split-Step Method for the CNLS Equation, The International Arabic Conferenceon Information Technology ACIT'2002, University of Qatar, Doha Qatar, December 16-19, 2002.
- 64. Parallel Numerical Simulation of Nonlinear Schrödinger Type Equations, the Third IMACS International Conference on Nonlinear Evolution equations and Wave Phenomena: Computation and Theory, Athens, GA, April 7-10, 2003.
- 65. Parallel Split-Step Fourier Methods for the CMKdV Equations, The 2003 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'03: Las Vegas, June 2003).
- 66. A Parallel Algorithm for Numerical Simulation of WDM Optical Fiber Communication Systems, The 2003 Arab Conference on Information Technology (ACIT'03), December 20-23, 2003, Alexandria, Egypt.
- 67. Parallel Computing: Introduction and Applications, Institute of Bioinformatics (IOB), UGA, November 11, 2004.
- 68. "Parallel Numerical Methods for Solving Nonlinear Evolution Equations", presented as aninvited talk at the "International Conference on Nonlinear Waves, Integrable systems and Applications", June 4 8, 2005, University of Colorado at Colorado Springs, Colorado.
- 69. "Parallel Split-step Fourier Methods for the CMKdV Equation", presented at the 17<sup>th</sup> IMACS World Congress on Computation and Applied Mathematics, Paris, France, July 11-15, 2005.
- 70. "A Linearly Implicit Conservative Scheme for the CNLS Equation", presented at the 17<sup>th</sup> IMACS World Congress on Computation and Applied Mathematics, Paris, France, July 11-15, 2005.
- 71. "GKIN: A graphical User Interface for KINSOLVER", presented at *The InternationalArabic Conference on Information Technology ACIT* '2005, Al Isra Private University, Amman, Jordan, December 6-8, 2005.

- 72. "Parallel Numerical Methods for Solving Nonlinear Evolution Equations", presented at *The International Arabic Conference on Information Technology ACIT' 2006*, Yarmouk University, Irbid, Jordan, December 19-21, 2006.
- 73. "Parallel Numerical Methods for Solving Nonlinear Evolution Equations", presented at The University of Graduate Studies, Amman, Jordan, December 18, 2006.
- 74. "Web Based Interface for Numerical Simulations of Nonlinear Evolution Equations", presented at the *Fifth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory*, Athens, GA, April 16-19, 2007.
- 75. "Parallel Numerical Methods for Solving Nonlinear Evolution Equations that model OpticalFiber Communication Systems", The 2008 SIAM Conference on Parallel Processing for Scientific Computing, March 12-14, 2008, Atlanta, GA.
- 76. "Parallel Numerical Methods for Solving Nonlinear Evolution Equations", The 7<sup>th</sup> AIMS Conference on Dynamical Systems and Differential Equations, University of Texas at Arlington, Texas, May 18-21, 2008.
- 77. "Solitary Wave Solutions for the NLSE with Higher Order Effects", presented at *The International Arab Conference on Information Technology, ACIT'2008*, December 16-18,2008, Tunis, Tunisia.
- 78. "Parallel Numerical Methods for Solving Nonlinear Evolution Equations", presented at *The International Arab Conference on Information Technology, ACIT'2008*, December 16-18, 2008, Tunis, Tunisia.
- 79. "A Tool to Exercise Numerical Simulation Algorithms", presented at the *Sixth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory*, Athens, GA, March 23-26, 2009.
- 80. "Web Based Interface for Numerical Simulations of Nonlinear Evolution Equations", presented as an invited talk at The 2009 Arab Conference on Information Technology (ACIT'09), December 15, 17, 2009, University of Science and Technology, Sana'a, Yemen.
- 81. Keynote Speaker: Keynote on Behalf of the Steering Committee, December 15, 2009, of The 2009 Arab Conference on Information Technology (ACIT'09), December 15-17, 2009, University of Science and Technology, Sana'a, Yemen.
- 82. Invited Keynote "Parallel Numerical Methods for Solving Nonlinear Evolution Equations",the MASCOT 2010 Conference, Las Palmas de Gran, Spain, Oct. 20-22, 2010.
- 83. Invited talk "Parallel Numerical Methods for Solving Nonlinear Evolution Equations", TheFirst International Conference on Integrable Systems and Nonlinear Waves on the Gulf of Mexico, In Honor of Yuji Kodama's 60th Birthday, June 10-14, 2010, at South Padre Travelodge, South Padre Island, Texas.
- 84. "Numerical Simulations for 1+2-dimensional nonlinear Schrödinger type equations", The11<sup>th</sup> International Arab Conference on Information Technology (ACIT 2010), Benghazi- Libya, December 14-16, 2010.
- 85. Invited Keynote, "Nonlinear Waves" Georgia Scientific Computing Symposium Saturday, February 12, 2011, Emory University.
- 86. "A GUI Based Tool to Exercise Numerical Simulation Algorithms", presented at the Seventh IMACS International Conference on Nonlinear Evolution Equations and WavePhenomena: Computation and Theory, Athens, GA, April 03-07, 2011.
- 87. Invited Talk: "Finite Difference methods for Numerical Simulations for 1+2 Dimensional NLS Type Equations", The 12th International Arab Conference on Information Technology(ACIT 2011), December 11-14, 2011, Riyadh, Saudi Arabia.
- 88. Invited Keynote: "Numerical Methods for Numerical Simulations for 1+2 Dimensional NLSType Equations", the MASCOT 2011 Conference, Rome, Italy, Oct. 18-21, 2011.
- 89. *Invited talk* "Parallel Numerical Methods for Solving 1+2-Dimensional Nonlinear Schrodinger Type Equation" at the SIAM Conference on Parallel Processing for ScientificComputing (PP12), February 15-17, 2012, Savannah, Georgia.
- 90. Invited Talk: "Numerical Simulations for 1+2 Dimensional CNLS Type Equations", The13th International Arab Conference on Information Technology (ACIT 2012), December10-14, 2012, Amman, Jordan.

- 91. Invited talk at the 2<sup>nd</sup> International Workshop on Nonlinear and Modern Mathematical Physics, March 9-11, 2013 (http://math.usf.edu/2ndNMMP/), Tampa, Florida.
- 92. Invited Talk: "Numerical Simulations for 1+2 Dimensional Coupled Nonlinear Schrodinger Equations", the 19<sup>th</sup> IMACS World Congress Real Centro Universitario El Escorial-Maria Cristina, Spain, August 26, 2013-August 30, 2013.
- 93. Invited Talk: "PARALLEL NUMERICAL SIMULATIONS for 1+2 DIMENSIONAL COUPLED NONLINEAR SCHRÖDINGER TYPE EQUATIONS", The 2013 Arab Conference on Information Technology (ACIT'14), December 17-19, 2013, Sudan University of Science and Technology, Sudan.
- 94. Thiab Taha: "Using CUDA for GPUs with MPI to solve nonlinear evolution equations", presented at the Eighth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 25-28, 2014. (co- author: Jennifer Rouan)
- 95. Thiab Taha, "A GUI tool for numerical simulation methods", presented at the Eighth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 25-28, 2014 (co-author: Leonidas Deligiannidis)
- 96. Invited Talk: NUMERICAL SIMULATIONS for 1+2 DIMENSIONAL COUPLED NONLINEAR SCHRDINGER TYPE EQUATIONS, Conference in Numerical Analysis 2014 (NumAn 2014), September 2-5, 2014 Chania, Greece
- 97. INVITED Talk: HIGH PERFORMANCE COMPUTING USING CUDA PROGRAMMING ON GPUS, The 15th International Arab Conference on InformationTechnology (ACIT 2014), December 9-11, 2014, Nazwa, Oman
- 98. INVITED Talk: HIGH PERFORMANCE COMPUTING and Big Data Challenges, The 16th International Arab Conference on Information Technology (ACIT 2015), December 14-17, 2015, Amman, Jordan.
- 99. Invited Keynote: HIGH PERFORMANCE COMPUTING and Big Data Challenges, *MASCOT2015 14TH MEETING ON APPLIED SCIENTIFIC COMPUTING AND TOOLS*, Rome, Italy, June 09-12, 2015.
- 100. Invited talk: NUMERICAL SIMULATIONS for NONLINEAR SCHRÖDINGER TYPE EQUATIONS", at The IMACS World Congress, December 10-14, 2016, Xiamen, China
- 101. Invited Talk: Big Data and High-Performance Computing and new developments, The 2016 International Arab Conference on Information Technology(ACIT 2016), December 608, 2016, Ben Mellal, Morocco.
- 102. Invited talk: "Bigdata and the Internet of Things (IoT) Challenges and opportunities at ACIT 2017, 22-24, 2017, Tunisia.
- 103. Invited Keynote talk: ICFDA (The International Conference on Fractional Differentiation and itsApplications, University of Jordan, 16-18 July 2018.
- 104. Invited talk: ACIT 2018 conference in November 28-30, 2018, Lebanon.
- 105. Invited Talk: Shanghai University: December 08-15, 2018.
- 106. Invited Talk: Harbin School of Engineering, Harbin, China, May 2018.
- 107. Invited Keynote: The MASCOT 2018 Meeting on Applied Scientific Computing and Tools, Rome, Italy, October 2-5, 2018.
- 108. Invited talk: ACIT 2019 Conference, 3-6 December, 2019, Abu Dhabi, UAE.
- 109. Invited Talk at Shanghai University, Shanghai, 10/28 to 11/03/2019.
- 110. Invited Keynote talk at the Second International Conference on new Trends in Computing Sciences(ICTCS 2019), Oct. 9-11, 2019, Amman, Jordan

# MAJOR PROFESSOR FOR THE FOLLOWING STUDENTS:

- 1. S.T. Tsai "On Comparison of numerical methods for solving second order differential equations", MAMS, Summer 1983.
- 2. P.C. Chao "Comparison of running time of different computer systems utilized in solving certain nonlinear evolution equations by several numerical methods", MAMS, Summer 1985.

- 3. Ling Zhong "A comparison of parallel algorithms for the solution of tridiagonal linear systems of equations", MAMS, Spring 1989.
- 4. Lingjia Zeng, "Parallel algorithms for solving periodic banded linear systems of equations on a hypercube", MAMS, Summer 1990.
- 5. Jerjiann Liaw, "An algorithm for solving a 4-diagonal Toeplitz linear system of equations on vector computers", MAMS, Fall 1991.
- 6. Peiqing Jiang, "Parallel and Vector Algorithms for Solving Toeplitz Systems", MS, Summer 1992.
- 7. Peng Lu, "Domain Decomposition Methods with Correction in Piecewise Harmonic Function Space", MS, Summer 1995.
- 8. Nikolla P. Qafoku, "PV96", A mini model for continuous simulation of solute transport and other chemical phenomena in variable charge soils", MAMS, Fall 1998.
- 9. Boanerg Aleman Meza, "Advances in Numerical Solution of Kinetics Reactions", MSCS, 2001.
- 10. Xiangming Xu, "Paralel Split-Step Fourier Methods for the Nonlinear Schrödinger Equations", MSCS, 2001.
- 11. Ruihan Liu, "Numerical and Parallel Algorithms for the CMKdV Equation", MSCS, 2001.
- 12. Xiaoging Zeng, "Web-Based Simulation of Lake Lanier Water Quality", 2001.
- 13. Yihai Yu, "Stiff Problems in Numerical Simulation of Biochemical and Gene regulatory Networks", 2004.
- 14. Ryan Foster, MSCS, "Web Based Interface for Numerical Simulations of Nonlinear Evolution Equations", May 2007.
- 15. Shanshan Ding, MAMS, "Applying Mean-Reverting in Pricing European Options", August 2007.
- 16. Shruti Pai, in progress
- 17. Wei Yu, MS, "Numerical Methods for the Two Dimensional Nonlinear Schrodinger Equation", December 2010.
- 18. Harini Medikonduru, MS, "Numerical Methods for the Two Dimensional Coupled Nonlinear Schrodinger Equation", May 2012.
- 19. Jennifer Rouan, MS, May 2014
- 20. Ahmad Al-Orami, Major co-advisor, IPhD, OB, March 2015
- 21. GuanNan Wang, MS, June 2015
- 22. Brandon Posey, MAMS, in progress
- 23. BITA Kazemi Zahrani, MS in CS, November 2015.
- 24. Dileep Bodanki, MS, December 2016
- 25. Yuting, Zhou, MS, 2018
- 26. Yifan Dai, MAMS, 2018

# Member of the Advisory Committee for the following Ph.D. students:

- 1. Shafiuddin Ahmad, Department of Economics, College of Business Administration, UGA, 1988.
- 2. Munif Qtaishat, School of Education, UGA, 1988.
- 3. Ping-Cheng Chao, School of Education, UGA, 1990.
- 4. Randy B. Stepp, College of Business Administration, UGA, 1991.
- 5. Jon A. Higbie, College of Business Administration, UGA, 1992.
- 6. Moon Sig Kang, College of Business Administration, UGA, 1993.
- 7. Lakshmi Sundaram, College of Business Administration, UGA, 1993.
- 8. Guangming Xing, Computer Science Dept., UGA, 2001
- 9. Jinhua Guo, Computer Science Dept., UGA, 2002

- 10. Gita Williams, Computer Science Dept., UGA, 2003
- 11. Junfeng Qu, Computer Science Dept., UGA, 2004
- 12. Rabia Jafri, Computer Science Dept., UGA, 2009
- 13. Phillipa Rhodes, Computer Science Dept., UGA, 2007
- 14. Osama Al-Haj Hassan, Computer Science Dept., UGA, 2010.
- 15. Tomasz Oliwa, Computer Science Dept., UGA, 2013.
- 16. Karen Aguar, PhD, December 2017
- 17. Michael Cottrell, PhD, November 2017.
- 18. Milad Makkie, PhD, 2018
- 19. Saeid Safaei, PhD, November, 2021
- 20. Soheyla Amirian, PhD, August 2021
- 21. Mehdi Assefi, PhD, November 2021
- 22. Farzan Shenavar Masouleh, June 2022
- 23. Yue Wu, June 2022
- 24. Zengyan Wang, PhD, December 2022
- 25. Farid Gharehmohammadi, June 2022
- 26. Seyedsaed Rezayidemne, in progress
- 27. Ola Alqahtani, in progress
- 28. Kawkab Aldoshan, in progress
- 29. Fukun Liu, in progress

Member of the advisory committee for 46 M.S. and 22 MAMS students.

# **UNIVERSITY SERVICE:**

- 1. Appointed to the Graduate Faculty (Provisional) February 1985.
- 2. Appointed to the Graduate Faculty (Regular) October 1988.
- 3. Appointed to the Graduate Faculty of Applied Quantitative Sciences as a member of the Mathematics Subfaculty, January 1989.
- 4. Member of the Franklin College of Arts and Sciences Faculty Senate Fall 1990 1993.
- 5. Member of the Academic Standards Committee of the Franklin College of Arts and Sciences 1990 1991.
- 6. Member of the Steering Committee of the Graduate Faculty of Applied Quantitative Sciences since July 1, 1991.
- 7. Member of the Senate Ad Hoc Committee on Worker Health and Safety, 1991 1992.
- 8. Member of the Awards Committee of the Franklin College of Arts and Sciences 1991 -1992, 2006 2007.
- 9. Chair of the Awards Committee of the Franklin College of Arts and Sciences 1992 –1993
- 10. Member of the Committee on Committees of the Franklin College of Arts and Sciences1992 –
- 11. Member of the Physical Sciences Committee on Appointment/Reappointment to the Graduate Faculty 1989 1993, 2006 2009.
- 12. Member of the Franklin College promotion committee, 1994 1995 & 1996 1997.
- 13. Member of the Area Committee for Physical Sciences on Appointment/Reappointment to the Graduate Faculty, 1996 1999.
- 14. Member of the Academic Honesty Panelists, 1997 present.
- 15. Member of the University Council, 1998 2001, 2004-2007, 2008-2023.
- 16. Member of the University Committee on Student Affairs, 1998 2001.
- 17. Member of the Physical and Mathematical Science Committee Faculty ResearchGrants, 1998 2001 (Chair: 1999).
- 18. External member of the Recruitment Committee, Department of Religion, 1999.
- 19. University Review Committee (Physical Sciences) for the 2001 2004 promotion andtenure.
- 20. University Review Committee (Physical Sciences) for the 2007 2010 promotion andtenure.
- 21. Member of the Graduate Council, 2002 2005.

- 22. Member of the Curriculum Committee for the Graduate Council 2002 2005, chair 2004 2005.
- 23. Chair of the McCay Award Committee, Mathematics Department, UGA, 2005.
- 24. Member of Post-Tenure Review Appeals Committee, University Council, 2006 2008.
- 25. Member of The Search Committee for the Computer Systems Engineering positions, Faculty of Engineering, 2006 2008, 2010-2012.
- 26. Member of the Lamar Dodd Creative Research Award Selection Committee, 2007 –2010.
- 27. Judge for the UGA nominee for the Council of Graduate Schools (CGS)/UMI Distinguished Award competition in the field of Mathematics, Physical Sciences and Engineering, 2008, Graduate School, UGA.
- 28. Member of the Committee on Facilities, University Council Representative, 2008 2011.
- 29. Member of the Curriculum Committee of CSEE, 2010-present.
- 30. Member and the Chair-elect of the Research Advisory Computing Committee (RACC), UGA, 2010-2011.
- 31. Chair of the Research Advisory Computing Committee (RACC), UGA, 2011-2013.
- 32. Member of the Search and Screening Committee for the Dean of the Franklin College of Arts and Sciences, 2011-2012.
- 33. Member of the Search Advisory Committee for the Director of Research Computing atUGA, 2011-2012.
- 34. Member of the Faculty Advisory Committee for the President 2019-2020.
- 35. Member of the Franklin College Research Computing Committee (2013-present).
- 36. Member of the Faculty Affairs Committee, University Council, 2006 2008, 2010-2013(Chair), 2019-2022.
- 37. A Co-chair of the School of Computing Planning Committees: Curriculum and Research, Sep. 2021 to February 2022.

# **DEPARTMENTAL SERVICE:**

- 1. Graduate Coordinator, January 1989 December 1994.
- 2. Member of the Graduate Programs Committee (Chair 1989-1994), 1989 present.
- 3. Member of the Graduate Admissions Committee (Chair 1989-1994), 1989 present.
- 4. Member of Tenure Faculty, 1988 present.
- 5. Member of the Curriculum Committee, (Chair 2009-2012) 1993 2012
- 6. Member of the Recruiting Committee, 1993 95; 1998 99 (Chair), 2000 2001.
- 7. Member of the Ph.D. in Computer Science proposal committee, 1987 1989.
- 8. Member of the Search and Screening Committee, 1988 1989.
- 9. Member of the Equipment Committee, 1988 1989, 1996 2005.
- 10. Member of the Exams Committee, 1996 2006.
- 11. Undergraduate Group Advisor, 1997 present.
- 12. Appointed to the Regular Graduate Faculty (provisional member 1985), (1988 present).
- 13. Departmental Mentor for Dr. Khaled Rasheed, 2000 2003.
- 14. Member of the Bylaws committee, 2008-present (Chair, 2009 2010).
- 15. Member of the Accreditation Committee, 2009-present.
- 16. Member of the Teaching Assignment Committee (chair 2013- present), 2012-present.
- 17. Member of the CS program committee for establishing a Professional MS program: "Computational Science and Data Analytics", 2012-present.

# **PUBLIC SERVICE:**

- Clarke County Mentor Program, 1993 1995.
- A member of the Advisory Committee of the Oconee County High School and North OconeeHigh School, 2017-present