Bilal Naser Abdullah Al-Hasanat

Full Professor in Mathematics

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Personal Information

Nationality:	Jordanian
Date of Birth:	01/06/1976
Place of Birth:	Wadi Mousa
Marital status:	Married

Work Address

Department of Mathematics
Al Hussein Bin Talal University Ma'an – Jordan 67110

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Academic Qualifications

Universiti Sains Malaysia, 11800, Pulau Pinang - Malaysia

Ph.D., Mathematics, November 2015

- Thesis Title: *Some Results on the Conjugacy and Orders Classes of Some Groups*

Mutah University, 61710, Al Karak - Jordan

MSc., Mathematics, June 2007

- Thesis Title: *On Certain Problems of Projective Geometry*

Yarmouk University, Irbid, Jordan

BSc., Mathematics, June 1997

Work Experience

Full Professor Jan., 2026
Department of Mathematics
International University, Kuwait.

Full Professor Sep., 2025–Jan., 2026
Department of Mathematics
Al Hussein Bin Talal University, Ma'an, Jordan.

Associate Professor Sep., 2020–Sep., 2025
Department of Mathematics
Al Hussein Bin Talal University, Ma'an, Jordan.

Assistant Professor Sep., 2016–Sep., 2020
Department of Mathematics
Al Hussein Bin Talal University, Ma'an, Jordan.

Full time lecturer Sep., 2009 – Sep., 2016
Department of Mathematics
Al Hussein Bin Talal University, Ma'an, Jordan.

Maths Teacher Sep., 1997 – Apr., 2007
Petra Education Directory
Ministry of Education, Jordan.

ICDL Trainer Sep., 2004 – Jun., 2006
Petra Education Directory
Ministry of Education, Jordan.

Research Interests

- Group Theory and Generalizations.
- Geometry.
- Computing and Applications.
- Graph theory and Applications.
- Field Theory and Polynomials.

Publications and Conferences

Published Peer-reviewed Journal Articles

- Ahmad Alhabahbeh and **Bilal N. Al-Hasanat**, Tangents and *SecTan* Methods: New iterations of real root findings, *International Journal of Mathematics and Computer Science*, **20**(4), 1091-1201, 2025.
https://doi.org/10.69793/ijmcs/04.2025/bilal

- Ibrahim A. Jawarneh and **Bilal N. Al-Hasanat**, Graphs combining, *IAENG International Journal of Applied Mathematics*, **55**(11), 3523-3528, 2025.
https://www.iaeng.org/IJAM/issues_v55/issue_11/IJAM_55_11_07.pdf

- Ibrahim A. Jawarneh and **Bilal N. Al-Hasanat**, Counterexamples for Some Conjectures of Finite Groups, *International Journal of Applied Mathematics*, **38**(2), 185–192, 2025.
http://dx.doi.org/10.12732/ijam.v38i2.2

- **Bilal N. Al-Hasanat** and Ibrahim A. Jawarneh, $\mathcal{P}erm$-Graph of Finite Groups, *International Journal of Applied Mathematics*, **38**(1), 200-210, 2025.
http://dx.doi.org/10.12732/ijam.v38i1.4

- Asma Almazaydeh, **Bilal N. Al-Hasanat** and Remal S. Al-Gounmeein, On the Edge Irregularity Strength of Finite Graphs, *Contemporary Mathematics*, **6**(1), 246-255, 2025.
https://doi.org/10.37256/cm.6120255957

- Ibrahim Jawarneh, Abd Ulazeez Alkouri and Jehad AlJaraden, **Bilal N. Al-Hasanat** and Mohammad Hazaimeh, On The Fuzzy Topological Spaces Based On a Fuzzy Space (X, I), *Applied Mathematics & Information Sciences*, **18**(6), 1295-1301, 2024.
http://dx.doi.org/10.18576/amis/180611

- **Bilal N. Al-Hasanat**, J. J. Jaraden and L. Oukhtite, On the commutativity of prime rings using some differential identities, *Proc. Jangjeon Math. Soc.*, **27**(2), 289-296, 2024.
https://jangjeonopen.or.kr/public/upload/1715315245-pjms27-2-%20(17).pdf

- **Bilal N. Al-Hasanat** and Khaled A. Al-Sharo, Characterizing Finite Groups with Normal p-Subgroups for the Smallest Prime Divisor of the Order of the Group, *JP Journal of Algebra, Number Theory & Applications*, **63** (3), 237-246, 2024.
  http://dx.doi.org/10.17654/0972555524014

- Remal Shaher Al-Gounmeein, Mohd Tahir Ismail, **Bilal N. Al-Hasanat** and Ahmad M. Awajan, Improving Models Accuracy Using Kalman Filter and Holt-Winters Approaches Based on ARFIMA Models, *IAENG International Journal of Applied Mathematics*, **53** (3), 869–878, 2023.
  https://www.iaeng.org/IJAM/issues_v53/issue_3/IJAM_53_3_13.pdf

- Ahmad M. Awajan, **Bilal Al-Hasanat**, Elarbi Elkaroui, Ayed AL e'damat, Remal S. Al-Gounmeein, Abdullah S. Al- Jawarneh, Heba N. Ayyoub and Eyad AlFarajat, Time Series Forecasting of New Cases for COVID-19 Pandemic in Jordan Using Enhanced Hybrid EMD-ARIMA, *Journal of Statistics Applications & Probability*, **13** (1), 261–271, 2023.
  http://dx.doi.org/10.18576/jsap/130118

- J. J. Jaraden, **Bilal Al-Hasanat**, L. Oukhtite and Isra'a Al-lawama, Some differential identities for rings involving prime ideals, *Appl. Math. Inf. Sci.*, **17** (2), 1–5, 2023.
  http://dx.doi.org/10.18576/amis/170203

- **Bilal N. Al-Hasanat** and Asma Almazaydeh, Normal Covering of Finite Groups, *International Journal of Mathematics and Computer Science*, **17** (4), 1595–1603, 2022.
  https://future-in-tech.net/17.4/R-Al-Hasanat.pdf

- **Bilal N. Al-Hasanat** and Ahmad M. Awajan, On the commutativity degree of certain finite groups, *International Journal of Applied Mathematics*, **35** (6), 827–838, 2022.
  http://dx.doi.org/10.12732/ijam.v35i6.2

- **Bilal N. Al-Hasanat**, Awni F. Al-Dababseh, Khaled A. Al-Sharo and Baheej R. Al-Shuraifeen, On the direct product of nearly s-permutable subgroups, *International Journal of Applied Mathematics*, **35** (2), 307–315, 2022.
  http://dx.doi.org/10.12732/ijam.v35i2.9

- Faten Alwan, Mashhour Bani-Ata and **Bilal Al-Hasanat**, On certain finite geometric structures, *Communications in Algebra*, **50** (9), 3734-3743, 2022.
  http://dx.doi.org/10.1080/00927872.2022.2042547

- **Bilal N. Al-Hasanat** and Asma Almazaydeh, On classification of groups of order p^4, p odd prime, *International Journal of Mathematics and Computer Science*, **17** (4), 1569–1593, 2022.
  https://future-in-tech.net/17.4/R-Hasanat1.pdf

- Murhaf Alabdullah, **Bilal N. Al-Hasanat** and Jehad Jaraden, Noetherian and Artinian Ternary Rings, *Int. J. Open Problems Compt. Math.*, **14**(1), 6–16, 2021.
  https://www.ijopcm.org/Vol/2021/1.2.pdf

- Alaa Alrawajfeh, **Bilal N. Al-Hasanat**, Hothifa Alhasanat and Feras M. Al Faqih, On the edge irregularity strength of the corona product of some graphs, *International Journal of Mathematics and Computer Science*, **16**(2), 639–645, 2021.
  https://future-in-tech.net/16.2/R-Rawajfeh.pdf

- **Bilal N. Al-Hasanat**, Permutability of subgroups of semidirect product of p-groups, International Journal of Algebra, **13** (7), 331 –339, 2019.
  https://doi.org/10.12988/ija.2019.9828

- **Bilal N. Al-Hasanat**, On edge irregularity strength of some graphs, *Advances and Applications in Discrete Mathematics*, **21** (2), 193–202, 2019.
  http://dx.doi.org/10.17654/DM021020193

- **Bilal N. Al-Hasanat** and Ahmad S. Alhasanat, Order Graph: A new representation of finite groups, *International Journal of Mathematics and Computer Science*, **14** (4), 809–819, 2019.
  https://future-in-tech.net/14.4/R-Hasanat.pdf

- **Bilal Al-Hasanat**, Awni Dababseh and Asmaa Alissa, Permutable subgroups of groups of order 16, *International Journal of Applied Mathematics*, **32** (1), 101-110, 2019.
  http://dx.doi.org/10.12732/ijam.v32i1.10

- Sadoon Abdullah Al-Obaidy and **Bilal N. Al-Hasanat**, Classification technique for linear discriminate analysis for civil engineering students as per their specialization, *Int. J. Appl. Math. Stat.*, **57**(4), 10–25, 2018.
  http://www.ceser.in/ceserp/index.php/ijamas/article/view/5573

- **Bilal N. Al-Hasanat**, Jehad M. Alhasanat and Enas M. Salah, On Non-abelian Groups of Order 2^n , $n \geq 4$ Using GAP, *International Journal of Applied Mathematics*, **31**(1), 2018.
  http://dx.doi.org/10.12732/ijam.v31i1.4

- **Bilal N. Al-Hasanat**, Asad A. Al-Hasanat and Mohanad Al-Hasanat, Groups With Primes Order Classes, *International Journal of Pure and Applied Mathematics*, **116**(3), 695–699, 2017.
  http://ijpam.eu/contents/2017-116-3/15/index.html

- **Bilal N. Al-Hasanat**, Awni Al-Dababseh, E. Al-Sarairah, Sadoon Alobiady and Mahmoud Bashir Alhasanat , An upper bound to the number of conjugacy classes of non-abelian nilpotent groups. *Journal of Mathematics and Statistics*, **13**(2), 139–142, 2017.
  http://dx.doi.org/10.3844/jmssp.2017.139.142

- Mahmoud Bashir Alhasanat, **Bilal N. Al-Hasanat** and E. Al-Sarairah , The Order Classes of 2-Generator p-Groups. *Journal of Applied Mathematics*, vol. **2016**, Article ID 8435768, 6 pages, 2016.
  http://dx.doi.org/10.1155/2016/8435768

- E. Al-Sarairah, **Bilal N. Al-Hasanat** and A. Hachicha, On the stability of planner premixed flames under non adiabatic conditions and preferential diffusion. *Journal of Thermal Science and Engineering Applications*, **9**(3), 031010–031010, 2016.
  http://dx.doi.org/10.1115/1.4035938

- **Bilal N. Al-Hasanat**, Ahmad, A. and Sulaiman, H. , The order classes of dihedral groups. *Proceeding of Mathematical Sciences National Conference (SKSM21)*, AIP Conference Proceedings 1605, 551–556, 2014.
  http://dx.doi.org/10.1063/1.4887648

- **Bilal N. Al-Hasanat**, Ahmad, A. and Sulaiman, H., Order classes of symmetric groups. *International Journal of Applied Mathematics*, **26**(4), 501-510, 2013.
  http://dx.doi.org/10.12732/ijam.v26i4.8

- **Bilal N. Al-Hasanat**, Othman A. Almatroud and Mousa S. Ababneh, Dihedral Groups Of Order 2^{m+1}. *International Journal of Applied Mathematics*, **26**(1), 1-7, 2013.
  http://dx.doi.org/10.12732/ijam.v26i1.1

- **Bilal N. Al-Hasanat** and Sadoon Abdullah I.O, The conjugacy class of symmetric groups. *International Journal of Applied Mathematics*, **25**(5), 603-607, 2012.
  https://www.diogenes.bg/ijam/contents/2012-25/v25_5/Web%20Contents-IJAM-25-5-2012.pdf

- Al-Ali M.I., **Bilal N. Al-Hasanat**, Neumann A. and others, On B-injectors of symmetric groups S_n and alternating groups A_n: a new approach. *Colloquium Mathematicum*, **115**(2), 247-258, 2009.
  http://dx.doi.org/10.4064/cm115-2-8

- Mashhour I. Al-Ali and **Bilal N. Al-Hasanat**, The autotopism group of a semifield of order p^4, p is an odd prime. *Communications in Algebra*, **37** (4), 1240–1247, 2009.
  http://dx.doi.org/10.1080/00927870802466801

Accepted articles for publication

- **Bilal N. Al-Hasanat** and Ibrahim A. Jawarneh, $\mathcal{A}$-Subgroups and $\mathcal{A}$-Groups, *Applied Mathematics & Information Sciences*.

Submitted Journal Publications

- **Bilal N. Al-Hasanat**, Seasonal Variations in Pre-Inflammatory Cytokine Activity and Their Effect on Wound Inflammation and Healing During November and Autumn season.

- **Bilal N. Al-Hasanat**, Regular and irregular groups.

Conferences

- The International Conference on Algebra and its Applications 26-28, Errachidia, Morocco, April 2017.

- Simposium Kebangsaan Sains Matematik-21, Pulau Pinang-Malaysia, Nov. 2013.

- The 3^{rd} Zraqa Private University Conference, Jordan, Aug. 2008.

Teaching and Supervision

Courses taught

- Pre-Calculus
- Calculus (1, 2, and 3)
- Introduction to Probability and Statistics.
- Set Theory.
- Linear Algebra
- Euclidean and non-Euclidean geometry
- Abstract Algebra
- Numerical Analysis
- Graph Theory
- Computerized Mathematics
- Ordinary Differential Equations

Post-Graduate Students Supervision

✓ Ala'aldin Al Shaboul/Main supervisor. Thesis Title: *On the classification of all groups of order* 5^4, (2019).

✓ Suhib Aref Alrtaimat/Main supervisor. Thesis Title: *On graph representation of finite groups*, (2019).

✓ Hasan Aljondy/Main supervisor. Thesis Title: *On groups of the same order type*, (2020).

✓ Mohammad Alzo'bi/Main supervisor. Thesis Title: *On commutativity degree and co-prime probability of finite groups*, (2020).

✓ Ahmad Suliman Alsaudi/Main supervisor. Thesis Title: *On Groups Norms*, (2021).

✓ Hothifa Ahmed Al-Hasanat/Main supervisor. Thesis Title: *On Edge irregularity strength of finite graphs*, (2021).

✓ Ekram Hasan Al-Hasanat/Main supervisor. Thesis Title: *On the Conjugacy Classes of Finite Groups*, (2021).

✓ Dana Jehad AL-Jaraden/Main supervisor. Thesis Title: *Irregularity Strength of Finite Graphs*, (2022).

✓ Mohammad Hamad Alkhawaldeh/Main supervisor. Thesis Title: *On Finite Groups through Conjugation*, (2022).

Professional and Institutional Service

- Course coordinator.
- Personal Academic Student Advisor graduate and postgraduate level.
- Participated in master's thesis discussions and comprehensive exams as a committee member/evaluator.
- Contributed to scientific research seminars through active participation and organization.
- Involved in curriculum development and academic planning for course and program improvement.
- Served on various departmental committees addressing academic, administrative, and quality assurance matters.
- Supported and coordinated extracurricular student activities.
- Reviewed numerous articles for various high-indexed journals

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Awards and Recognition

2017 Received formal thanks and recognition for outstanding efforts in contributing to the success of the Mathematics Olympiad. Al Hussein Bin Talal University, Ma'an, Jordan.

2023 Acknowledged for organizing and delivering free training workshops for university students, supporting academic skill development. Al Hussein Bin Talal University, Ma'an, Jordan.

Training and Workshops

2004 International Computer Driving License (ICDL), Jordan.

2020 Proficient in LaTeX for Academic and Research Writing (for instructors), Al Hussein Bin Talal University, Ma'an, Jordan.

2023 Guided Students in Using LaTeX for Scientific Projects, Al Hussein Bin Talal University, Ma'an, Jordan.

Skills

Languages

Professional in both oral and written **Arabic** and **English**.

Others

- Excellent computer and networking skills.
- Excellent experience in Microsoft Office (Word, Excel, Access, and Power Point).
- Excellent experience in Math Software's: GAP, Mathematica, AutoCAD, LaTeX.
- Learning Management Systems, LMS: Moodle, D2L, and Microsoft Teams.

Research Profiles

Web of Science Scopus Orcid Google Schooler Research Gate

References

Available upon request
