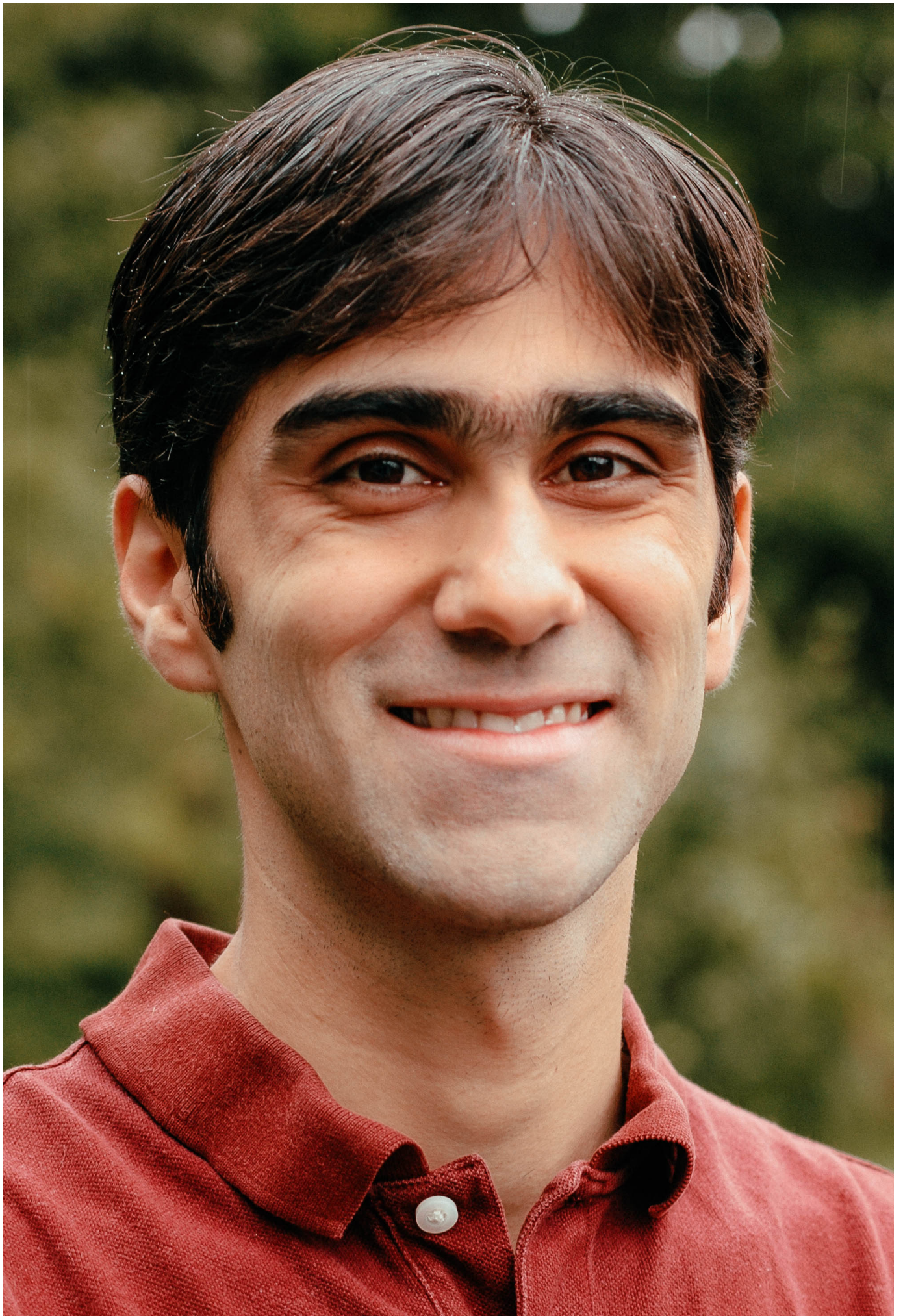


Professor Manuel Reyes wins NSF grant to study geometric shapes

The grant will help the UCI mathematician explore geometric shapes with peculiar properties.

Wednesday, May 18, 2022

UCI Physical Sciences Communications



The grant will help the UCI mathematician explore geometric shapes with peculiar properties.

Picture Credit:

Zoë Reyes Photography

Professor Manuel “Manny” Reyes, who [joined UCI in 2020](#) as one of the Department of Mathematics’ newest faculty members, just won a \$200,000 grant from the National Science Foundation to study the algebra of geometric shapes. Reyes will be studying “noncommutative spaces” — shapes that do not conform to typical algebraic equations like other shapes do. “There are many instances in mathematics where a geometric object is ‘perfectly encoded’ by the algebra of functions that define it,” said Reyes. “For several decades and for a variety of reasons, mathematicians have considered the possibility of noncommutative geometry where certain noncommutative algebras are imagined to similarly encode a ‘noncommutative space.’” Reyes’ grant will help fund collaborations with researchers at other institutions in an effort to construct models of noncommutative spaces and the algebras that define them — something that may one day inform research into quantum mechanics, where the algebra that describes phenomena on subatomic scales is fundamentally noncommutative.

[News Briefs](#)

[Math](#)

[Awards](#)

[Gifts and Grants](#)

[View PDF](#)