

Heart Attacks Can Give You Mathematics



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Jim Keener is a Distinguished Professor of Mathematics at the University of Utah. His education includes an M.S. and Ph.D. in Applied Mathematics, both from the California Institute of Technology, and B.S. in Mathematics from Case Western Reserve University.

He is author of two graduate textbooks as well as author or co-author of more than 100 research journal articles on applied mathematics and biology. His book (with co-author James Sneyd) *Mathematical Physiology* was selected by the American Association of Publishers as the "Best New Title in Mathematics" in 1998.

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Heart attacks kill hundreds of people daily in the United States – many more than are killed by math anxiety!

A heart attack occurs when there is an occlusion of a coronary artery, leading to tissue damage. A heart attack is fatal when there is a subsequent disruption of the normal electrical signal of the heart, leading to fibrillation. There is very little understanding of why this occurs, and there are essentially no reliable predictors for the onset of fibrillation.

In this talk, I will give an overview of some of the ways that mathematics can help our understanding of cardiac arrhythmias, how they occur, what they are, and how they might be eliminated or prevented. The main emphasis will be on how mathematics can be used to give us insight and understanding that can not be obtained by other (non-mathematical) means.

Free and Open to the Public

7:00 p.m.

Thursday

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Middleton Auditorium

Strickler Hall 101

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