

Mochammad Zulfikar Aditya

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EDUCATION

- Bandung Institute of Technology** Bandung, Indonesia
Master of Science - Mathematics; GPA: 3.63/4.00
Aug 2019 - Oct 2020
Courses: Group Theory, Graph Theory, Association Scheme, Functional Analysis, Algebraic Graph Theory, Graph on Algebraic Structure, Matrix Analysis, Galois Theory,
- Bandung Institute of Technology** Bandung, Indonesia
Bachelor of Science - Mathematics; GPA: 3.65/4.00
Aug 2015 - Jul 2019
Courses: Linear Algebra, Modern Algebra, Intro to Graph Theory, Cryptography, Coding Theory, Intro to Real Analysis, Intro to Complex Analysis

SKILLS SUMMARY

- Math Skills:** Field and Galois Theory, Graph Theory, Linear Algebra, Hadamard Matrix
- Languages:** English (Fluent), Indonesian (Native)
- Programming:** Python, HTML, Java, MATLAB
- Frameworks:** Scikit, NumPy, Networkx, Flask, Bootstrap

EXPERIENCE

- Pahamify** Bogor, Indonesia (Hybrid)
Content Quality Control (Full-time)
Nov 2020 - Jun 2022
 - Math Reviewer:** Reviewed and checked at least 45 to 50 mathematics problems per week in the form of Try Out, Test Preparation, and Solution Video.
 - Analytical Research:** Conduct and apply cognitive and learning dimensions based on the current curriculum.
 - Teaching Consult:** Communicate with teachers and encourage them to improve their skills for writing good problems.
- Excelsis Learning Center** Bandung, Indonesia
Math Teacher (Part-time, Contract)
Aug 2019 - Jan 2021
 - Math Private Teacher:** Taught Math and Calculus for High School and Undergraduate Students such as Basic Calculus, Linear Algebra, and Intro to Differential Equation.
 - Tutorial:** Conducted teaching based on Cambridge curriculum for a single student or a group of 3-5 students.
- Bandung Institute of Technology** Bandung, Indonesia
Teaching Assistant and Grader (Part-time, Contract)
Jan 2018 - Dec 2021
 - Tutorial:** Conducted tutorial session for students in Basic Calculus and Calculus for Engineering/Biology.
 - Lab Assistant:** Handled a session of computational lab such as numerical mathematics, intro to computational mathematics, and intro to programming.
 - Grading:** Graded students' homework in various subjects such as Linear Algebra and Calculus.
 - Consulting:** Handled a session of math consulting for undergraduate students two times a week.

WORKSHOPS AND SEMINARS

- ITB International Virtual Course : Combinatorics Perspective** Bandung, Indonesia (Online)
Participants and doing final research projects on graph theory
5-17 Sep 2022
- ICW-HDDA-X** Sanur, Indonesia (Online)
Parallel speaker presenting "Jacobson Graph over \mathbb{Z}_n " (published)
12-15 Oct 2020
- CIMPA Research School on Group Actions in Arithmetic and Geometry** Yogyakarta, Indonesia
Participants
17-28 Feb 2020
- The 3rd ICCGANT** Jember, Indonesia
Parallel speaker presenting "Jacobson Graph over \mathbb{Z}_n "
26-27 Oct 2019

PROJECTS

- On the Topological Indices of Zero Divisor Graphs of Some Commutative Rings (Zero-Divisor Graph, Commutative Ring, Topological Indices):** Research project funded by ITB Research group focusing on finding some topological indices of a zero divisor graph over ring or multiplication ring of prime-power modulo (Feb '22)
- Exploration of Mutually Unbiased Biangular Regular Set over Butson-Type $BH(n, 3)$ on Constructing Association Scheme (Association Scheme, Biangular Regular Set, Hadamard Matrix):** Master thesis focusing on exploration of determining whether it's possible to construct an association scheme based on Mutually Unbiased Biangular Regular Set using Hadamard Matrix of type $BH(n, 3)$ (Aug '20)
- Jacobson Graph over \mathbb{Z}_n (Ring Theory, Graph Theory, Elementary Number Theory):** Undergraduate thesis focusing on finding the relation between graph properties of Jacobson Graph and ring properties of \mathbb{Z}_n (May '19)

PUBLICATIONS

- **Paper: Jacobson Graph over \mathbb{Z}_n :** Published in Journal of Physics : Conference Series Volume 1722 (Jan '21).

HONORS AND AWARDS

- Honorable Mention at International Mathematics Competition for University - July, 2018
- Bronze Medal at National Science Olympiad for Undergraduate - May, 2018

VOLUNTEER EXPERIENCE

- **Founder of Purist MA LOL** Online
Creating a small community of Pure Math students in ITB Math Departments. Sep 2018 - Present
- **Customer Relation at AIESEC in Bandung** Bandung, Indonesia
Manage outgoing volunteer participants from Bandung from departure to arrival. Mar 2019 - Jan 2020
- **Committee of 5th BIGTC (Biennale International Group Theory Conferences)** Bandung, Indonesia
Volunteering as a committee helping in the logistics section. Jul 2019
- **English Teacher at AIESEC in Assumption University** Nakhon Pathom, Thailand
Teaching English to Elementary Schools in rural areas with fun and interactive concept. Dec 2018 - Feb 2019