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# Without Numbers, With Numbers, About Numbers —

*Some thoughts on a thousand years of mathematics*

Bullitt Lecture  
of the  
Department of Mathematics  
University of Louisville

April 7, 2000  
7 pm  
Floyd Theatre  
Swain  
Student  
Activities  
Center

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University of Louisville  
Department of Mathematics*

*Speaker:*

**Professor Fernando Gouvêa**

*Department of Mathematics, Colby College*



**T**he mathematics that we inherited from the ancient Greeks did not give a central role to numbers. The most prestigious form of mathematics was geometry, which was about lengths, areas, angles... and none of these things were numbers. A thousand years later, we assign numbers to everything, from lengths to voter preferences. How did this change come about? The first signs were already in the air about a thousand years ago in Baghdad, then a crucial step was taken about 500 years ago in Europe, but the resulting mathematical questions weren't resolved till the nineteenth century. This talk will fly over a thousand years of mathematical history to survey this process and then consider the benefits and costs of assigning numbers to the world.

Dr. Gouvêa's research interests are in number theory and arithmetic geometry, with a secondary interest in the history of mathematics. He is also the editor of FOCUS and MAA Online (the online newsletter of the Mathematical Association of America).

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