Yishen Yang was born in Jiangsu, China. In 2007 she received her Bachelor degree in Mathematical Statistics in Shanghai University of Finance and Economics. She then continued her studies at master level in Applied Statistics at Örebro University, School of Business in Sweden (2007-2009). Following this, in 2009 she was enrolled as a Ph.D. student. Her research interests are non-parametric rank-invariant methods for paired ordinal data.

Data from rating scale assessments have rank-invariant properties only, which means that the data represent an ordering, but lack of standardized magnitude, inter-categorical distances, and linearity. Even though the judgments often are coded by natural numbers they are not really metric. The aim of this thesis is to further develop the nonparametric rank-based Svensson methods for paired ordinal data that are based on the rank-invariant properties only. The thesis consists of five papers. The first three are theoretical papers dealing with properties of estimators / tests; the last two are applied papers verifying the applicability of the methods.