



हैदराबाद विश्वविद्यालय  
University of Hyderabad

# SEMINAR

## SCHOOL OF MATHEMATICS AND STATISTICS



प्रतिष्ठित संस्थान  
INSTITUTION OF EMINENCE  
राष्ट्रीय अपेक्षाएँ, वैश्विक मानक  
National Needs, Global Standards

DATES: 30<sup>TH</sup> APRIL 2021  
AND 7<sup>TH</sup> MAY 2021

### TITLE

Transition from High-School Algebra to College Algebra

### SPEAKER

Amartya Kumar Dutta  
Professor, ISI Kolkata

### VENUE | TIME

[meet.google.com/nhw-gcjz-oqy](https://meet.google.com/nhw-gcjz-oqy),  
04:00–05:00 PM (on 30.04.2021 and 07.05.2021).

### ABSTRACT

The algebra taught up to the higher secondary stage is a part of “Classical Algebra” which is primarily a study of polynomials: solutions of polynomial equations, relations between the roots and coefficients of polynomials, etc.

At the college level, students get introduced to “Modern Algebra” or “Abstract Algebra” which is primarily a study of abstract structures like groups, fields, rings and ideals. The late Prof. S.S. Abhyankar gave the names “High-School Algebra” and “College Algebra” to “Classical Algebra” and “Abstract Algebra” respectively.

Though we use the common name “Algebra”, the High-School Algebra and College Algebra may appear to the students to be completely different branches of study, mysteriously linked by a common name. In this *series of two talks*, we shall try to indicate the connection between the two aspects of “Algebra” — how the study of groups and fields emerged from the study of the cubic and higher degree polynomials.

**Note:** The second talk will be a continuation of the first talk. It should be possible for advanced students to attend the second talk even if they miss the first. The first talk will be accessible even to first year B.Sc. students.

### ABOUT THE SPEAKER

Prof. Amartya did his PhD at TIFR in commutative algebra under the guidance of Prof. S.M. Bhatwadekar in 1994. Apart from being one of the top algebraists in the country, he has mastery over the history of Indian Mathematics, having given several talks in various aspects of the subject. He is well known to be an inspiring teacher and he got INSA Best Teacher award in 2018.