

FLORIDA GULF COAST UNIVERISTY DEPARTMENT OF MATHEMATICS

MATHEMATICS SEMINAR

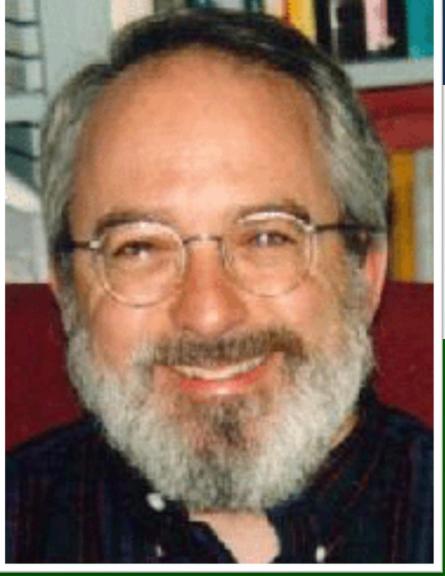
FRIDAY MARCH 16TH, 2018 FLORIDA GULF COAST UNIVERSITY ROOM 220 SEIDLER HALL 4:30 PM- 5:30 PM

A STATISTICIAN'S VIEW OF UNCERTAINTY

GUEST SPEAKER: DR. DAVID W. SCOTT

NOAH HARDING PROFESSOR OF STATISTICS RICE UNIVERSITY

MODERN DATA SCIENCE RELIES ON EVER MORE COMPLEX MODELS **EXAMPLES** TO UNDERSTAND DATA. PRESENTING THE CONFIDENCE OF MODEL PREDICTIONS IS A GRAND CHALLENGE. IT IS MUCH MORE THAN INVENTING A NEW LANGUAGE EXPRESSING UNCERTAINTY. FACED WITH POTENTIALLY HUNDREDS OR THOUSANDS OF



PARAMETERS, SCIENTISTS OFTEN PERFORM SENSITIVITY ANALYSES IN ORDER TO ASSESS THE ROBUSTNESS OF MODEL PREDICTIONS. SUCH ONE-AT-A-TIME CALCULATIONS ARE USEFUL BUT LIMITED. VISUALIZATION TECHNIQUES CAN PROVIDE A FULLER PICTURE, BUT THE AVAILABILITY OF IMMERSIVE TECHNOLOGIES IS STILL EXPENSIVE AND NOT COMMONPLACE (YET). WE EXAMINE SOME SIMPLE POLLING, SURVEY, AND REGRESSION DATA AND DISCUSS THE PRESENTATION OF UNCERTAINTY. AVENUES FOR RESEARCH ARE DESCRIBED.

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