



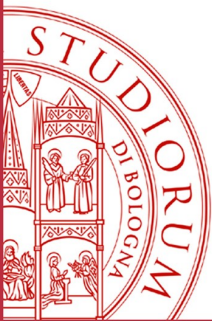
ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

**Mercoledì 9 marzo 2011 - Ore 14:30**

**Dipartimento di Scienze Statistiche**

**Aula III**

**Via Belle Arti, 41**



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Il Dipartimento di Scienze Statistiche  
invita all'incontro sul tema

***PROPENSITY SCORE METHODS  
IN PRACTICE***

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**Abstract:** *The popularity of propensity score (PS) methods for estimating causal treatment effects from observational studies strongly increased during the past decade. However, the success of these methods in removing selection bias mainly rests on strong assumptions and the competent implementation of a specific propensity score technique. I will start with a short introduction to the Rubin Causal Model and then discuss different PS techniques (PS matching, PS stratification, inverse propensity weighting, PS regression). Finally, I will discuss conditions under which PS approaches for estimating causal treatment effects can actually for in practice. I will focus on the relative importance of four factors in removing selection bias: (i) the selection of covariates, (ii) their reliable measurement, (iii) estimating a PS that balanced baseline group differences, and (iv) the choice of a specific propensity score technique. The relative importance of these four factors will be demonstrated using results from meta-analyses but also within-study comparisons that compare treatment effect estimates from a non-equivalent control group design with self-selection to a corresponding benchmark from a randomized experiment.*

Il Direttore di Dipartimento  
Prof. Rosella Rettaroli

Il Coordinatore del Dottorato in Metodologia Statistica  
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Prof. Daniela Cocchi