

Sahir GILL

EMAIL: sahirgill8@gmail.com PHONE: +91 9654003899 WEBSITE: sahir8gill.github.io

EDUCATION

- 2019 B.E. (hons.) Electrical and Electronics Engineering
Birla Institute of Technology and Science Pilani, K.K. Birla Goa Campus
CGPA: 7.189/10, *first division*
- 2015 Senior School Examination
Central Board of Secondary Education, India
PERCENTAGE: 92.8%

PUBLICATIONS

- 25th June 2018 **Bounds for Region Containing All Zeros of a Complex Polynomial**
Journal Name: **International Journal of Mathematical Analysis** vol. 12, 2018, no. 7

ACADEMIC PROJECTS

- Aug 2018-Present **NUMBER THEORY: Circle Method to Represent n as Sum of Powers of Primes**
Using the circle method in analytic number theory to study the representation of a given number as the sum of naturals, powers of naturals and primes. Problems like Waring's, Partitions fall in this category. The objective is to explore such distribution of powers of primes to represent n .
- Jan-Apr 2018 **COMPLEX ANALYSIS: Bounds for Region Containing All the Zeros of a Polynomial**
Modeled new bounds for annular region containing all the zeros of a complex polynomial using existing number sequences which reduce the area of such regions formulated by already existing results for some polynomials. [Paper](#).
- Aug-Nov 2017 **COMPLEX ANALYSIS: A General Approach to Prove the Sendov Conjecture**
Formulated an approach using Mathematica for proving the conjecture using the apolarity condition of polynomials. Presented a condition on fourth degree (can be extended generally) polynomials which if has a solution under given constraints, proves the conjecture. [Report](#).

WORK EXPERIENCE

- | | |
|--------------|--|
| MAY-JUL 2017 | Summer Intern at ADANI POWER, <i>Mundra</i>
Industrial Training for Transformer Overhauling and Maintenance at India's second largest power plant. Rated <i>good</i> for performance and conduct. |
|--------------|--|

POSITION OF RESPONSIBILITY

- | | |
|-----------------|--|
| AUG-DEC 2018 | Teacher's Assistant MULTIVARIABLE CALCULUS , <i>On Campus</i>
Evaluation of quizzes, consolidation of scores, exam invigilation duties and organizational assistance to the instructor. Rated <i>excellent</i> for overall performance. |
| JAN-MAY 2018 | Teacher's Assistant LINEAR ALGEBRA & COMPLEX ANALYSIS , <i>On Campus</i>
Facilitated doubt clearing sessions, consolidation of scores, exam invigilation duties and organizational assistance to all students. Rated <i>excellent</i> for overall performance. |
| AUG-DEC 2017 | Teacher's Assistant CALCULUS , <i>Off Campus</i>
<i>Work Integrated Learning Program</i>
Critical evaluation of answer sheets with constructive feedback. Moderation of discussion forum and answering queries of working professionals undertaking the course. Rated <i>excellent</i> for overall performance. |
| AUG '16-MAY '17 | Editor at SIZZLING SANDS , <i>BITS Goa Annual Magazine</i>
Directed content contribution and editing of creative submissions by college community. Moderated and promoted the magazine content on social media. |

SCHOLARSHIPS AND AWARDS

2018 **Research Scholarship** presented by the Alumni Relations Cell, BITS Pilani
Awarded 2nd place for conducting successful independent research in the period of April '17-June '18

CERTIFICATES AND EXAMINATIONS

OCTOBER 2018 GRE[®] Mathematics: 730
JUNE 2018 TOEFL iBT[®]: 114/120 (R:27/30;L:30/30;S:29/30;W:28/30)
MARCH 2018 GRE[®]: 324/340 (Q:170/170;V:154/170); AWA: 4.0/6.0

SOFTWARE SKILLS

Basic Knowledge: MATLAB, HTML, \LaTeX
Intermediate Knowledge: C++, Wolfram Mathematica

MATHEMATICS COURSEWORK

Multivariable Calculus, Probability & Statistics, Linear Algebra & Complex Analysis, Differential Equations, Number Theory, Complex Analysis, Introduction to Topology, Optimization, Study Project, Mathematical Methods, Design Project 1, Algebra-I, Elementary Real Analysis, Design Project 2.

Poetry Blog ([link](#)), Football, Astrophotography, Reading.