**Lab weighting approach for confounding adjustment**

**P1822 – Statistical Methods for Causal Inference**

**Linda Valeri**

We analyze data from the Lalonde study. Interest lies in investigating the causal effect of participating in a job training program on income 4 years after.

The **lalonde** dataset can be directly loaded from R. Code for the lab can be found on Courseworks.

Note that different models can be used and different choices regarding confounding adjustment can be made. I encourage you to work together and using slightly different choices than what done in the code.

1. Explore the dataset and fit the propensity score, after having discussed rationale for adjustment of covariates in the propensity score model
2. Check Covariate Balance and Overlap
3. Implement the inverse probability of treatment weighting procedure and estimate the marginal ATE
4. Implement the inverse probability of treatment weighting procedure and estimate the conditional ATE
5. Compare your results with what you would have obtained with direct adjustment for confounding in the outcome regression