



The Southern California STATISTICIAN

✧ Meeting Memo and Newsletter ✧

Vol 19 No 7

SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

May 1982

MAY MEETING ANNOUNCEMENT

Los Angeles Area Meeting

WHO: Jeffrey Morris, M.D., Ph.D.

TOPIC: Paternity Testing

WHEN: Thursday, May 27, 1982

PRICE: \$7.00
\$6.00 for full time students

DINNER RESERVATIONS: Please make your dinner reservations by Tuesday, May 25 by calling either Bob Newcomb at (714) 833-5979 or Bruce Hodge at (213) 741-4370

WHERE: UCI, Terrace Restaurant,
Gateway Commons
For directions, see map.

CAREER DAY

Career Day was a great success. There were 61 participants from 8 Universities visiting 16 firms. Our thanks to all who helped.

Any suggestions for next year's Career Day would be appreciated and can be sent to: Janet Williams
Math Dept.
University of California
Irvine, CA 92717

THE SPEAKER AND HIS TOPIC

Jeffrey Morris, M.D., Ph.D., received his Ph.D in Biophysics from UCLA and his M.D. from UCI. He is presently Clinical Assistant Professor of Pathology at UCI School of Medicine. An abstract of Dr. Morris's talk follows:

Paternity testing is based on determination of a number of genetically defined traits (blood types). Inspection of blood types of mother and child permits identification of those factors contributed by the biological father (obligatory genes). An alleged father lacking one or more obligatory genes is excluded. It is a simple matter to calculate the frequency with which the obligatory genes are found in the general population. The complement of this frequency is the power of exclusion, A . Modern methods yield, typically, $A = 0.99$. Failure of an alleged father to be excluded by such tests is powerful intuitive evidence that the alleged father is, indeed, the biological father of the child. The genetic evidence (contained in the paternity index, x/y) is combined with the non-genetic evidence (contained in the prior probability) and quantitated by means of formulas of conditional probability (i.e. Bayes Theorem) to yield the likelihood of paternity, W .

As both paternity index and prior probability contain inherent uncertainties in their determinations, W (in common with all functions of experimentally observed parameters) also carries with it an inherent uncertainty. However, if testing has been extensive, this uncertainty does not invalidate such evidence, which is now explicitly admissible in California courts.

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If you are paying Chapter dues to the Chapter (rather than part of the National membership dues) you should pay them for 1982-83 using the enclosed form. These dues should reach us by June 30, 1982. Due to the high cost of postage and printing we will be forced to drop those people who decide not to pay dues.