You are cordially invited to the 321st meeting as scheduled below.

**Date:** 2019年12月13日（金）15:00－
15:00－, Friday, December 13, 2019

**Place:** 放射線影響研究所講堂
Auditorium, RERF

**Speaker:** 林 賢一 博士（慶應義塾大学理工学部数理学科 准教授）
Kenichi Hayashi, Ph. D.
Associate Professor
Department of Mathematics, Faculty of Science and Technology,
Keio University

**Title:** 「Power·IDI: IDIに基づく予測能改善の定量化」
“The power·IDI: a quantification of the incremental predictive value based on the integrated discrimination improvement”

**Summary:**
The predictive performance of biomarkers is a central concern in biomedical research. This is often evaluated by comparing two statistical models: a “new” model incorporating additional biomarkers and an “old” model without them. The integrated discrimination improvement (IDI) was proposed for cases, and became popular during the last decade as a promising alternative to conventional measures, such as the difference of the area under the ROC curve. However, the IDI can erroneously identify a significant improvement in the new model even if no additional information has been provided by new biomarkers. In order to overcome problems with existing measures, we propose a novel measure of incremental predictive value. We establish that the IDI cannot avoid false detection of apparent improvements in a new model and show that our proposed measure is better able to capture improvements in prediction.