

Hasan Alnajjar

Department of mathematics, Faculty of science, University of Jordan, Amman, Jordan ●

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Education:

Doctor of philosophy in Mathematics. University of South Florida. Tampa, FL, May 2004
Thesis advisor: Brian Curtin.

Master in Mathematics. University of Jordan. Amman, Jordan, Jan 1996

Bachelor in Mathematics. University of Jordan. Amman, Jordan, June 1991

Employment:

Professor University of Jordan, Amman, Jordan 2021 – present

Associate Professor University of Jordan, Amman, Jordan 2014 – 2020

Associate Professor. Princess Sumaya University for Technology, Amman 2013 – 2014

Associate Professor. University of Jordan, Amman, Jordan 2011 – 2013

Assistant Professor. University of Jordan, Amman, Jordan 2005 - 2011

Assistant Professor. Zarka Private University, Zarka, Jordan 2004 - 2005

Teaching assistant. University of South Florida, Tampa, FL, 2001 - 2004

Research assistant. Hashemite University, Zarka, Jordan, 2000 - 2001

Teacher. Al-Israa University, Amman, Jordan, 1998 - 2000

Teacher. Ministry of Education, Zarka, Jordan 1992 - 1998

Research interest:

Tridiagonal pairs, Leonard pairs, Lie algebra, quantum groups , quantum affine algebra.

Publications:

- H. Alnajjar and B. Curtin. A family of tridiagonal pairs. Linear algebra and its applications. 390 (2004) , 369-384

- H. Alnajjar and B. Curtin. A family of tridiagonal pairs related to the quantum affine algebra. ELA 13 (2005), 1 – 9.

- H. Alnajjar and B. Curtin. Bilinear form of tridiagonal pairs of q-serre type. Linear algebra and its applications. 428 (2008) no. 11-12, 2688—2698.

- H. Alnajjar. Self-Duality of Tridiagonal Pairs of q-Serre Type. International Mathematical Forum, 5, 2010, no. 29, 1409 – 1415.

- H. Alnajjar. Leonard pairs from the equitable generators of $U_q(\mathfrak{sl}_2)$. Dirasat Pure sci, 37 (2010), no 2.

- H. Alnajjar and B. Curtin. Leonard pairs from the equitable basis of \mathfrak{sl}_2 . ELA, 20 (2010), 490 – 505.

- H. Alnajjar. Leonard pairs associated with the equitable generators of the quantum algebra $U_q(\mathfrak{sl}_2)$. Linear and Multilinear Algebra , 59, No. 10, 2011, 1127–1142

- H. Alnajjar, and B. Curtin. Bidiagonal and tridiagonal linear map with respect to eigenbases of equitable basis of \mathfrak{sl}_2 Linear and Multilinear Algebra ,61, No.12, 1668-1674. (2013).

- H. Alnajjar , A tridiagonal linear map with respect to eigenbases of equitable basis of sl_2 Linear and Multilinear Algebra , 63, No. 7, 1458–1467, (2014).

- H. Alnajjar and B. Curtin. Leonard triples from the equitable basis of sl_2 . Linear Algebra Appl., 482:47–54, (2015)

- H. Alnajjar. Leonard pairs of Racah and Krawtchouk type in LB-TD form. Communications of the Korean Mathematical Society, 34 (2). (2019)...

- H. Alnajjar. A linear map acts as a Leonard pair with each of the generators of $U(sl_2)$. International Journal of Mathematics and Mathematical Science, Volume 2020, Article ID 3593296, 9 pages.

- H. Alnajjar, B. Curtin . Linear maps that act tridiagonally with respect to eigenbases of the equitable generators of $U_q(sl_2)$. Mathematics. 2020. (Accepted)

Research projects in progress:

- A linear map that acts as Leonard pair with respect to each of the generators of $U_q(sl_2)$.

Seminar Presentations:

- Leonard and tridiagonal pairs in representation theory, University of south florida, 2003

- A family of tridiagonal pairs , University of south florida, 2004.

- A tridiagonal pairs related to quantum affine algebra, Private Zarka University, 2005.

- A bilinear form for tridiagonal pairs of q-serre type, University of Jordan, 2008.

- Leonard pairs in terms of Lie algebra sl_2 , University of Jordan, 2009
- Two isomorphic tridiagonal pairs of q -Serre type, University of Jordan, 2016.
- **Courses taught:**
 - Calculus I, Calculus II, Calculus III.
 - Mathematical statistics.
 - Linear algebra I, Linear algebra II.
 - Modern algebra I, Modern algebra II.
 - Number theory.
 - Operation research.
 - Differential equations.
 - Abstract algebra (Master course).

Professional Membership and service:

- American Mathematical Society, since 2001.
- Communications of the Korean Mathematical Society

University and Department Service:

- A head of committee of operating the graduate students in mathematics department, 2009 - 2013.
- Mathematics department guidance of new students committee, 2006 – 2007.
- Mathematics department students council elections committee, 2008, 2018
- Mathematics department social committee, 2008 – 2011, 2016
- Coordinator for many courses in mathematics department.
- Member, ABET committee.
- Member, Ph.D qualifying exam committee
- Member of abstract algebra workshop committee 2018, 2019
- Member of safety and emergency committee in science faculty 2015-2016
- Member of job interview committee for master degree
- Member of research committee in math department 2015-2016, 2016-2017
- Member of seminar committee in math department

- Member of preparatory committee for science activity of organizing the first math and physics Olympiad
- Member of many committees of master theses