

Curriculum Vitae

Khaled Bataineh

Personal Information:

Name: Dr. Khaled Tawfiq Bataineh
Position: Associate Professor of Mathematics/ Jordan University of Science and Technology
Education: Ph.D., New Mexico State University, USA, 2003
Date of Birth: 22-6-1973
Nationality: Jordanian
Social Status: Married

Address:

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Academic Degrees:

Ph.D.. in Mathematics/ Algebraic Topology, New Mexico State University, USA, 2003, GPA 4.0.
MSc. in Mathematics/ Functional Analysis, Yarmouk University, Jordan, 1998, Excellent, first rank.
BSc. in Mathematics, Yarmouk University, Jordan, 1995, very good.

Teaching Experience:

2013 – Now: Associate Prof. of Mathematics, Department of Mathematics and Statistics, Jordan University of Science and Technology, Jordan.
2015 – 2016: Visiting Associate Professor of Mathematics/ Al Al-Bayt University.
2003 – 2013: Assistant Prof. of Mathematics, Department of Mathematics and Statistics, Jordan University of Science and Technology, Jordan.
Sep. 2011 – June 2013: Assistant Prof. of Mathematics, Department of Mathematics, University of Bahrain, Bahrain.
1999 - 2003: Lecturer of Calculus courses at the Department of Mathematical Sciences, New Mexico State University, New Mexico, USA.
Summer 2001: Lecturer of Calculus courses at the Department of Mathematics, Elpaso Community College, Texas, USA.
1998-1999: Lecturer of Calculus courses, Department of Mathematics and Statistics, Jordan University of Science and Technology, Jordan.

Courses Taught:

(A) Undergraduate Courses:

Math 99	Pre-Calculus
Math101	Calculus I
Math102	Calculus II
Math103	Mathematics for Business Administration I (at University of Bahrain)
Math104	Mathematics for Business Administration II (at University of Bahrain)
Math102A	Calculus for Biological Sciences
Math140	Linear Algebra I

Math201	Intermediate analysis
Math203	Ordinary Differential equations
Math241	Discrete Mathematics.
Math245	Set theory and logic
Math261	Euclidean and Non-Euclidean Geometry
Math362	Topology
Math491	Special Topics in Mathematics (Knot Theory)
Math492	Research in Applied Mathematics

(B) Graduate Courses:

Math707	Mathematics for Pharmaceuticals
Math761	Advanced Topology
Math791	Independent Study
Math799	Masters Thesis

General Courses Coordination:

I have coordinated the following courses several times:

Math 99	Pre-Calculus
Math101	Calculus I
Math102	Calculus II
Math103	Mathematics for Business Administration I (at University of Bahrain)
Math104	Mathematics for Business Administration II (at University of Bahrain)
Math102A	Calculus for Biological Sciences
Math140	Linear Algebra I
Math201	Intermediate analysis
Math203	Ordinary Differential equations
Math241	Discrete Mathematics

Research Interests:

Vassiliev invariants of knots and links, Quantum invariants of knots and links, Kauffman bracket skein modules, Invariants of knots in three-manifolds, Invariants of singular knots and links, Quandles.

Advisory of Master's Students:

- **Mustafa Hajji**, Jones Polynomial for Links in the Handlebody, 2008. Now: Postdoc at University of South Florida.
- **Mohammad Abu Zaytoon**, Vassiliev invariants of order one for links in the solid torus, 2005. Now: Ph.D. Student, University of Brunswick (Canada).
- **Abed M. Al-zyoot**, Index-three Pretzel knots in the handlebody, January 2017.
- **Shoroog M. Shatnawi**, Index-three closed braids in the solid torus, December 2017.
- **Hadeel M. Ghaith**, Involutory Biquandles and Singular Knots and Links, December 2017.
- **Renad Abudriei**, On Jones Polynomial for Singular Knots and Links, January, 2018.
- **Nabeel Al-Asmar**, ongoing.
- **Elham Al-Saidi**, ongoing.

I acted also as a committee member in the defense of a big number of master's students.

Scientific and Professional Societies:

- American Mathematical Society
- I worked as reviewer for ZentralblattMATH

Scholarships:

- Ph.D. Scholarship from Jordan University of Science and Technology 1999-2003.
- Teaching Assistantship from New Mexico State University 1999-2003.

Training Courses:

- A course in statistical analysis, 2018, JUST.
- A course in e-learning based on Moodle, 2006, JUST.
- A first course in Mathematica, 2006, JUST.
- A course in assessment and measurement, 2004, JUST.

International Conferences:

I gave presentations in the following international conferences:

- Knots in Washington 2003, **Washington-USA.**
- AMS big meeting 2003, **Baltimore-USA.**
- Algebraic Topology (Old and New) 2007, **Poznan-Poland.**
- Conference on Algebraic and Geometric Topology 2008, **Gdansk, Poland.**
- Infinite Dimensional Analysis and Topology, Ivano-Frankivsk 2009, **Ukraine.**
- Topology, Geometry and Integrability, Varna, 2014, **Bulgaria.**
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- Invited speaker for the colloquium at University of South Florida, Jan. 2017, **Tampa, USA.**

Publications:

- [1] Khaled Bataineh; Mohammad Abu Zaytoon, Vassiliev invariants of order one for links in the solid torus, **Topology and its Applications**, 157 (2010) pp. 2495-2504.
- [2] Khaled Bataineh, The module of two-chord diagrams for oriented knots of zero winding number in the solid torus, **J. Knot Theory Ramifications**, 21, No. 7 (2012) [20 pages].
- [3] Khaled Bataineh; Mustafa Hajij, Jones Polynomial for links in the handlebody, **Rocky Mountain Journal of Mathematics**, 43, No. 3 (2013) pp. 737-753.
- [4] Khaled Bataineh, Hedi Belkhirat, The derivatives of the Hoste and Przytycki polynomial for oriented links in the solid torus, to appear at **Houston Journal of Mathematics**.
- [5] Khaled Bataineh, On the coefficients of Jones polynomial and Vassiliev invariants, **Journal of Mathematics Research**, 4, No. 6, 97-105 (2012).
- [6] K. Bataineh, S. Obeidat, S. Al-Ghour, Essentially copied topological spaces, **Math. Sci. Lett.**, 1, No. 2, 97-104 (2012).
- [7] Khaled Bataineh, Taylor series coefficients of the HP-polynomial as an invariant for links in the solid torus, **Applied Mathematics and Information Sciences**, 7, No. 1 (Jan. 2013), PP:203-208.
- [8] Abdelhadi Belkhirat, Khaled Bataineh, Gromov Hyperbolicity, Teichmüller Space & Bers Boundary, **Journal of Mathematics Research**, 5, No. 2, 1-5 (2012).
- [9] Khaled Bataineh, On Numerical invariants for knots in the Solid Torus, **Open Mathematics**, 13, 899–907 (2015).
- [10] Khaled Bataineh, Type-Two invariants for knots in the solid torus, **J. Knot Theory Ramifications**, 25, No. 8 (2016) [24 pages].
- [11] Khaled Bataineh, Mohamed Elhamdadi, Mustafa Hajij, The colored Jones polynomial of singular knots, **New York Journal of Mathematics** 22 (2016) 1439-1456.
- [12] Khaled Bataineh, On the Jones Polynomial in the Solid Torus, **Communications in Mathematics and Applications**, Vol. 7, No. 4, pp. 291–302, 2016.
- [13] Khaled Bataineh, Mohamed Elhamdadi, Mustafa Hajij, On Rational Knots and Links in the Solid Torus, submitted.
- [14] Khaled Bataineh, Computing Jones Polynomial and Kauffman's Bracket for Rational Knots and Rational Tangles, submitted.
- [15] Khaled Bataineh, On the Skein Theory of Dichromatic Links and Invariants of Finite Type, submitted.