COLLABORATIVE RESEARCH CENTER 649
"Economic Risk"

NEWSLETTER

No. 12
8 December 2014

REGULAR RESEARCH SEMINARS

An overview is available at:
http://sfb649.wiwi.hu-berlin.de/fedc/seminars.php

ECONOMIC RISK SEMINAR

Location: Spandauer Str. 1, room 23
Time: every Monday, 2.00 – 4.00 p.m.

SCHUMPETER SEMINAR

Location: Spandauer Str. 1, room 23
Time: every Tuesday, 4.00 – 6.00 p.m.

WIAS RESEARCH SEMINAR MATHEMATICAL STATISTICS

Location: Weierstrass Institute for Applied Analysis and Stochastics,
                Mohrenstraße 39, 10117 Berlin, Erhard-Schmidt-Hörsaal
Time: every Wednesday, 10.00 – 12.00 a.m.

CURRENT EVENTS

More information can be found here:
http://sfb649.wiwi.hu-berlin.de/fedc/events_actual.php

3. Dec. 2014   **Nobelprizelecture**

                      Location: SPA 1, Heilig-Geist-Kapelle
                      Time: 18:00 p.m.

16. Dec. 2014   **Hilda Geiringer Lecture Series**

                      Location: SPA 1, Room 201
                      Time: 18:00 p.m.

17. Dec. 2014   **RDC: Bloomberg workshop**

                      Location: SPA 1, Room 21b
                      Time: 14:00 - 16.00 p.m.

NEWS OF THE CRC

13. November 2014   **Opening of the "Eltern-Kind-Raum"**

On the 13th of November the "Eltern-Kind-Raum" (Parenting Room) was opened in the west wing, main building, of the Humboldt-Universität zu Berlin in the presence of Professor Härdle. The room was partially supported by the CRC649.

20.-21. Nov. 2014   **Workshop on Recent Advances in High-Frequency Statistics**

From the 20th to 21st of November the workshop on Recent Advances in High-Frequency Statistics organized by the CRC, IRTG 1792, FOR 1735 and Weierstraß-Institut (WIAS) took place at WIAS. Distinguished speakers presented their recent research projects related to the field in an open inspiring atmosphere and discussed perspectives for future developments. The organizer committee Markus Bibinger, Nikolaus Hautsch, Marc Hoffmann, Markus Reiß and Vladimir Spokoiny invited as speakers Torben Andersen, Emmanuel Bacry, Peter Hansen, Marc Hoffmann, Jean Jacod, Nour Meddahi, Per Mykland, Mark Podolskij, Mathieu Rosenbaum, Viktor Todorov, and Mathias Vetter to gather experts currently working on important topics related to high-frequency financial data, both on empirical and methodological aspects. Almost sixty interested participants from twenty different institutions were present in the audience. A poster session provided a platform for young researchers working in this area, including members of the organizing insti-

tutions and as well foreign guests, to present their research and get in touch with the participants and invited speakers.
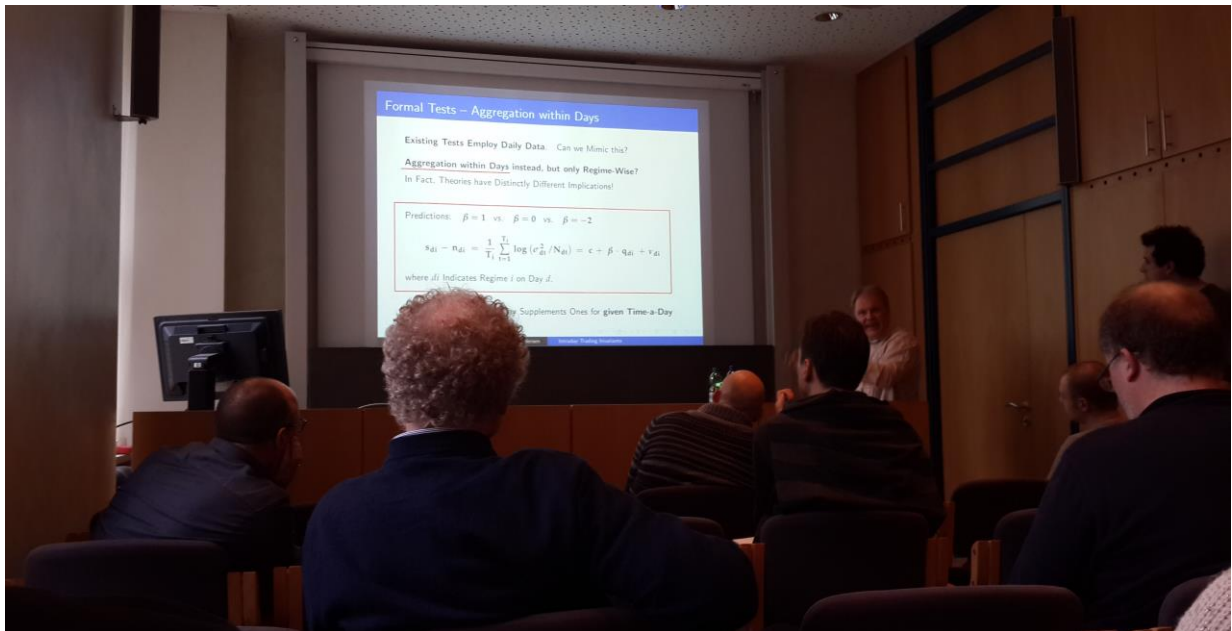
Privatissimum

Traditionally the Privatissmum of the Ladislaus von Bortkiewicz Chair of Statistics for Ph.D. students is held at different locations with them presenting their research and new results. Through discussion and collaboration in a non formal environment the progress in pushing foreward the individual work together with same minded research colleagues is enforced.

NEWS OF THE PROJECTS

Wolfgang Härdle (B1) has given a talk on "Portfolio Decisions and Brain Reactions via the CEAD Method" on the 28th of November 2014 at Renmin University, Beijing, People's Republic of China. Together with **Dedy Dwi Prastyo (B1)**, he spoke at the Chinese Academy of Science on "Localising Forward Intensities for Multiperiod Default". On the 5th of December 2014 he gave a talk on "TEDAS - Tail Event Driven Asset Allocation", following his presentation of "TENET: Tail Event Driven Network Risk" (Skewness, Heavy Tails, Market Crashes and Dynamics) on the 6th of December 2014 at CRETA, Center Research Economic Time series Analysis of the National University of Taiwan, Republic of China.

Shiyi Chen (B1) successfully applied for the Changjiang Scholarship granted by Ministry of Education, People's Republic of China. Congratulations!

Roland Strausz (A8) gave a talk on "Ex post information rents in sequential screening" at Mannheim University on the 11th of November 2014. From the 20th to 22nd of November 2014 Roland Strausz attended the LACEA-LAMES 2014 Meeting in Sao Paulo, Brazil and gave a talk on "Ex post information rents in sequential screening". On the 24th of November 2014 Roland Strausz gave a talk on "Optimal Sales Contracts with Withdrawal Rights" at the Workshop on Economic Theory - FGV/EPGE in Rio de Janeiro, Brazil.

Dorothea Kübler (A6) was a co-organizer of and participated in the Matching in Practice Workshop which was part of the UECE Lisbon Meetings from 6th to 8th of November in Lisbon.

Ostap Okhrin (B10). The Faculty of Economics and Management at Free University Bozen/Bolzano listed Ostap Okhrin as number one for the position as an Associate Professor of Econometrics, which he rejected. He also received an offer from the Technische Universität Dresden for the W3 Professorship in Statistics and Econometrics at the Transportation department which he accepted and will start from 01.03.2015.

He was also visiting Charles University in Prague from 25th to 28th of November. Okhrin and Pešta are working on the extension of their previous work about loss modelling in reserving. Financial support was provided by CENTRAL-Strategischen Initiativförderung with the aim to maintain and broaden the cooperation in Central Europe.

Alexander Ristig (B10) visited the Department of Statistics, University of Bologna, and gave a talk at the Conference on Systemic Risk and Contagion from 05th to 08th of November. He presented the joint project with Ostap Okhrin (B10), Jeffrey Sheen and Stefan Trück both from Macquarie University on "Investigating Financial Contagion with Copulae".

Michael C. Burda (C7) visited the Copenhagen Business School, Department of Economics, for a research stay with Battista Severgnini from 3rd to 8th of November 2014.

He participated on the 1st internal network-workshop of the DFG Priority Program 1764 "The German Labor Market in a Globalized World: Challenges trough Trade, Technology and Demographics" from 13th to 14th of November 2014 at ZEW in

Mannheim and hold a lecture on "Labor Market Reforms and Aggregate Supply in the Short and Long Run".

Michael Burda attended on a Conference in Honor of Prof. Daniel Hamermesh at the University of Austin, Texas on 21st of November 2014 and gave a talk "Payroll Taxes, Social Insurance and Business Cycles". On 24th of November 2014 he visited the Department of Economics at the University of Maryland and presented his paper on "Payroll Taxes, Social Insurance and Business Cycles".

Frank Heinemann (C10) organized a conference on Experiments in Monetary Policy together with Camille Cornand that took place at ENS Lyon on the 5th to 6th of November. He presented his paper (joint with John Duffy) "Central Bank reputation, Transparency and Cheap Talk as Substitutes for Commitment: Experimental Evidence."

Markus Bibinger (C12) has been invited to give a presentation at the Oberseminar zur Wahrscheinlichkeitstheorie und Statistik der Universität Marburg on the 2nd of November 2014.

Markus Bibinger is offered a W1-professorship at the University of Mannheim.

Lars Winkelmann (C14) presented the joint paper with **Aleksei Netšunajev (C15)** "Inflation Expectations Spillovers in a Markov Switching Structural VAR Model" at the Statistische Woche from 16th to 19th of September and the Research Seminar of the Bundesbank on 10th of October.

He presented joint work with Markus Bibinger (C12) on "Common price and volatility jumps in noisy high-frequency data" at the "Workshop on Recent Advances in High-Frequency Statistics" at the WIAS from the 20th to 21st of November.

CRC STAFF
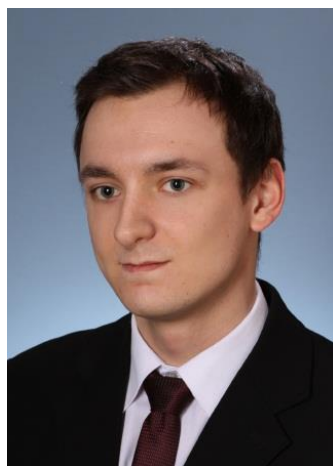
At this point the Collaborative Research Center 649 "Economic Risk" wants to present Grzegorz Dlugoszek, staff member of project C7 "Macroeconomic Risk in Labor and Financial Markets".

Grzegorz Dlugoszek obtained his Master of Science in Economics from the Humboldt University of Berlin in 2012. Immediately after graduation, he joined the Berliner Doctoral Program in Economics and Management Science and became a member of the Research Training Group 1659 one year later. Since October 2014, he has been a research assistant at the chair of Professor Michael C. Burda.

Grzegorz's main research interests are international macroeconomics, monetary economics and macro-finance. In his master's thesis, he examined the role of financial frictions for the international risk sharing in a two-country DSGE model. In his doctoral thesis, he continues to focus on the portfolio choice problem in a general equilibrium framework. In particular, he aims to explain the cross-country differences in external portfolio holdings and to investigate their implications for international transmission of domestic shocks and monetary policy.

GUESTS OF THE CRC 649

You find a summary about all guests here:
http://sfb649.wiwi.hu-berlin.de/fedc/guests_actual.php

01.09.2014 – **Tan, Frank**
31.01.2015   University College Dublin (IR)

Project: *Co-movements of idiosyncratic volatilities in G7 countries*

Spandauer Str. 1, room 311
Phone: 030-2093-1470
E-Mail: frank.tan@ucdconnect.ie

01.09.2014 – **Paulus, Michael**
31.01.2015   Charles University in Prague (CZ)

Project: *International trade with specific concern about gravity models and role of institutions (e.g. corruption) in international trade, fiscal policies and macroeconomics, philosophy of economics*

Spandauer Str. 1, room 318
Phone: 030-2093-5895
E-Mail: michal.paulus@seznam.cz

01.11. –   **Yun-Cheng, Tsai**
29.02.2016   National Taiwan University (TW)

Project: *Risk management, derivative pricing, high-frequency trading data analysis, computational finance*

Spandauer Str. 1, room 318
Phone: 030-2093-5895
E-Mail: d98922012@ntu.edu.tw

29.11. –   **Ni, Xinwen**
23.12.2014   Singapore Management University (SG)

Project: *Tail Event Driven Asset Allocation*

Spandauer Str. 1, room 318
Phone: 030-2093-5895
E-Mail: NIXI0001@e.ntu.edu.sg

01.12. –	**Chetverikov, Denis**
04.12.2014	UCLA (US)

Project: *Nonparametric instrumental variable estimation under monotonicity*

Spandauer Str. 1
E-Mail: chetverikov@econ.ucla.edu

04.12. –	**Chen, Ying**
17.12.2014	National University of Singapore (SG)

Project: *Manifold Functional Principal Component Analysis with Application to Neuroeconomics*

Spandauer Str. 1, room 406
Phone: 030-2093-5807
E-Mail: stacheny@nus.edu.sg

04.12. –	**He, Qiang**
17.12.2014	National University of Singapore (SG)

Project: *Manifold Functional Principal Component Analysis with Application to Neuroeconomics*

Spandauer Str. 1, room 406
Phone: 030-2093-5807
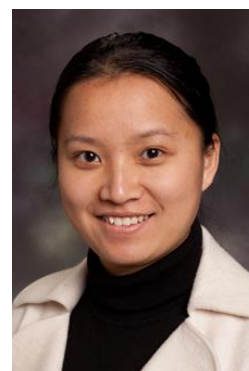E-Mail: hq19861027@gmail.com

07.12. –	**Liao, Yin**
12.12.2014	Queensland University of Technology (AU)

Project: *Financial Network Risk Modelling*

Spandauer Str. 1, room 318
Phone: 030-2093-5895
E-Mail: yin.liao@qut.edu.au

09.12. –	**Mai Tran, Ngoc**
24.12.2014	UC Berkeley (US)

Project: *Methods and Challenges in Financial Risk Measurement - Check*

Spandauer Str. 1, room 318
Phone: 030-2093-5895
E-Mail: tran.mai.ngoc@gmail.com

15.12. –   **Ma, Shujie**
30.12.2014   University of California, Riverside (US)

Project: *Pricing Kernel Modelling*

Spandauer Str. 1, room 318
Phone: 030-2093-5895
E-Mail: shujie.ma@ucr.edu

NEW DISCUSSION PAPERS

2014-065 "A Theory of Price Adjustment under Loss Aversion" by Steffen Ahrens, Inske Pirschel, Dennis J. Snower

2014-066 "TENET: Tail-Event driven NETwork risk" by Wolfgang Karl Härdle, Natalia Sirotko-Sibirskaya, Weining Wang

2014-067 "Bootstrap confidence sets under model misspecification" by Vladimir Spokoiny, Mayya Zhilova

2014-068 "Estimation and Determinants of Chinese Banks' Total Factor Efficiency: A New Vision Based on Unbalanced Development of Chinese Banks and Their Overall Risk" by Shiyi Chen, Wolfgang K. Härdle, Li Wang

2014-069 "When the Taylor principle is insufficient - A benchmark for the fiscal theory of the price level in a monetary union" by Maren Brede

2014-070 "The Politics of Related Lending" by Michael Halling, Pegaret Pichler,Alex Stomper

PUBLICATIONS

Chen, S. and Härdle, W. (2014)
        "Dynamic activity analysis model-based win-win development
        forecasting under environment regulations in China"
        Computational Statistics
        DOI: 10.1007/s00180-014-0505-2

Bibinger, M., Winkelmann, L. (2014)
        "Econometrics of co-jumps in high-frequency data with noise"
        Journal of Econometric
        DOI: 10.1016/j.jeconom.2014.10.004

Strohsal, T., Winkelmann, L. (2014)
        "Assessing the Anchoring of Inflation Expectations"
        Journal of International Money and Finance
        DOI: 10.1016/j.jimonfin.2014.09.001

Strohsal, T., Weber, E. (2014)
        "Mean-Variance Cointegration and the Expectations Hypothe-
        sis"
        DOI: 10.1080/14697688.2013.814974

Lütkepohl, H. (2014)
"Forecasting Unpredictable Variable"
Empirical Economic and Financial Research,
Advanced Studies in Theoretical and Applied Econometrics
DOI: 10.1007/978-3-319-03122-4_18

Lütkepohl, H., Velinov, A. (2014)
"Structural vector autoregressions: checking identifying long-run restrictions via heteroskedasticity"
Journal of Economic surveys
DOI: 10.1111/joes.12100

Fengler, M. and Okhrin, O. (2014)
"Managing risk with a realized copula parameter"
Computational Statistics and Data Analysis
DOI: 10.1016/j.csda.2014.07.011

QUANTLETS

In November 36 new Quantlets were uploaded (a total of 443 Quantlets in 2014). More detailed information is available here.

Project: COP

The success of copulae in applied statistics started at the end of 90s, when Embrechts, McNeil and Straumann (1999) introduced copula to empirical finance in the context of risk management. In multivariate models, normal distribution of residuals is a traditional assumption, however it is not very often consistent with real data. Copulae allow for an extension of dependency models to nonellipticity and for separation of margins from the dependency. With an increasing demand for models of multivariate time-series with time-varying and non-Gaussian dependencies, the available models suffer from the curse of dimensionality or from restrictive assumptions on the parameters and distributions. A promising class of models is that of hierarchical Archimedean copulae (HAC), which allows for non-exchangeable and non-Gaussian dependency structures with a small number of parameters. The COP project summarizes the R codes on Quantlet based on five journal papers from Ladislaus von Bortkiewicz Chair of Statistics:

• **Härdle, W., Okhrin, O. and Wang, W.** (2013) HMM and HAC, Advances in Intelligent Systems and Computing, 190, 341-348.

• **Härdle, W., Okhrin, Y. and Okhrin, O.** (2013) Dynamic structured Copula Models, Statistics and Risk Modelling, 30(4), 361–388

• **Choroś-Tomczyk, B., Härdle, W. and Okhrin, O.** (2013) Valuation of Collateralized Debt Obligations with Hierarchical Archimedean Copulae, *Journal of Empirical Finance*

• **Okhrin, O., Okhrin, Y. and Schmid W. (**2013) Properties of hierarchical Archimedean copulas, *Statistics and Risk Modeling*, 30 (1), 21-53,

• **Okhrin, O. and Ristig, A. (2014)** Hierarchical Archimedean Copulae: The HAC package**,** *Journal of Statistical Software,* 58(4), 1-20. IF 2.647

With the Quantlet of COP project, the main results of these papers could be replicated. The COP project also served as the Quantlet part of the forthcoming Copulae course held by the LvB chair.

The corresponding quantlets with R code can be found in the Project COP. The quantlet HAC example gives a 3D scatter plot with samples generated from HAC package.

Hierarchical Archimedean Copula

$$C_{Gumbel}[\Phi(x_2), C_{Gumbel}\{t_2(x_1), \Phi(x_3); \theta_1 = 10\}; \theta_2 = 2], s = (2(13))$$
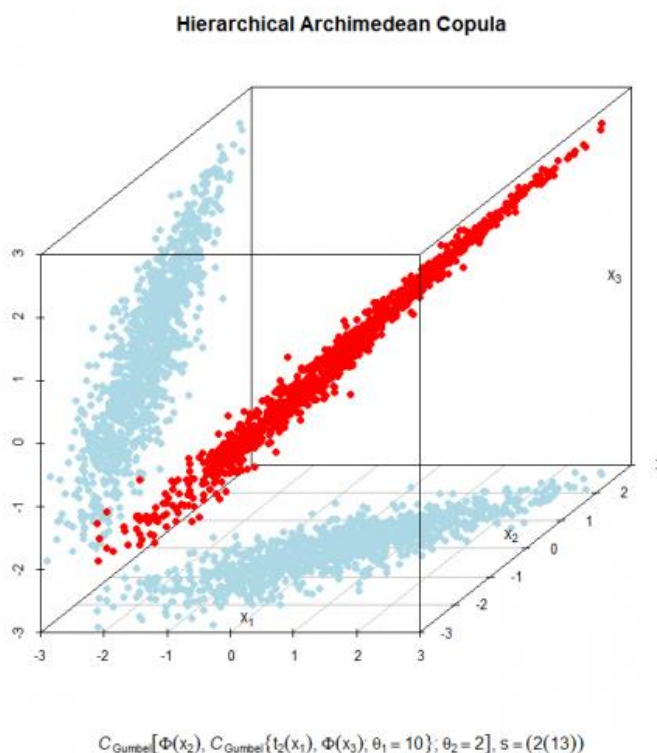
QUOTE OF THE MONTH

"One of the funny things about the stock market is
that every time one person buys, another sells, and both think they are astute."

William Feather (1889-1981)

Please also note that the newsletter is published on the homepage of the CRC 649.

**The CRC 649 – Newsletter is published at the beginning of each month.
Editorial deadline for the first Newsletter 2015 is 02.01.2014.**