

Ali H. Al-Saedi, Ph.D.

Department of Mathematics
Mustansiriyah University
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Baghdad, Iraq

Education

Doctor of Philosophy in Mathematics, Oregon State University, Corvallis, 2017

Thesis title: Periodicity and Partition Congruences

Supervisor: Holly Swisher

Master of Science in Mathematics, Mustansiriyah University, Baghdad, Iraq, 2009

Thesis title: Purely Baer Modules

Supervisor: Mehdi S. Abbas

Bachelor of Science in Mathematics, Mustansiriyah University, Baghdad, Iraq, 2004

Awards and Honors

Several Certificates of appreciation, Mustansiriyah University *2004-2020*

Valedictorian Award, College of Science, Mustansiriyah University *July 2004*

Travel Awards

- The 31st annual Automorphic Forms Workshop, March 6-9, 2017, East Tennessee State University, Johnson City, Tennessee, USA.
- The Integer Conference 2016, October 6-9, 2016, University of West Georgia, Carrollton, Georgia, USA.

Scholarships

Ph.D. Scholarship, Oregon State University *Fall 2015- Spring 2017*

Higher Committee for Education Development in Iraq *October, 2010-2016*

Employment and Teaching Experience

Mustansiriyah University, Baghdad, Iraq

Faculty Member *November 2017-present*

- Complex Analysis
- Mathematics & C++ programming instructor
- Computer lab supervisor

- Academic advisor

Oregon State University, Corvallis, Oregon

Instructor

Spring 2017

Taught Calculus for Management and Social Science for new international students attending Oregon State University .

Teaching Assistant

Fall 2015 - Spring 2017

Ran recitations, discussions, problems review sessions, graded papers, quizzes and final exams including the following courses:

Math 342	Linear Algebra II	Winter 2017
Math 343	INTRODUCTION TO MODERN ALGEBRA	Winter 2017
Math 254	VECTOR CALCULUS I	Spring and Fall 2016
Math 252	INTEGRAL CALCULUS	Winter 2016
Math 251	DIFFERENTIAL CALCULUS	Fall 2015

Additional work Experience

Fall 2014, Winter 2015

Worked at Oregon State University dorms as a Math tutor helping students understand variety of subjects and topics in Mathematics such as Statistics, Finance, Accounting and Engineering. I also worked with students in groups and individual.

Mustansiriyah University, Baghdad, Iraq

Instructor of Mathematics

2009-2010

- Module Theory
- Complex Analysis

Teaching assistant and grader

2006-2008

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|-------------------------------|-----------------------------------|
| • Calculus I & II | • Ordinary Differential Equations |
| • Fundamentals of Mathematics | • Real Analysis |
| • Abstract Linear Algebra | • Group and Ring Theory |
| • Probability and Statistics | • Topology |

Departmental Assistant

2004-2006

Research Interests in Number Theory

Interested in the study of various partition functions including congruences and combinatorial properties.

Research Interests in Module Theory

Interested in the study of annihilators properties of modules and their endomorphism rings including Baer, quasi-Baer, purely Baer, purely quasi-Baer, Rickart modules and rings.

Ongoing Projects

- “Inequalities for positive rank and crank moments of plane overpartitions”.
- “Restricted plane overpartitions congruences modulo powers of 2”
- Overpartition Triples
- Pair Overpartitions

Publications and Preprints

Publications and Preprints in Number Theory

- Ali H. Al-Saedi and Anaam Mutar Sharqi. ”A note on overpartition triples.” Iraqi Journal of Science, accepted (2022).
- Ali H. Al-Saedi. ”2-Rowed plane overpartitions modulo 8 and 16.” Iraqi Journal of Science (2022), 63(10), 4410–4416.
- Ali H. Al-Saedi, Thomas Morrill, and Holly Swisher. ”Inequalities for the d th Residual Crank Moments of Overpartitions.” International Journal of Number Theory, Vol. 16, No. 07, pp. 1599-1606 (2020).
- Ali H. Al-Saedi, ”Congruences for restricted plane overpartitions modulo 4 and 8.” The Ramanujan Journal 48.2 (2019): 251-277.
- Ali H. Al-Saedi, ”Using periodicity to obtain partition congruences.” Journal of Number Theory 178 (2017): 158-178.

Publications and Preprints in Module Theory

- Ali H. Al-Saedi and Mehdi S. Abbas. ”A Note on Rickart Modules.” arXiv preprint arXiv:1609.04113 (2016).
- Mehdi S. Abbas and Ali H. Al-Saedi, Purely Baer Modules, Al- Mustansiriyah J. Sci. Vol. 24, No 5, 2013. Received 6/3/2013 – Accepted 15/9/2013.
- Mehdi S. Abbas and Ali H. Al-Saedi, Purely Quasi-Baer Modules, Al- Mustansiriyah J. Sci., Vol. 24, No 5, 2013 Received 27/3/2013 – Accepted 15/9/2013.

Conferences

31st annual Automorphic Forms Workshop

March 6-9, 2017, East Tennessee State University, Johnson City, Tennessee, USA.

20 minutes given talk under the title “ An Infinite family of Plane Overpartition Congruences Modulo 4”.

Winter 2017

Integers Conference

Fall 2016

October 6-9 conference in Number Theory, University of West Georgia, Carrollton City, Georgia.
20 minutes given talk under the title “Periodicity and Plane Partition Congruences”.

Pacific Northwest Number Theory Conference *Spring 2016*
May 14-15 2016, Oregon State University, Corvallis, OR.

Pacific Northwest Number Theory Conference *Spring 2015*
May 16-17, University of Oregon, Eugene, OR.

College of Science, Department of Mathematics Conference *Fall 2009*
November 4-6, College of Science Conference, Mustansiriyah University, Baghdad, Iraq.
30 minutes given talk under the title “On Purely Baer Modules”.

Talks

- Talks in The Department of Mathematics, Mustansiriyah University
 - Branches of Number Theory, November, 2022.
 - Open Problems in Number Theory, November, 2021.
 - Periodicity and Partition Congruences, June, 2019.
 - From Ph.D to Postdoc, May, 2019.
 - A Graduate Student Journey in the United States, April, 2019.

- Talks in The Department of Mathematics, Oregon State University
 - A periodic approach to plane partition Congruences, Number Theory Seminar, 11-17-2015.
 - Minimum periods of $S(n, k)$ modulo M , Winter 2016.
 - Periodicities of a Class of Infinite Integer Sequences Modulo M , Spring 2016.

Official Services and Volunteering

- Mustansiriyah University, College of Science Conference, Organizer, November 26-27, 2018.
- The Fibonacci Quarterly Journal, Canada.
- Thirty-Seventh Annual Oregon Invitational Math Tournament at Oregon State University, May 13th, 2017.

Computer Skills

Computer Languages

C++ and Maple.

Other Computer skills

Latex, Microsoft Word, Excel, Power-Point.

Graduate Courses

- Real Analysis
- Abstract Linear Algebra
- Topology
- Differential and Integral Equations
- Complex Analysis
- Graduate Algebra
- Probability Theory
- Number Theory
- Partitions and Q-series
- Module Theory
- Operation Research

References

- **Holly Swisher**, Professor
 Department of Mathematics, Oregon State University
 Kidder Hall 058
 Corvallis, OR, 97333
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 Email Contact: swisherh@math.oregonstate.edu

- **Yevgeniy Kovchegov**, Professor
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 Kidder Hall 060
 Corvallis, OR, 97333
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- **Filix Maisch**, Senior Instructor (Teaching Reference)
 Department of Mathematics, Oregon State University
 Kidder Hall 368C
 Corvallis, OR, 97333
 Fax Contact: (541) 737-0517
 Email Contact: maischf@math.oregonstate.edu

- **Muatez Mohammed**, Lecturer
 Department of Physics & Astronomy, University of Central Arkansas
 201 Donaghey Avenue
 Lewis Science Center, Rm 171
 Conway, AR 72035
 Voice Contact: (501) 450-5909
 Fax Contact: (501) 852-2286
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