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An Echo of History: A Peruvian musician plays an ancient conch horn from the Chavín de Huántar ruins.

## PROGRESS EXAMPLES: ENGAGING THE ARTS AND CREATIVITY

THE  
STANFORD  
CHALLENGE

### The Challenge

What was the purpose of the mysterious Chavín de Huántar, an archaeological site in the Peruvian highlands that predates Machu Picchu by more than 2,500 years?

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### The Concept

A Stanford expedition traveled to Peru to measure the acoustics of the labyrinthine stone architecture before conservation work may alter it forever. With specialized microphones and precision loudspeakers, researchers analyzed the ceremonial space and shell trumpets found onsite to decipher their use.

Engaging the Arts and Creativity Overview

### Related News and Stories

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### The Outcome

The project has advanced the field of archaeoacoustics, which provides archaeologists and anthropologists with a novel way to unlock ancient histories. The team delved into the hypothesis that the structure's acoustic design enhanced the sensory experience in pre-Incan rites (see [analysis and data](#)). The research continues in the [doctoral dissertation](#) of Miriam A. Kolar. Team members and art and art history researchers now are also [studying](#) the acoustics of the Byzantine church of Hagia Sophia.

## The Collaboration

### *Stanford Department of Anthropology*

- John Rick, PhD, Professor of Anthropology

### *Stanford Center for Computer Research in Music and Acoustics (CCRMA)*

- John Chowning, DMA, Professor Emeritus of Music and Founding Director of CCRMA
- Jonathan S. Abel, PhD, Consulting Professor, CCRMA
- Perry R. Cook, Former Director of CCRMA and Professor Emeritus of Computer Science and Music, Princeton University

### *Stanford Interdisciplinary Graduate Fellowship*

- Miriam Kolar, MFA, PhD '12, CCRMA

*Additional Researchers including Graduate Students from the Stanford Departments of Music, Electrical Engineering, Communication, and Art & Art History.*

## With Support From

- [Stanford Institute for Creativity and the Arts Seed Funding](#)
- [Stanford Interdisciplinary Graduate Fellowships](#)

## More on This Example

- [Article](#): "Scientists Record 3,000-year-old Music; No Time Machine Required." *NPR*. December 1, 2010
- [Article](#): "What Lies Beneath." *Stanford Magazine*. January/February 2005
- [Gallery](#): Chavín de Huántar. Stanford Arts Initiative Website.
- [Link](#): Chavín de Huántar Archaeological Acoustics Project Website

[The Wasps takes aim at 'Tea-Partying Right,' 'Elitist Left'](#)

[Domenico Tiepolo's New Testament drawings come to Stanford](#)

[Writing of Stegner Fellows will be performed on Feb. 26 ? word for word](#)