

Estimations of the Hierarchical Archimedean Copula

Ostap Okhrin¹

Dresden University of Technology, Germany
ostap.okhrin@tu-dresden.de,

WWW home page: <https://tu-dresden.de/bu/verkehr/iwv/osv/die-professur/inhaber-in>

Abstract: We discuss several estimators, of the hierarchical Archimedean copulas. In one, we propose the estimation of parametric hierarchical Archimedean copula while imposing an implicit penalty on its structure. Asymptotic properties of this sparse estimator are derived and issues relevant for the implementation of the estimation procedure are discussed. In the other method we propose the estimator, that uses cluster algorithm in order to obtain the structure and the parameters. Third method is based on the maximum likelihood technique. This talk is based on the several papers together with Y. Okhrin, W. Schmid, A. Ristig, A. Teterova.

Ostap Okhrin (born 1984) studied mathematics (B.Sc. in 2004) and statistics (M.Sc. in 2005) at the Ivan Franko National University in Lviv, Ukraine. In 2008 he defended his PhD thesis at the Europa Universität Viadrina in Frankfurt (Oder) and was appointed as the Assistant Professor at the Humboldt-Universität zu Berlin. Prior his appointment at the TU Dresden he was an Associate Professor at the Humboldt-Universität zu Berlin (2014-2015). Since 2011



he made research stays at different international universities, f.e. SWUFE (Chengdu, China), Vienna University (Austria), Princeton University (USA), University of Chicago (USA), Michigan University (USA). Ostap Okhrin is in the editorial boards of four international Journals as well as author of articles in journals as Journal of the American Statistical Association, Journal of Econometrics, Econometric Theory, etc. He specialized in the multivariate distributions esp. copulas, their properties and applications in various fields from weather, over insurance to high-frequency data.