السيرة الذاتية

الاسم: سامر شفيق سليم الأشهب
Samer Shafiq Al-Ashhab

Education

PhD in Mathematics (December2003) North Carolina State University, NC, USA.
Thesis Title: The role of sh-Lie algebra in Lagrangian field theory. GPA: 4.0.
MSc in Applied Mathematics (August 2000) North Carolina State University, NC, USA.
Thesis Title: Undercompressive waves in driven thin film flows. GPA: 4.0.
BSc in Electrical Engineering (January 1995) The University of Jordan.

Experience

• Associate Professor: Al Imam Mohammad Ibn Saud Islamic University, Saudi Arabia: August 2016-present.
• Assistant Professor: Al Imam Mohammad Ibn Saud Islamic University, Saudi Arabia: August 2013-August 2016.
• Assistant Professor: German Jordanian University, Jordan: August 2012-August 2013.
• Assistant Professor: Hashemite University, Jordan: February 2011-August 2012.
• Instructor of Mathematics: University of New Orleans, LA, USA: August 2004-December 2010.
• Instructor of Mathematics: North Carolina State University, NC, USA: January 2004-August 2004.

Meetings and Talks/Presentations

• Southeast Geometry conference: South Carolina, USA March 2003:
Strongly homotopy Lie algebra in Lagrangian field theory.
• AMS sectional meeting in homological physics: North Carolina, USA October 2003
Strongly homotopy Lie algebra and the reduction of the de Rham complex of a Lagrangian field theory.
• AMS sectional meeting in symmetry techniques for partial differential equations Delaware, USA April 2005:
Canonical transformations and Hamiltonian evolutionary systems.

Publications

• Canonical Transformations of Local Functionals and sh-Lie structures (with Ron Fulp) *Journal of Geometry and Physics* **53** (2005) pp. 365-382.
• Symmetry Reduction of sh-Lie Structures and of Local Functionals. *Differential Geometry and Its Applications* **21** (2004) pp. 215-227.
• A Class of Strongly Homotopy Lie Algebras with Simplified sh-Lie Structures. *Journal of Pure and Applied Algebra* **208** (2007) pp. 647-653.
• Canonical transformations and Hamiltonian evolutionary systems. *Journal of Mathematical Physics* **53**, 063502 (2012); DOI 10.1063/1.4726174.
• Similarity Solutions for a non-Newtonian power-law fluid flow (with Dongming Wei). *Applied Mathematics and Mechanics (English Edition)* **35,** 9 (2014) pp. 1155-1166; DOI 10.100/s10483-014-1854-6.
• Negative Curvature Solutions in a non-Newtonian power-law fluid flow (with Dongming Wei). *Pacific Journal of Applied Mathematics* **6**, 4 (2014) pp. 293-303.

• Parameter variation in a third order singular boundary value problem. *International journal of open problems in computer science and mathematics* **8,** 1 (2015) pp. 55-65.
• A Curvature Unified Equation for a non-Newtonian power-law fluid flow. *International journal of advances in applied mathematics and mechanics* **2**, 3 (2015) pp. 72-77.
• Estimation of the Shear Stress Parameter of a Power-Law Fluid. *Mathematical Problems in Engineering* **2016**, (2016) Article ID 4729063, pp. 1-4; doi:10.1155/2016/4729063.

Research Interests

• Nonlinear ordinary differential equations with applications. Existence and Uniqueness. The Adomian decomposition method applied to nonlinear ordinary differential equations. Singular equations. Fluid flow applications.
• Differential geometry, algebraic topology, and mathematical physics: Lagrangian field theory, invariance, symmetry, and reduction. Applications of local functionals and strongly homotopy Lie algebras in differential geometry.

Languages:

• Arabic: Reading, writing, and speaking.
• English: Reading, writing, and speaking.
• French: Reading.

Honors

• Member of PhiKappaPhi honor society.
• Member of PiMuEpsilon mathematics honor society.