CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES
VIRTUAL COLLOQUIUM

Friday, April 16
3:00 – 4:00 PM
https://ccsu.webex.com/meet/gotchev

GEOMETRY AND FINANCE: DRAWING CONNECTIONS BETWEEN TWO DISTINCT FIELDS

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Abstract: If asked where geometry can be applied in the real world, lots of answers come to mind – GPS, robotics, computer graphics, architecture – the list goes on and on. From construction of pyramids by the ancient Egyptians to tracking planetary orbits by the ancient Babylonians, the insights and tools provided by the study of geometry has been well established for thousands of years. Yet one area of applied mathematics that has emerged and significantly advanced in the last century – financial mathematics – seems an unlikely field for geometry to be of much use. While the value of geometry to problems in physics and engineering may seem obvious, the value of geometry in financial mathematics takes a little more digging. That is not to say this connection does not exist! Join me on Friday, April 16th, as we talk through some examples of where geometric concepts can be found in finance. From variance of a two asset portfolio being analogous to the law of cosines, to the asymptotic solution to the SABR model requiring tools found in differential geometry, the connection between finance and geometry will be shown to be as robust as it is surprising. Minimal background of math and finance will be required!

For further information:
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