DEPARTMENT OF MATHEMATICS Spring 2023 MATH Colloquium Series



From the Heavens to the Earth: The Mercurial Tale of Spherical Trigonometry

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As "the foot of the ladder to the stars" (as 15th-century astronomer Regiomontanus put it), trigonometry came into existence to map and predict the motions of heavenly bodies. But the celestial playing field is not the flat surface of our high school trigonometry; rather, it is the spherical dome of the heavens. The mathematics that arises is powerful; but more than that, it is beautiful. We explore the early development of the subject and some of its key theorems, with side trips to its applications in navigation and a startling new approach to the subject discovered only in the early 20th century.

