# **Kuwait University - Curriculum Vitae**



# Associate Professor Abdullah Alazemi

December 2022

# 1. PERSONAL DATA

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Web of Science Researcher ID	:	AAU-4893-2021

# 2. ACADEMIC QUALIFICATION

# 2.1 Educational Background

Degree	University	<b>Country (Year)</b>	Field of Specialization
	Colorado State University	USA (2007)	Combinatorics and Graph Theory
Ph. D.	Dissertation: "Classification Algorithms for Graphs, Digraphs and Linear Spaces"		
	Colorado State University	USA (2004)	Linear Algebra in Economy
M. Sc.	Thesis: "The Effect of Increased Energy Taxes in a General Equilibrium Model of Production"		
B. Sc.	Kuwait University	Kuwait (2000)	Mathematics

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# ArabicMother tongueEnglishFluentAdvanced Computer SkillsC, C++, Objective-C, Matlab, Mathematica, Magma, Maple,<br/>NewGRAPH, TeX, Python, GAP, Microsoft Office (Word,<br/>Excel, Power Point, Teams, OneNote, OneDrive, SharePoint,<br/>Stream), Web Designing.Basic Computer SkillsPHP, SQL, Java.SystemsApple, Linux, Unix, Windows.

### 2.2 Languages / Special Skills

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# 3. <u>PROFESSIONAL EXPERIENCE</u>

### 3.1 Academic Positions

Title	Duration	Institution	Country
Professor	2023- present	Kuwait University	Kuwait
Associate Professor	2017-2023	Kuwait University	Kuwait
Assistant Professor	2007 - 2017	Kuwait University	Kuwait
Scholarship for M. Sc. and Ph. D.	2001 - 2007	Colorado State University	USA
Teacher	2000 - 2001	Middle School	Kuwait

### 3.2 Administrative Experience

a. Administrative Positions at Faculty Level (Faculty of Science, Kuwait University)

Name	Academic Year	Position
Department of Mathematics	2018/2019 – October 2022	Chairman
Department of Mathematics	2018/2019	Acting Chairman
Advising and Counseling Office	2011/2012 - 2013/2014	Head

### b. Committees at Departmental Level (Department of Mathematics, Kuwait University)

Name	Academic Year	Role
Mathematics Program Convener	November 2022 - September 2023	Convener
Electronic Learning	2021/2022	Convener
Distant E-Learning	2020/2021 - 2021/2022	Convener
Anneiteturent	2018/2019 - October 2022	Convener
Appointment	October 2022 - September 2023	Member

Promotion	2018/2019 – September 2023	Member
	2018/2019 - October 2022	Convener
Scholarships	2013/2014 - 2015/2016 and October 2022	Member
Consultative	2018/2019 - October 2022	Convener
Consultative	November 2022 - present	Member
Transitioning to New Campus	2019/2020 - 2021/2022	Convener
Schedule of Classes	2017/2018 and November 2022 - September 2023	Member
	2012/2013 - 2017/2018	Member
Employees Affairs	2010/2011 - 2011/2012	Convener
Strategic Planning	2011/2012 - 2016/2017	Convener
Student Affairs	2010/2011	Member
Teaching Assistants	2008/2009	Convener

# c. Committees at Faculty Level (Faculty of Science, Kuwait University)

Name	Academic Year	Role
Electronic Content Update Committee	November 2022 - September 2023	Member
College of Science Council	2018/2019 - October 2022	Member
College Laboratories Management Committee	2020/2021 - October 2022	Member
Graduate Program Committee	2019/2020 - October 2022	Member
Distant Learning System Management Committee	2019/2020 - October 2022	Member
Correcting Errors in Grade Submission Committee	2019/2020	Member
Transitioning to New Campus Committee	2018/2019 - 2021/2022	Member
Scholarship Committee	2018/2019 - October 2022	Member

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The Project of Sabah Al-Salem University City	2013/2014 - 2016/2017	Member
Jamming Communications in Examination Halls Committee	2012/2013	Member
Strategic Planning Committee	2011/2012 - 2016/2017	Member
Selective Admission to College of Science Committee	2011/2012	Member
Consultation and Training Committee	2008/2009 and 2010/2011	Member

### d. Committees at University Level (Kuwait University)

Name	Academic Year	Role
Workshops for Mathematics Aptitude Test	2021/2022	Organizer
Mathematics Olympiad in the Arab Bureau of Education for the Gulf States	2010/2011 - 2012/2013	Convener

### e. Ad-hoc Committees - Department Level (Kuwait University)

Name	Academic Year	Role
Comprehensive Examination Committee - Graduate Program of the department	Spring 2021/2022	Coordinator
Entrance Examination Committee - Graduate Program of the department	Fall 2022/2023	Convener

### f. Other Community Services

 Organized Workshops, 2020: Several workshops were organized to the Faculty Members of Mathematics Department related to Microsoft Applications: Teams, OneNote, OneDrive, Forms and Stream.

- Organized Workshops, 2020: Several workshops were organized to the Teaching Assistant Members of Mathematics Department related to Microsoft Applications: Teams, OneNote, OneDrive, Forms and Stream.
- Recorded Video Tutorials, 2020: Several tutorials were recorded and distributed to Kuwait University Students related to Teams, OneNote, and OneDrive in details.
- Started *Ice Cream Competition*, 2012-2015: Bi-weekly mathematical problem directed to Students.
- Started Sudoku Puzzle, 2010-2015: Monthly Sudoku puzzle (9 x 9 and 16 x 16) directed to Students.

### g. Committees outside Kuwait University

Name	Academic Year	Role
Evaluation of the general Framework of the National Curriculum in Kuwait	2013/2014	Member

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# 4. TEACHING AND STUDENT ADVISING

# 4.1 Courses Taught

### • <u>Undergraduate:</u>

No.	Course Number	Course Name
1	0410 - 091 ( <u>Supervision</u> )	Pre-Calculus
2	0410 - 101	Calculus I
3	0410 - 102	Calculus II
4	0410 - 111	Introductory Linear Algebra
5	0410 - 115 ( <u>Supervision</u> )	Finite Mathematic
6	0410 - 226	Euclidean Geometry
7	0410 - 250	Foundation of Mathematics
8	0410 - 261	Introduction to Abstract Algebra I
9	0410 - 262	Introduction to Abstract Algebra II
10	0410 - 363	Advanced Linear Algebra
11	0410 - 403	Advanced Linear Algebra
12	0410 - 491	Topics in Applied Mathematics (Spectral Graph Theory)

### • <u>Graduate:</u>

No.	<b>Course Number</b>	Course Name	
1	0410 - 501	Algebra	
2	0410 - 537	Combinatorics	

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### 4.2 Thesis Supervised

- <u>Ph. D.</u>: None.
- <u>Master:</u>
  - Aisha Salim (2022 Completed). Area: Spectral Graph Theory.
    Thesis Title: On chain graphs with k main eigenvalues.
    Master's Thesis Department of Mathematics, College of Science, Kuwait University, Kuwait.
    (Co-Supervisor: Dr. Milica Andelić Department of Mathematics, College of Science, Kuwait University, Kuwait).

(Supervisor).

Osama Alhalabi (2021 - Ongoing). Area: Linear Algebra and its applications. Master's Thesis - Department of Mathematics, College of Science, Kuwait University, Kuwait.

(Supervisor: Dr. Milica Andelić - Department of Mathematics, College of Science, Kuwait University, Kuwait).

(Co-Supervisor).

 Anwar Althefeeri (2021 - Ongoing). Area: Non associative algebra. Master's Thesis - Department of Mathematics, College of Science, Kuwait University, Kuwait.

(Supervisor: Dr. Latif Hanna - Department of Mathematics, College of Science, Kuwait University, Kuwait).

(Co-Supervisor).

 Haneen Zaidan (2022 - Ongoing). Area: Linear Algebra and Its Applications. Master's Thesis - Department of Mathematics, College of Science, Kuwait University, Kuwait. 8/

(Supervisor: Dr. Milica Andelić - Department of Mathematics, College of Science, Kuwait University, Kuwait).

(Co-Supervisor).

### 4.3 Courses Amendment/New:

- Undergraduate: Initiate the amendment process for all undergraduate syllabi. Most Faculty Members of the department contributed to that process.
- Undergraduate: Initiate the accreditation process for Mathematics Program of the department. Accreditation committee members and all involved coordinators of all courses were part of this process.

No.	<b>Course Number</b>	Course Name		
1	0410 - 250 (Amendment)	Foundation of Mathematics (with others)		
2	0410 - 261 (Amendment)	Introduction to Abstract Algebra I (with others)		
3	0410 - 262 (Amendment)	Introduction to Abstract Algebra II (with others)		
4	0410 - 345 (Amendment)	Rings Theory (with others)		
5	0410 - 346 (Amendment)	Group Theory (with others)		
6	0410 - 363 (Amendment)	Advanced Linear Algebra (with others)		
7	0410 - 403 (Amendment)	Advanced Linear Algebra (with others)		
8	0410 - 464 (New)	Spectral Graph Theory (with others)		
9	0410 - 465 (New)	Matrix Analysis (with others)		
10	0410 - 499 (New)	Project		
11	0410 - 501 (Amendment)	Algebra (with others)		
12	0410 - 530 (Amendment)	Foundations of Geometry (with others)		
13	0410 - 537 (Amendment)	Combinatorics		

Amendment/New of Undergraduate and Graduate Courses

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Year	Semester	Course No.	Course Name	Number of Students	Remark
2022/2023	Fall	0410- <b>537</b> /01A	Combinatorics (Graduate)	3	Chairman
2021/2022	Fall	0410- <b>261</b> /01A	Abstract Algebra I	38	Chairman
2021/2022	Spring	0410- <b>403</b> /01A	Advanced Linear Algebra	10	
	Fall	0410- <b>491</b> /01A	Topics in Applied Mathematics (Spectral Graph Theory)	6	Chairman
2020/2021	Spring	0410- <b>501</b> /01A	Algebra (Graduate)	5	
	Summer	0410- <b>250</b> /01A	Foundation of Mathematics	45	
	Fall	0410- <b>226</b> /01A	Euclidean Geometry	52	Chairman
2019/2020	Spring	0410 <b>-261</b> /01A	Abstract Algebra I	45	
	Summer	0410- <b>250</b> /01A	Foundation of Mathematics	46	
	Fall	0410- <b>250</b> /01A	Foundation of Mathematics	51	Acting Chairman
		0410- <b>262</b> /01A	Abstract Algebra II	18	
2018/2019	Spring	0410- <b>363</b> /01A	Advanced Linear Algebra	35	
	Summer	0410- <b>250</b> /01A	Foundation of Mathematics	44	Chairman
		0410- <b>363</b> /51 <b>T</b>	Advanced Linear Algebra	l Volunteered	
	E-11	0410- <b>250</b> /01A	Foundation of Mathematics	50	
2017/2018	Fall	0410- <b>363</b> /01A	Advanced Linear Algebra	37	
2017/2018	Spring	0410- <b>226</b> /01A	Euclidean Geometry	58	
		0410- <b>261</b> /01A	Abstract Algebra I	40	

# 4.4 Courses Taught in the Last Five Academic Years

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### 5. <u>RESEARCH EXPERIENCE</u>

### 5.1 Research Areas Group

• Convener of Pure Mathematics Group (Department of Mathematics, Kuwait University), September 2020 – September 2023.

### 5.2 Area of Interest

- Spectral Graph Theory.
- Combinatorial Objects.

• Algebra (Abstract and Linear).

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• Combinatorics.

### 5.3 Conferences and Workshops

- <u>Conferences Organized:</u>
- Member of Scientific Committee for "IV International Conference on Mathematics and its Applications in Science and Engineering (ICMASE 2023)", 12-14 July 2023, Madrid, Spain.
- Co-Chair for "8<sup>th</sup> International IFS and Contemporary Mathematics Conference (IFSCOM 2022)", 16 19 Jun. 2022, Mersin, TURKEY.
- Reviewer for "8<sup>th</sup> International IFS and Contemporary Mathematics Conference (IFSCOM 2022)", 16 19 Jun. 2022, Mersin, TURKEY.
- Member of Scientific Committee for "II. International Conference on Mathematics and its Applications in Science and Engineering (ICMASE 2022)", 4 - 7 Jul. 2022, Bucharest, Romania.
- Reviewer for "II. International Conference on Mathematics and its Applications in Science and Engineering (ICMASE 2022)", 4 - 7 Jul. 2022, Bucharest, Romania.
- Chairing a Session for "10th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2021)", 25 - 27 Aug. 2021, Sakarya, Turkey.

- Member of Scientific Committee for "II. International Conference on Mathematics and its Applications in Science and Engineering (ICMASE 2021)", 1 - 2 Jul. 2021, Salamanca, Spain.
- Master of Ceremony for "Conference on Mathematics and its Applications 2014 (CMA14)", 14 – 17 Nov. 2014, Department of Mathematics, Kuwait University, Kuwait.
- Conferences Attended with Oral Presentation:
- 1. October 27 31, 2022, Main and non-main eigenvalues of connected chain graphs, *The 5th Mediterranean International Conference of Pure & Applied Mathematics and Related Areas* (MICOPAM 2022), Antalya, Turkey.
- 2. August 25 27, 2021, Matroids and n<sub>3</sub>-configurations, 10th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2021), Sakarya, Turkey.
- July 25 29, 2021, On triangular matroids induced by n<sub>3</sub>-configurations, II. International Conference on Mathematics and its Applications in Science and Engineering (ICMASE2021), Salamanca, Spain.
- 4. June 21 22, 2021, **Upper bounds on the energy of graphs in terms of matching number**, *Emerging Trends in Pure and Applied Mathematics* (ICETPAM 2021), University of Bahrain, Bahrain.
- 5. May 25 29, 2021, **The Moore-Penrose inverse of symmetric matrices with nontrivial** equitable partitions, 7<sup>th</sup> International IFS and Contemporary Mathematics Conference (IFSCOM 2021), Mersin, TURKEY.
- 6. August 5 6, 2010, Classification of Triangle-Free 22<sub>3</sub> Configurations, *Workshop Coding Theory and Geometry*, Colorado State University, Fort Collins, Colorado, USA.
- 7. March 2007, **Classification algorithms for incidence structures**, *Algebra Seminar*, Colorado State University, USA.
- 8. April 7, 2006, Algorithms for isomorphism checking and generation of simple graphs, *Algebraic Combinatorics Seminar*, Colorado State University, USA.
- Poster Presentations:
- 1. May 11 14, 2022, **On main eigenvalues of chain graphs**, 5<sup>th</sup> International Conference on Mathematical Advances and Applications (ICOMAA-2022), Istanbul, Turkey.

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- 2. May 26 29, 2021, Upper bounds on the energy of graphs in terms of matching number, 4<sup>th</sup> International Conference on Mathematical Advances and Applications (ICOMAA-2021), Istanbul, Turkey.
- May 26 29, 2021, On triangular matroids induced by n<sub>3</sub>-configurations, 4<sup>th</sup> International Conference on Mathematical Advances and Applications (ICOMAA-2021), Istanbul, Turkey.
- 4. March 21, 2021, Upper bounds on the energy of graphs in terms of matching number, *Poster Day 2020/2021*, Research Sector Kuwait University.
- 5. July 11 21, 2016, On construction of certain Chevalley groups of E<sub>6</sub>(q), *The conference* of the 5th CIMPA GeToPhyMa 2016, Rabat, Morocco.
- June 5 9, 2013. On Baer triple (V,G,R)<sub>F2</sub>, "The 4th Novi Sad Algebraic Conference & Semigroups and Applications 2013", Novi Sad, Serbia.
- <u>Participation in Scientific Meetings without Oral Presentations:</u>
- 1. December 15 17, 2021, International Conference on Linear Algebra and its Applications (ICLAA 2021).
- 2. July 23 27, 2021, 26th International Conference on Applications of Computer Algebra (ACA 2021).
- 3. April 28 29, 2021, ILAS 2340 Spectral Graph Theory (SGT) Online 2021, Research Group SGT-Rio and SGT-RS, Brazil.
- 4. July 17 27, 2015, Combinatorics and Computer Algebra (CoCoA) 2015, *Colorado State University*, Fort Collins, Colorado, USA.
- 5. July 23 27, 2012, The 6th International Conference on Automatic Differentiation (AD2012), *Colorado State University*, Fort Collins, Colorado, USA.
- 6. April 11 18, 2010, Algebraic Combinatorics and its Applications (ALCOMA 10), *Thurnay near Bayreuth*, Germany.

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### 6. <u>SABBATICAL LEAVES</u>

- September 2023- September 2024, Colorado State University (Colorado USA) and Kuwait University (Kuwait).
- September 2009 September 2010, *Colorado State University* (Colorado USA) and *Kuwait University* (Kuwait).



### 7. HONORS AND AWARDS

- 1. Winner of Jaber Al-Ahmad Prize for Young Researchers for the Prize Field "**Natural Sciences and Mathematics** including Physics, Chemistry, Geology, Mathematics, Statistics, Computer Sciences and other majors", 2021.
- Kuwait University Research Reward for "Final Report Reward from *funded* project No. SM02/19": Saieed Akbari, Abdullah Alazemi and Milica Andelić, "Upper bounds on the energy of graphs in terms of matching number", *Applicable Analysis and Discrete Mathematics*, 15: 444 - 459, 2021.
- Kuwait University Research Reward for "publishing Q1 scientific paper from *funded* project No. SM01/19": Abdullah Alazemi, Milica Andelić, Carlos da Fonseca, Vyacheslav Futorny, and Vladimir V. Sergeichuk, "Three representation types for systems of forms and linear maps", *Mathematics*, 9 (5), 455, 1 - 12, 2021.
- Kuwait University Research Reward for "publishing Q1 scientific paper from *unfunded* project": Ali Kanso, Mohammad Ghebleh, and Abdullah Alazemi, "Efficient Image Encryption Scheme Based on 4-Dimensional Chaotic Maps", *Informatica*, 31 (4): 793 820, 2020.
- 5. Kuwait University Research Reward for "publishing Q1 scientific paper from *unfunded* project": Ali Kanso, Mohammad Ghebleh, and Abdullah Alazemi, "A Lossless Linear Algebraic Secret Image Sharing Scheme", *Informatica*, **31** (3): 499 522, 2020.
- Kuwait University Research Reward for "publishing Q1 scientific paper from *funded* project No. SM03/18": Abdullah Alazemi, Milica Andelić, Francesco Belardo, Maurizio Brunetti, and Carlos da Fonseca, "Line and subdivision graphs determined by T<sub>4</sub>-gain graphs", *Mathematics*, 7 (10), 926, 1 - 12, 2019.
- Kuwait University Research Reward for "publishing Q1 scientific paper from *unfunded* project": Abdullah Alazemi, Milica Andelić, and Slobodan Simić, "On eigenvalue inequalities of a matrix whose graph is bipartite", *Journal of Inequalities and Applications*, 50, 1 12, 2019.
- Kuwait University Research Reward for "publishing Q1 scientific paper from *funded* project No. SM03/16": Abdullah Alazemi, Milica Andelić, Tamara Koledin, and Zoran Stanić, "Distance-regular graphs with small number of distinct distance eigenvalues", *Linear Algebra and its Applications*, 531: 83 - 97, 2017.
- Kuwait University Research Reward for "publishing Q1 scientific paper from *funded* project No. SM03/15": Abdullah Alazemi, Milica Andelić, and Slobodan K. Simić, "Eigenvalue location for chain graphs", *Linear Algebra and its Applications*, 505: 194 - 210, 2016.

### 8. <u>LIST OF PUBLICATIONS</u>

### 8.1 Research Papers (Post Ph.D.)

- Abdullah Alazemi, Milica Anđelić, Jovana Milenković and Jovana Nikolov Radenković, "Combinatorial versus algebraic formulae for the Moore–Penrose inverse of a Laplacian matrix of a threshold graph", Journal of Computational and Applied Mathematics, 442, 115714, 2024. https://doi.org/10.1016/j.cam.2023.115714.
- Abdullah Alazemi, Osama Alhalabi and Milica Anđelić, "Moore-Penrose inverse of the signless Laplacians of bipartite graphs", Bulletin of the Iranian Mathematical Society, 49, 51 (2023). https://doi.org/10.1007/s41980-023-00792-6.
- 3. **Abdullah Alazemi** and Emrah Kilic, "Determinant evaluation of banded Toeplitz matrices via bivariate polynomial families", Applicable Analysis and Discrete Mathematics, accepted.
- 4. **Abdullah Alazemi**, Milica Anđelić, and Darko Dimitrov, "On the inverse Collatz-Sinogowitz irregularity problem", Open Mathematics 21, Article number 20220572, 2023.
- 5. Abdullah Alazemi, Milica Anđelić, Tamara Koledin, and Zoran Stanić, "Chain graphs with simple Laplacian eigenvalues and their Laplacian dynamics", Computational and Applied Mathematics 42, Article No. 6, 1 16, 2023. https://doi.org/10.1007/s40314-022-02141-5.
- Latif Hanna, Abdullah Alazemi, and Anwar Al-Dhafeeri, "On Faithful Matrix Representations of q-Deformed Models in Quantum Optics", International Journal of Mathematics and Mathematical Sciences, Volume 2022, Article ID 6737287, 8 pages. https://doi.org/10.1155/2022/6737287.
- Abdullah Alazemi, Milica Anđelić, Kinkar C. Das and Carlos M. da Fonseca, "Chain graph sequences and Laplacian spectra of chain graphs", Linear and Multilinear Algebra, 1 - 17, 2022. https://doi.org/10.1080/03081087.2022.2036672.
- 8. Mohammad Ghebleh: Ali Kanso and **Abdullah Alazemi**, "A linear algebraic threshold essential secret image sharing scheme", Mathematics 10 (5), 742, 1 16, 2022. https:// doi:10.3390/math10050742.
- 9. Saieed Akbari, **Abdullah Alazemi**, Milica Anđelić and Mohammad A. Hosseinzadeh, "On the energy of line graphs", Linear Algebra and Its Applications 636, 143 153, 2022. https://doi.org/10.1016/j.laa.2021.11.022.

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- Abdullah Alazemi, Carlos da Fonseca and Emrah Kiliç, "The spectrum of a new class of Sylvester-Kac matrices", Filomat 35 (12), 4017 - 4031, 2021. https://doi.org/10.2298/FIL2112017A.
- Abdullah Alazemi, Milica Anđelić and Aisha Salim, "On main eigenvalues of chain graphs", Computational and Applied Mathematics 40, Article No. 268, 2 - 16, 2021. https://doi.org/10.1007/s40314-021-01639-8.
- Saieed Akbari, Abdullah Alazemi and Milica Anđelić, "Upper bounds on the energy of graphs in terms of matching number", Applicable Analysis and Discrete Mathematics 15 (2), 444 -459, 2021. https://doi.org/10.2298/AADM201227016A.
- Abdullah Alazemi, Milica Anđelić and Dragana Cvetković-Ilić, "The Moore-Penrose inverse of symmetric matrices with nontrivial equitable partitions", Applied Mathematics and Computation 400, 126036, 1 - 11, 2021. https://doi.org/10.1016/j.amc.2021.126036.
- Abdullah Alazemi, Milica Anđelić, Carlos da Fonseca, Vyacheslav Futorny and Vladimir Sergeichuk, "Three representation types for systems of forms and linear maps", Mathematics 9 (5), 455, 1 - 12, 2021. https://doi.org/10.3390/math9050455.
- Kinkar Chandra Das, Abdullah Alazemi and Milica Anđelić, "On energy and Laplacian energy of chain graphs", Discrete Applied Mathematics 284, 391 - 400, 2020. https://doi.org/10.1016/j.dam.2020.03.057.
- Ali Kanso, Mohammad Ghebleh and Abdullah Alazemi, "Efficient image encryption scheme based on 4-dimensional chaotic maps", Informatica 31 (4), 793-820, 2020. https://doi.org/10.15388/20-INFOR426.
- Ali Kanso, Mohammad Ghebleh and Abdullah Alazemi, "A Lossless linear algebraic secret image sharing scheme", Informatica 31 (3), 499-522, 2020. https://doi.org/10.15388/20-INFOR420.
- Abdullah Alazemi, and Michael Raney, "On triangular matroids induced by n<sub>3</sub>configurations", Open Mathematics 18, 1565-1579, 2020. https://doi.org/10.1515/math-2020-0101.
- Abdullah Alazemi, Milica Anđelić, Tamara Koledin and Zoran Stanić, "Eigenvalue-free intervals of distance matrices of threshold and chain graphs", Linear and Multilinear Algebra 69 (16), 2959 2975, 2019.
  https://doi.org/10.1080/03081087.2019.1701624

https://doi.org/10.1080/03081087.2019.1701624.

- Abdullah Alazemi, Milica Anđelić and Slobodan Simić, "On eigenvalue inequalities of a matrix whose graph is bipartite", Journal of Inequalities and Applications 50, 1 - 12, 2019. https://doi.org/10.1186/s13660-019-2001-2.
- Abdullah Alazemi, Milica Anđelić, Francesco Belardo, Maurizio Brunetti and Carlos M. da Fonseca, "Line and subdivision graphs determined by T<sub>4</sub>-gain graphs", Mathematics 7(10), 926, 1 - 12, 2019. https://doi.org/10.3390/math7100926.
- 22. Abdullah Alazemi and Mashhour Bani-Ata, "On the existence of Baer triples (V,G,K)<sub>F2</sub> of type 2", Kuwait Journal of Science 46 (3), 18 30, 2019.
- Abdullah Alazemi, Milica Anđelić, Carlos da Fonseca and Vladimir Sergeichuk, "Lipschitz property for systems of linear mappings and bilinear forms", Linear Algebra and its Applications 573, 26 - 36, 2019. https://doi.org/10.1016/j.laa.2019.03.016.
- Abdullah Alazemi, Anton Betten and Sajeeb Chowdhury, "Rainbow clique search algorithm for BLT-sets", In ICMS 2018 - Proceedings of the International Congress on Mathematical Software; James H. Davenport, Manuel Kauers, George Labahn, Josef Urban (ed.), pages 71– 79. Springer, 2018. https://doi.org/10.1007/978-3-319-96418-8 9.
- 25. Abdullah Alazemi, Milica Anđelić, Tamara Koledin and Zoran Stanić, "Distance-regular graphs with small number of distinct distance eigenvalues", Linear Algebra and its Applications 531, 83-97, 2017. https://doi.org/10.1016/j.laa.2017.05.033
- 26. Abdullah Alazemi, Milica Anđelić and Slobodan Simić, "On the spectral invariants of symmetric matrices with applications in the spectral graph theory", Filomat 31, 2925-2932, 2017.
- 27. Abdullah Alazemi and M. Bani-Ata, "On construction of the maximal parabolic subgroup P<sub>1</sub> of E<sub>6</sub>(K) for fields K of characteristic two", Journal of Lie Theory 27 (4), 1107-1118, 2017.
- Abdullah Alazemi, Milica Anđelić and Slobodan Simić, "Eigenvalue location for chain graphs", Linear Algebra and its Applications, 505, 194-210, 2016. https://doi.org/10.1016/j.laa.2016.04.030.
- 29. Abdullah Alazemi and Mashhour Bani-Ata, "On certain properties of Baer triples (V, G, K)<sub>F2</sub> of type n", Far East Journal of Mathematical Sciences (FJMS), 96 (6), 725-734, 2015.
- 30. Abdullah Alazemi and Dieter Betten, "The configurations 12<sub>3</sub>, revisited", Journal of Geometry, 105 (2), 391-417, 2014.



https://doi.org/10.1007/s00022-014-0228-0

- Abdullah Alazemi, Anton Betten and Dieter Betten, "Unital designs with blocking set", Discrete Applied Mathematics, 163 (2): 102-112, 2014. https://doi.org/10.1016/j.dam.2013.02.023.
- Fares AlAzemi, Abdullah Alazemi and Lyubomir Boyadjiev, "Mellin transform method for solving Black-Scholes equation", International Journal of Pure and Applied Mathematics, 97 (3), 287-301, 2014. https://doi.org/10.12732/ijpam.v97i3.3.
- 33. **Abdullah Alazemi**, Fares AlAzemi, and Amin Boumenir, "The approximation of eigencurves by sampling", Sampling Theory in Signal and Image Processing, 12 (2-3), 127-137, 2013. http://dx.doi.org/10.1007/bf03549564.
- 34. Abdullah Alazemi, "Isomorph rejection: theory and an application", Kuwait Journal of Science and Engineering, 39 (2A): 1-14, 2012.
- 35. Abdullah Alazemi, "Classification of regular digraphs, normally regular digraphs, and strongly regular digraphs", International Journal of Pure and Applied Mathematics 78 (3): 379-393, 2012.
- 36. Abdullah Alazemi and Anton Betten, "Classification of triangle free 22<sub>3</sub> configurations", International Journal of Combinatorics, Volume 2010, Article ID 767361, 17 pages, 2010. http://dx.doi.org/10.1155/2010/767361.
- 37. Abdullah Alazemi, "Generating incidence structures with a given girth", International Journal of Applied Mathematics, 23 (4), 703 -711, 2010.

### 8.2 **Conference Proceedings Publications**

- Abdullah Alazemi, Anton Betten and Sajeeb Chowdhury, "Rainbow clique search algorithm for BLT-sets", In ICMS 2018 - Proceedings of the International Congress on Mathematical Software; James H. Davenport, Manuel Kauers, George Labahn, Josef Urban (ed.), pages 71– 79. Springer, 2018.
- 2. Abdullah Alazemi, Milica Anđelić and Slobodan Simić, "On the spectral invariants of symmetric matrices with applications in the spectral graph theory", Filomat 31 (10), 2925-2932, 2017.

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### 8.3 Papers Under Review / Submitted

1. **Abdullah Alazemi**, Milica Anđelić and Sudipta Mallik, "Signed graphs and inverses of their incidence matrices", Linear Algebra and Its Applications.

### 8.4 Books and Book Chapters

- 1. **Abdullah Alazemi** (Ph. D. Dissertation), "Classification algorithms for graphs, digraphs, and linear spaces", LAP LAMBERT Academic Publishing, 2009.
- 2. Abdullah Alazemi, Milica Anđelić, and Kyriakos Papadopoulos, "On the geometric realization of generalized Cartan matrices of rank 3", *a chapter in "Analysis, Geometry, Nonlinear Optimization and Applications, World Scientific"*.
- 3. Abdullah Alazemi and Milica Anđelić, "Forbidden eigenvalue intervals of chain graphs", *submitted, Springer chapter in a book.*

# 9. SCIENTIFIC CONTRIBUTIONS

### 9.1 Mathematical Software

 A collaborator of ORBITER – Classification of Combinatorial Objects, by Anton Betten, Kuwait University, Kuwait and Colorado State University, Colorado, USA: https://github.com/abetten/orbiter.

### 9.2 Membership in Professional Societies

- Member of Kuwait University Faculty Association.
- Member of American Mathematical Society (AMS).
- Member of International Linear Algebra Society (ILAS).

### 9.3 Editorial Boards

- Area Editor for Journal of Universal Mathematics, 2021 present.
- Member of Editorial Board of Facta Universitatis, Series: Mathematics and Informatics, 2022 - present.

### 9.4 Refereeing Projects

• Kuwait Journal of Science.

### 9.5 Refereeing Articles

- Discussiones Mathematicae Graph Theory.
- Kuwait Journal of Science.
- Discrete Applied Mathematics.

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- Applied Mathematics and Computation.
- AIMS Mathematics.
- Mathematics and Statistics (Invited).
- Filomat.
- Facta Universitatis: Series Mathematics and Informatics.
- Journal of Applied Mathematics and Computing.

### 9.6 Review of Published Articles

- Mathematical Reviews by American Mathematical Society (AMS).
- Zentralblatt MATH (zbMATH Open).

# 9.7 Proposed Academic Visits (One week) to the Department of Mathematics at Kuwait University - Kuwait

- Dr. Darko Dimitrov (2022), University of Applied Sciences, Berlin, Germany.
- Prof. Emrah Kilic (2019), TOBB University of Economics and Technology, Ankara, Turkey.
- Prof. Kinkar C. Das (2018), Department of Mathematics, Sungkyunkwan University, Suwon, South Korea.
- Prof. Volodymyr Sergeichuk (2018), Institute of Mathematics of the National Academy of Sciences of Ukraine, Ukraine.
- Prof. Slobodan Simić (2015), Mathematical Institute of Serbian Academy of Sciences and Arts, Belgrade, Serbia.

### 9.8 Collaborators

- Prof. Saieed Akbari, Sharif University, Iran.
- Dr. Fares Alazemi, Kuwait University, Kuwait.
- Anwar Al-Dhafeeri, Kuwait University, Kuwait.
- Osama Al-Halabi, Kuwait University, Kuwait.
- Dr. Milica Anđelić, Kuwait University, Kuwait.
- Prof. Mashhour Bani Atta, Public Authority for Applied Education and Training, Kuwait.
- Dr. Francesco Belardo, University of Naples, Italy.
- Dr. Anton Betten, Kuwait University, Kuwait and Colorado State University, USA.

- Prof. Dieter Betten, University of Kiel, Germany.
- Prof. Amin Boumenir, Kuwait University, Kuwait.
- Prof. Lyubomir Boyadjiev, Kuwait University, Kuwait.
- Dr. Maurizio Brunetti, University of Naples, Italy.
- Sajeeb Chowdhury, Colorado State University, USA.
- Prof. Dragana Cvetković-Ilić, Kuwait University, Kuwait and University of Nis, Serbia.
- Dr. Kinkar Chandra Das, Sungkyunkwan University, South Korea.
- Dr. Darko Dimitrov, Faculty of Information Studies, Novo mesto, Slovenia.
- Prof. Carlos M. Da Fonseca, College of Science and Technology, Kuwait, and University of Primorska, Slovenia.
- Dr. Mohammad Ghebleh, Kuwait University, Kuwait.
- Dr. Latif Hanna, Kuwait University, Kuwait.
- Dr. Mohammad Hosseinzadeh, Amol University of Special Modern Technologies, Iran.
- Dr. Ali Kanso, Kuwait University, Kuwait.
- Prof. Emrah Kilic, TOBB University of Economics and Technology, **Turkey**.
- Dr. Tim Hopkins, University of Kent, UK.
- Dr. Tamara Koledin, University of Belgrade, Serbia.
- Sudipta Mallik, Northern Arizona University, USA.
- Dr. Jovana Milenković, University of Niš, Serbia.
- Dr. Kyriakos Papadopoulos, Kuwait University, Kuwait.
- Dr. Jovana Nikolov Radenković, University of Niš, Serbia.
- Dr. Michael Raney, Georgetown University, USA.
- Aisha Salim, Kuwait University, Kuwait.
- Prof. Vladimir V. Sergeichuk, Institute of Mathematics, Ukraine
- Prof. Slobodan K. Simić, Serbian Academy of Sciences and Arts, Serbia.
- Prof. Zoran Stanić, University of Belgrade, Serbia.