

# Sahir GILL

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## EDUCATION

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- 2019 B.E. (hons.) Electrical and Electronics Engineering  
**Birla Institute of Technology and Science Pilani**, K.K. Birla Goa Campus  
CGPA: 7.55/10, first division
- 2015 Senior School Examination  
**Central Board of Secondary Education**, India  
PERCENTAGE: 92.8%

## PUBLICATIONS

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- 25<sup>th</sup> 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

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- Aug-Nov 2018 **NUMBER THEORY: Circle Method to Represent  $n$  as Sum of Powers of Primes**  
Study of the circle method in analytic number theory to understand the representation of a given number as the sum of naturals, powers of naturals and powers of primes. Focused on the text by Miller and Takloo-Bighash to analyze problems like Waring's, Partitions in this category.
- 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

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- JAN-JUNE 2019 **Product Management Intern at RIVIGO SERVICES, Gurgaon**  
Worked in the team for internal sales products to deliver a new web based product, facilitated enhancement of existing mobile app features. Worked on MySQL based data visualization tools (Periscope, Apache Superset, Metabase) to analyze data.

## POSITION OF RESPONSIBILITY

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- AUG-DEC 2018 **Teacher's Assistant MULTIVARIABLE CALCULUS, On Campus**  
Evaluation of quizzes, consolidation of scores, exam invigilation duties and organizational assistance to the instructor. Rated *excellent* for overall performance.
- JAN-MAY 2018 **Teacher's Assistant LINEAR ALGEBRA & COMPLEX ANALYSIS, On Campus**  
Facilitated doubt clearing sessions, consolidation of scores, exam invigilation duties and organizational assistance to all students. Rated *excellent* for overall performance.
- AUG-DEC 2017 **Teacher's Assistant CALCULUS, Off Campus**  
*Work Integrated Learning Program*  
Critical evaluation of answer sheets with constructive feedback. Moderation of discussion forum and answering queries of working professionals undertaking the course. Rated *excellent* for overall performance.

AUG '16-MAY '17 Editor at SIZZLING SANDS, *BITS Goa Annual Magazine*  
Directed content contribution and editing of creative submissions by college community. Moderated and promoted the magazine content on social media.

## SCHOLARSHIPS AND AWARDS

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

## CERTIFICATES AND EXAMINATIONS

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

## CODING SKILLS

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Basic Knowledge: MATLAB, HTML,  $\text{\LaTeX}$   
Intermediate Knowledge: C++, Wolfram Mathematica, MySQL

## MATHEMATICS COURSEWORK

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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.