Bakersfield College Math Students

At the 2002 MAA Southern California Spring Meeting

Six Bakersfield College Math Students presented poster sessions at the Mathematical Association of America (MAA) Southern California Spring Meeting at the California Institute of Technology on March 16, 2002. Bakersfield College accounted for five of the 20 poster projects and was one of two community colleges that had students participate in the session. Other participants were from CSU’s, UC’s, and four-year private colleges.

Colon Cancer Among Hispanics
Kathy Aleman

My project consists of highlighting the disparities of colon cancer among Hispanics by looking at previous colon cancer statistics (1979-1999) and the newly released statistics for 2001. I am specifically looking to see if health care coverage and cancer risk factors are related to clinical outcomes. I am also directly looking at my community statistics to see if the trend is similar.

Applications of Mathematics to Waterslides
Adriana Magana and Candace Golike

Waterslides have always represented fun and adventure. The faster the slide, the more thrilling the experience. This is in fact what we will investigate, the different structures and paths of waterslides that yield the maximum velocity. Using AutoCAD drawings we will examine two types of slides, a speed slide and a banked slide, and will come up with equations for the curves. By applying the principles involved in the solution to the brachistochrone problem we will also find the curve of shortest time.

Fractional Calculus
Michael Rios, Brandon McNaughton, and Benjamin Samudio

This work explores several derivations and properties of basic fractional calculus.

Note: Brandon is a BC alumni; Brandon, Michael, and Benjamin are students at California State University, Bakersfield.

Whirling Worldviews
This project investigates the derivation and analysis of rotational matrices and their applications.

Modeling Brain Images

Tadeu Pauletto Szpoganicz

Science has inspired many people to attempt to describe nature; however, computer software tends to depict nature during some situations. For example, computer images are presented in pixels, or several closely spaced dots. In contrast, when the human brain presents an image, as in a thought or dream, it is doubtful that this image is displayed in the same manner a computer displays a JPEG. If scientists can measure radiation that describes images displayed in a flow of thought, then it is possible to draw a picture of what you are imagining now as you read this passage.

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