ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ

ΣΧΟΛΗ ΧΡΗΜΑΤΟΟΙΚΟΝΟΜΙΚΗΣ ΚΑΙ ΣΤΑΤΙΣΤΙΚΗΣ

ΤΜΗΜΑ ΣΤΑΤΙΣΤΙΚΗΣ ΚΑΙ ΑΣΦΑΛΙΣΤΙΚΗΣ ΕΠΙΣΤΗΜΗΣ

ΠΡΟΣΚΛΗΣΗ

Σας προσκαλούμε στην **ομιλία** του **Αναπλ. Καθηγητή, Λεωνίδα Μπαντή, Department of Biostatistics and Data Science of the University of Kansas Medical Center, Kansas, U.S.A.**, η οποία θα διεξαχθεί διαδικτυακά την **Παρασκευή 16 Μαΐου 2025, ώρα 16:00**, με θέμα:

Biomarker Cutoff Estimation and Inferences around the Associated True and False Class Rates for the Three-Class Problem with Applications to Pancreatic Cancer

Abstract/Περίληψη: Pancreatic ductal adenocarcinoma (PDAC) is the most deadly cancer, and currently there is strong clinical interest in novel biomarkers that contribute to its early detection. Appropriately assessing the accuracy of such biomarkers is a crucial issue, and one must often take into account that many assays include biospecimens from individuals in three groups: healthy, chronic pancreatitis, and PDAC. The ROC surface is an appropriate tool for assessing the overall accuracy of a marker used under such trichotomous settings. A decision/classification rule is often based on the so-called Youden index and its three-dimensional generalization. However, neither the clinical nor the statistical literature has paid sufficient attention to the underlying false classification (FC) rates, which are of equal or even greater importance. In this presentation, we illustrate a framework for making inferences about all classification rates, as well as comparisons across them. We comment on the trinormal model, along with flexible models based on power transformations, and robust non-parametric alternatives. We discuss a comprehensive framework for constructing confidence intervals, regions, or spaces for clinically meaningful operating points related to the underlying optimized decision cutoffs. Finally, we illustrate the approach using data from a recent PDAC study conducted at the MD Anderson Cancer Center.

Για να συνδεθείτε στη διαδικτυακή ομιλία επιλέγετε:
https://teams.microsoft.com/l/meetup-join/19%3ac2b84132af2140dabd5355ea486de1a4%40thread.tacv2/1746893855545?context=%7b%22Tid%22%3a%22d9c8dee3-558b-483d-b502-d31fa0cb24de%22%2c%22Oid%22%3a%22845270c1-6fa1-493b-b3af-3ebabd95a79e%22%7d

Short Bio: Leonidas Bantis is an Associate Professor in the Department of Biostatistics and Data Science at the University of Kansas Medical Center, Kansas, U.S.A. He is currently the Director of the Ph.D. Program in Biostatistics and the Assistant Director of Graduate Studies in the same department. His research focuses on biomarker evaluation and the development of statistical methodologies related to ROC-based approaches. His methods have broad applications in several settings, such as Alzheimer's disease and severe traumatic brain injury, although his most impactful collaborative projects have focused on biomarker studies in cancer patients. Dr. Leonidas Bantis is a member of the University of Kansas Cancer Center, an Associate Editor of the journal *Statistics in Medicine*, and has served as a regular panelist for NASA's HERO program since 2021.