

STANFORD MATHEMATICS RESEARCH CENTER

- FRIENDS OF STANFORD MATHEMATICS -  
PUBLIC LECTURE

TERENCE TAO

JAMES AND CAROL COLLINS CHAIR OF LETTERS & SCIENCE,  
DEPARTMENT OF MATHEMATICS, UCLA

“THE COSMIC  
DISTANCE LADDER”

WEDNESDAY, OCTOBER 6TH, 2010  
7:30P.M.

CUBBERLEY AUDITORIUM  
485 LASUEN MALL  
STANFORD UNIVERSITY

HOW DO WE KNOW THE DISTANCES FROM THE EARTH TO THE SUN AND MOON, FROM THE SUN TO THE OTHER PLANETS, AND FROM THE SUN TO OTHER STARS AND DISTANT GALAXIES? CLEARLY, WE CANNOT MEASURE THESE DIRECTLY. NEVERTHELESS, THERE ARE MANY INDIRECT METHODS OF MEASUREMENT, COMBINED WITH BASIC HIGH-SCHOOL MATHEMATICS, WHICH CAN ALLOW ONE TO GET CONVINCING AND ACCURATE RESULTS WITHOUT THE NEED FOR ADVANCED TECHNOLOGY. THESE METHODS RELY ON CLIMBING A “COSMIC DISTANCE LADDER”, USING MEASUREMENTS OF NEARBY DISTANCES TO THEN DEDUCE ESTIMATES ON DISTANCES SLIGHTLY FURTHER AWAY.

IN 2006, TERENCE TAO WAS AWARDED THE FIELDS MEDAL (THE MATHEMATICAL EQUIVALENT OF THE NOBEL PRIZE). AMONG HIS OTHER AWARDS ARE THE BÔCHER PRIZE, THE SASTRA RAMANUJAN PRIZE, THE CLAY RESEARCH AWARD, THE NEMMERS PRIZE, AND, IN 2010, HE SHARED THE PÓLYA PRIZE.



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