

24th March 2014

CURRICULUM VITAE

Name: **OSTAP OKHRIN**

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Birth date and place: May 23, 1984; Lviv, Ukraine

Marital status: married to Dr. Iryna Okhrin since Sep. 2007

(daughter Sophie born in Dec. 2011, son Martin born in Jun. 2013)

Citizenship: Ukrainian (with permanent residentship for Germany)

Languages native Ukrainian, fluent in English, German, Russian, some Polish

PROFESSIONAL POSITIONS – WERDEGANG

- Apr. 2014 - *Associate Professor (W2)* for 5 years at the
Ladislaus von Bortkiewicz Chair of Statistics,
Humboldt-Universität zu Berlin, Germany
- Apr. 2011 - Mar. 2014 Second period of office after positive evaluation as
Assistant Professor (W1) at the
Ladislaus von Bortkiewicz Chair of Statistics,
Humboldt-Universität zu Berlin, Germany
- Apr. 2008 - Mar. 2011 *Assistant Professor (W1)* at the
Ladislaus von Bortkiewicz Chair of Statistics,
Humboldt-Universität zu Berlin, Germany
- Feb. 2006 - Mar. 2008 *Research Fellow* at the Department of Statistics,
European University Viadrina, Frankfurt (Oder), Germany

EDUCATION – AUSBILDUNG

- Feb. 2008 Ph.D. in Economics with *summa cum laude*
European University Viadrina, Frankfurt (Oder), Germany
Ph.D. thesis title " *Hierarchical Archimedean Copula: Structure Determination, Properties, Applications*"
Supervisor: Prof. Dr. Wolfgang Schmid
- June 2005 M.Sc. in Statistics with *summa cum laude*
Ivan Franko National University of Lviv, Ukraine
Master thesis title " *Asymptotic behavior of the S-stopped branching processes with the countable number of types of particles*"
Supervisor: Prof. Dr. Yaroslav Yeleyko
- June 2004 Bachelor in Mathematics
Ivan Franko National University of Lviv, Ukraine
Supervisor: Prof. Dr. Yaroslav Yeleyko
- June 2000 Lviv Academic Gymnasium, Ukraine

RESEARCH INTERESTS – FORSCHUNGSGEBIETE

- Quantitative Methods in Economics
- Applied Econometrics
- Multivariate Distributions (Copulae)
- Credit Risk (CDO)
- Modeling of Weather
- Adaptive Methods

TEACHING – LEHRE

Undergraduate level

Statistics I (tutorials (SS 07, 08) and lectures (SS 09, 10, 11, 14), in German/English)

Statistics II (tutorials (WS07/08) and lectures (WS08/09), in German)

Investments (tutorials (SS05), in Ukrainian)

Master level (lectures in English)

Statistics of Financial Markets I (WS10/11)

Statistics of Financial Markets II (SS11, 13)

Multivariate Statistical Analysis I (WS 09/10, 10/11, 12/13)

Multivariate Statistical Analysis II (SS08, 13, 14)

Statistical Programming Languages (SS09)

Financial Econometrics (SS14)

PhD Level (lectures in English)

Statistical Tools in Finance and Insurance (WS 08/09, 09/10 (Socrates Program for lecturers in Wroclaw, Poland), WS11/12, WS 13/14)

Selected Topics of Mathematical Statistics (WS 11/12, 12/13, 13/14)

HONORS AND AWARDS – AUSZEICHNUNGEN

- Sep. 2005 – Feb. 2006 Scholarship within the Ph.D. program “*Financial and capital markets in enlarged Europe*”, Frankfurt (Oder), Germany
- 16 March 2004 Third place at the first stage of the All-Ukrainian Olympiad in Programming, Lviv, Ukraine
- 3-5 May 2003 1st place in the Fifth All-Ukrainian Exhibition-Competition “*Computer and Student*”, Lviv, Ukraine
- 19-21 April 2002 3rd place in the Fourth All-Ukrainian Exhibition-Competition “*Computer and Student*”, Lviv, Ukraine
- 15 May 2000 3rd place at the third stage of the “*All-Ukrainian Exhibition-Competition of the works of the Small Academy of Sciences*”, Lviv, Ukraine
- May 2000 3rd place at the second stage of the “*All-Ukrainian Exhibition-Competition of the works of the Small Academy of Sciences*”, Lviv, Ukraine
- May 1999 2nd place at the second stage of the “*All-Ukrainian Exhibition-Competition of the works of the Small Academy of Sciences*”, Lviv, Ukraine

PROF. ACTIVITIES – BERUFL. TÄTIGKEITEN

Co-organizer of the

Humboldt-Princeton Conference, Princeton, USA, October 2013

Section on “*Copulae*” in “*Applicable Semiparametrics*”, Berlin, Germany, October 2013

Section on “*Statistics in Finance, Insurance and Banking*” in “*DAGStat 2013 - Statistics under one umbrella*”, Freiburg, Germany

Copulae in Mathematical and Quantitative Finance, Cracow, Poland, July 2012

Märkische Schweiz Summer School on Statistics in Finance and Insurance, Berlin, Germany, May 2012

Section on “*Finanzstatistik*” in “*Statistische Woche 2011*”, Leipzig, Germany

C.A.S.E. Distinguished Lecture Series 2011, Berlin, Germany, January 2011

Workshop on “*Copulae: Theory and Practice*”, Berlin, Germany, December 2007

4th All-Ukrainian Scientific Conference for Graduate and Postgraduate “*Theoretical and Applied Aspects of the Analysis of the Financial Systems*”, Lviv, Ukraine, May 2005

3rd All-Ukrainian Scientific Conference for Graduate and Postgraduate, Lviv, Ukraine, April 2004

Scientific Committee of the

Copulae in Mathematical and Quantitative Finance, Crakow, Poland, July 2012

Humboldt-Copenhagen Conference, Berlin, Germany, March 2009

Member of the

BDPEMS – Berlin Doctoral Program in Economics & Management Science
(<http://www.doctoralprogram.de>)

commission of the *Master of Science in Statistics* (www.stat.de)

Deutsche Statistische Gesellschaft, Econometric Society

Head of the sub/projects

- 2013– Project “*Copulae*” in IRTG 1792 “*High Dimensional Non Stationary Time Series*”
- 2011–2012 “*Entwicklung dynamisches Marktmodell*” (F249), financed by Deutsche Telekom (50K Euro)
- 2008– “*Copulae in Finance*” in the *C.A.S.E. – Center for Applied Statistics and Economics*
- 2008– B10: “*Dynamic Copula Models*” in the CRC 649 (150K Euro)

Associate Editor

- 2010– *AStA Advances in Statistical Analysis*
- 2011– *Computational Statistics*
- guest Editor of Special Issue on “*Copulae*” in *Statistics and Risk Modeling*
- guest Editor together with S. Trück of Special Issue on “*Applicable Semiparametrics*” in *Computational Statistics*

Referee

- *Econometrica*, *Journal of the American Statistical Association*, *Journal of Business & Economic Statistics*, *Journal of Multivariate Analysis*, *Statistics*, *Quantitative Finance*, *Computational Statistics and Data Analysis*, *Journal of Time Series Analysis*, *Nonlinear Analysis*, *AStA Advances in Statistical Analysis*, *Computational Statistics*, *The Quarterly Review of Economics and Finance*, *Metrika*, *Canadian Journal of Statistics*, *Agricultural Finance Review*, *International Review of Economics & Finance*, *International Journal of Approximate Reasoning*, *Proceedings of Rijeka School of Economics: Journal of Economics and Business*, *Dependence Modeling*

Other

- Package for R on HAC: <http://mirrors.softliste.de/cran/web/packages/HAC>
- 2013– Coordinator cooperation HU Berlin- ENSAE Paris, ENSAI Rennes
- 2011– Head of the Local Electoral Board in School of Business and Economics, HU-Berlin

REFEREED PUBLICATIONS – REFERIERTE PUBLIKATIONEN

Estimation procedures for exchangeable Marshall copulas with hydrological application, forthcoming in *Stochastic Environmental Research and Risk Assessment*, DOI: 10.1007/s00477-014-0866-7 (with F. Durante) (IF 1.961).

Conditional Least Squares and Copulae in Claims Reserving for a Single Line of Business, *Insurance: Mathematics and Economics* 56, 2014, pp 28–37, DOI: 10.1016/j.insmatheco.2014.02.007 (with M. Pešta)

Modelling general dependence between commodity forward curves, forthcoming in *Energy Economics*, DOI: 10.1016/j.eneco.2014.02.019 (with M. Zolotko)

Determining the structure and estimation of hierarchical Archimedean copulas, *Journal of Econometrics* 173 (2), 2013, pp 189-204, DOI: 10.1016/j.jeconom.2012.12.001 (with Y. Okhrin and W. Schmid)

Editorial to the special issue on Copulae of Statistics & Risk Modeling, *Statistics and Risk Modeling* (former Statistics and Decisions), 30(4), 2013, pp 281–286, DOI: 10.1524/strm.2013.9014.

Dynamic Structured Copula Models, *Statistics and Risk Modeling* (former Statistics and Decisions), 30(4), 2013, pp 361–388, DOI: 10.1524/strm.2013.2004 (with W. K. Härdle, Y. Okhrin)

Valuation of Collateralized Debt Obligations with Hierarchical Archimedean Copulae, *Journal of Empirical Finance* 24, 2013, pp 42–62, DOI: 10.1016/j.jempfin.2013.08.001 (with W. K. Härdle and B. Choroś-Tomczyk)

Properties of hierarchical Archimedean copulas, *Statistics and Risk Modeling* (former Statistics and Decisions) 30 (1), 2013, pp 21-53, DOI: 10.1524/strm.2012.1071 (with Y. Okhrin and W. Schmid)

Systemic Weather Risk and Crop Insurance: The Case of China, *Journal of Risk and Insurance* 80(2), 2013, pp 351–372, DOI: 10.1111/j.1539-6975.2012.01476.x (with M. Odening and W. Xu)

On the Generating Functional of the special case of S -Stopped Branching Processes, *Visn. L'viv. Univ., Ser. Mekh.-Mat. (Bulletin of the Lviv University), Series in Mechanics and Mathematics: 74*, 2011, pp. 157-167 (preprint available at <http://arxiv.org/abs/1108.1675>)

On the Systemic Nature of Weather Risk. *Agricultural Finance Review: 70*(2), 2010, pp. 267-284 (with M. Odening, G. Filler and W. Xu).

De copulis non est disputandum, *AStA - Advances in Statistical Analysis: 94*(1), 2010, pp. 1-31 (with W. K. Härdle)

Asymptotic behavior of the S -stopped branching processes with countable state space, *Visn. L'viv. Univ., Ser. Mekh.-Mat. (Bulletin of the Lviv University), Series in Mechanics and Mathematics: 67*, 2007, pp. 119-129.(with Y. Yeleyko and I. Kyrychynska, preprint available at <http://arxiv.org/abs/1108.1513>)

OTHER PUBLICATIONS – ANDERE PUBLIKATIONEN

Can expert knowledge compensate for data scarcity in crop insurance pricing?, Selected paper AAEA Annual Meeting 2013, Washington D.C. (with Z. Shen and M. Odening)

Modeling Time-Varying Dependencies between Positive-Valued High-Frequency Time Series, in: P. Jaworski, F. Durante and W.K.Härdle (eds.), *Copulae in Mathematical and Quantitative Finance*, (2013), Springer Verlag. (with A. Ristig and N. Hautsch)

HMM and HAC, *Advances in Intelligent Systems and Computing* Volume 190, 2013, pp 341-348, DOI 10.1007/978-3-642-33042-1_37 (with W. K. Härdle and W. Wang)

CDO Pricing with Copulae, *In Bulletin of the International Statistical Institute, 57th Session Durban Vol. 57. Bulletin of the International Statistical Institute*, 2009, (with B. Choroś and W. K. Härdle)

Fitting high-dimensional Copulae to Data, in: J.-C. Duan, J. E. Gentle, and W. K. Härdle (eds.), *Handbook of Computational Finance*, (2011) Springer Verlag, pp. 469-503.

Modeling Dependencies with Copulae, in: W. K. Härdle, N. Hautsch and L. Overbeck (eds.), *Applied Quantitative Finance*, second ed. (2008), Springer Verlag, pp. 3-36. (with W. K. Härdle and Y. Okhrin)

Portfolio selection based on the internal yield requirement, proceedings of *7th international workshop for young mathematicians: Applied Mathematics*, Cracow, 2005, pp. 131-149 (with I. Yatsyshynets and Y. Yeleyko)

Renewal theory and stock returns, *Applied statistics. Actuarial and Financial Mathematics. #1-2*, pp. 217-218, 2004 (with Y. Yeleyko, in ukrainian)

PAPERS IN PROGRESS – VERÖFFENTLICHUNGEN

Hierarchical Archimedean Copulae: The HAC Package, under accept minor in the *Journal of Statistical Software* from 18.02.2014 (with A. Ristig)

Localising temperature risk, second time revised and resubmitted to *Journal of Econometrics* on 15.12.2013 (with W. K. Härdle, B. López Cabrera, W. Wang)

HMM in dynamic HAC models, second time revised and resubmitted to *Econometric Theory* on 03.03.2014 (with W. K. Härdle, W. Wang)

Goodness-of-fit Test For Specification of Semiparametric Copula Dependence Models, under revision in *Journal of Econometrics* from 15.01.2014 (with Shulin Zhang, Qian M. Zhou and Peter X.-K. Song)

Managing Risk with a Realized Copula Parameter, under revision in *Computational Statistics and Data Analysis* from 23.12.2013 (with M. R. Fengler).

Can expert knowledge compensate for data scarcity in crop insurance pricing?, under revision in *European Review of Agricultural Economics* from 03.03.2014 (with M. Odening and Z. Shen)

CDO Surfaces Dynamics, submitted to the *Journal of Risk and Insurance* on 13.01.2014 (with W. K. Härdle and B. Choroś-Tomczyk)

Efficient Iterative Maximum Likelihood Estimation of High-Parameterized Time Series Models, submitted to the *Journal of Econometrics* on 22.01.2014 (with N. Hautsch and A. Ristig)

Modelling spatiotemporal variability of temperature, submitted to *Computational Statistics* on 14.02.2014 (with X. Cao, M. Odening and M. Ritter)

CONFERENCES – KONFERENZEN

-
- Nov. 2013 Invited talk at “*DyMaMo Konferenz 2013*”, organized by Deutsches Telekom AG, Bonn, Germany
- Sep. 2013 Statistische Woche 2013, Berlin, Germany
- Sep. 2013 Workshop “*Copula modeling: New challenges and techniques*”, München, Germany
- Apr. 2013 MCTN Conference, Konstanz, Germany
- Dec. 2012 Invited talk at the CFE-ERCIM 2012, Oviedo, Spain
- Sep. 2012 6th International Conference on Soft Methods in Probability and Statistics, Konstanz, Germany
- Sep. 2012 *International Conference dedicated to 120-th anniversary of STEFAN BANACH*, Lviv, Ukraine
- Jul. 2012 *Copulae in Mathematical and Quantitative Finance*, Cracow, Poland
- May 2012 Märkische Schweiz Summer School on *Statistics in Finance and Insurance*, Bukow, Germany
- May 2012 *Methods and Challenges in Financial Risk Measurement 2012*, Kloster Druebeck, Germany
- Apr. 2012 Workshop on “*Risk and Dependence in Economics and Finance*”, Bolzano, Italy
- Jan. 2012 Energy Finance Workshop, Stolberg (Harz), Germany
- Oct. 2011 Workshop on “*Statistical Analysis of Financial Data*”, Rijeka, Croatia
- Sep. 2011 Statistische Woche 2011, Leipzig, Germany
- Aug. 2011 ISI 2011, Dublin, Ireland
- Jun. 2011 IME 2011, Trieste, Italy
- Jun. 2011 ASMDA 2011, Rome, Italy
- May 2011 Invited talk at “4th Workshop on Vine Copula Distributions and Applications”, München, Germany
- Jan. 2011 Risk Calibration Workshop, Institute of Statistical Science, Academia Sinica, Taipei, Taiwan
- Dec. 2010 Invited talk at the CFE-ERCIM 2010, London, UK
- Sep. 2010 Statistische Woche 2010, Nuremberg, Germany
- Jul. 2010 Symposium on “*High-Dimensional Data in Empirical Finance*”, Dortmund, Germany (invited discussant)
- Jun. 2010 Symposium on “*Computational Finance*”, Singapore (session chair)
- Mar. 2010 DAGStat 2010, Dortmund, Germany
- Mar. 2010 Workshop on “*High-Dimensional Data Analysis in Economics*”, Zagreb, Croatia
- Oct. 2009 Perceiving and Measuring Financial Risk: Credit, Energy and Illiquidity, Princeton, USA (session chair)
- Oct. 2009 Statistische Woche 2009, Wuppertal, Germany
- Sep. 2009 Workshop on “*Copula Theory and its Applications*”, Warsaw, Poland
- Jul. 2009 The 64th European Meeting of the Econometric Society and the 24th Annual Congress of the European Economic Association, EEA-ESEM 2009, Barcelona, Spain
- Jul. 2009 Invited talk at the *International Symposium on Risk Management and Derivatives 2009*, Xiamen, China
- Dec. 2008 Invited talk at the 4th *World Conference of the IASC 2008*, Yokohama, Japan

- Oct. 2008 International Conference on Price, Liquidity, and Credit Risk, Konstanz, Germany
- Sep. 2008 First Summer School on Copulas, Linz, Austria
- Mar. 2008 8th German Open Conference on Probability and Statistics, Aachen, Germany (session chair)
- Dec. 2007 Workshop on “*Copulae: Theory and Practice*”, Berlin, Germany
- May 2007 Radon Workshop on Financial and Actuarial Mathematics for Young Researchers, Linz, Austria
- Mar. 2007 *Statistik Unter einem Dach*, DAGStat, Bielefeld, Germany
- Sep. 2005 7th International Workshop for Young Mathematicians: Applied Mathematics, Cracow, Poland
- May 2005 4th All-Ukrainian Scientific Conference for Graduate and Postgraduate “*Theoretical and Applied Aspects of the Analysis of the Financial Systems*”, Lviv, Ukraine
- Apr. 2004 Economics in the Postcommunist Countries under Globalization, Lviv, Ukraine
- Apr. 2004 3rd All-Ukrainian Scientific Conference for Graduate and Postgraduate, Lviv, Ukraine
- Apr. 2004 7th All-Ukrainian Students Scientific Conference in Programming and Applied Mathematics, Lviv, Ukraine
- Mar. 2004 Problems and Perspectives of the Ukrainian’s Finance-Credit System, Lviv, Ukraine

RESEARCH VISITS – FORSCHUNGSaufenthalte

- 10–17.03.2013 Department of Mathematics, Instituto Superior Técnico Lisbon, hosted by M. C. Morais, Lisbon, Portugal
- 3–10.03.2013 Economics Department, Universidad Carlos III de Madrid, hosted by A. Taamouti, Madrid, Spain
- 29.09–05.10.2012 Faculty of Economics at the University of Rijeka, hosted by S. Zikovic, Rijeka, Croatia
- 15–25.05.2012 Stevanovitch Center for Financial Mathematics at the University of Chicago, hosted by P. Mykland, Chicago, USA
- 7–22.04.2012 Chair of Statistics, Universität Augsburg, hosted by Yarema Okhrin, Augsburg, Germany
- 1–31.03.2012 Faculty of Biostatistics, University of Michigan, hosted by Peter X. Song, Ann Arbor, USA
- 21.02–22.03.2011 ORFE, Princeton University, hosted by J. Fan, Princeton, USA
- 10–21.01.2011 Academia Sinica, hosted by C.-D. Fuh, Taipei, Taiwan

SEMINARS – SEMINARE

- Mar. 2012 Statistics Seminar in the IOMS/Statistics Group, NYU Stern School of Business, organized by Rohit Deo, New York, USA
- Feb. 2011 Brown Bag Seminar at the University of Michigan, Organized by P. X. Song, Ann Arbor, USA
- Feb. 2011 Financial Mathematics Seminar at The Stevanovitch Center for Financial Mathematics at the University of Chicago, Organized by P. Mykland, Chicago, USA
- Feb. 2011 Research in Econometrics Seminar at Harvard University, Organized by R. Ibragimov, G. Chamberlain, Cambridge, USA

- Jan. 2011 Seminar at the Sun Yat-Sen University, Organized by M.-H. Guo, Kaohsiung, Taiwan
- Jan. 2011 2011 NCTS & CMMSC Seminar at the Hsinchu University, Organized by H. HS Lu, Hsinchu, Taiwan
- Nov. 2010 Seminar at the University Bielefeld, Organized by G. Kauermann, Bielefeld, Germany
- Jun. 2010 Seminar at the National University of Kaohsiung, organized by R.-B. Chen, Kaohsiung, Taiwan
- Jun. 2010 Seminar at the Renmin University of China, organized by M. Tian, Beijing, China
- May 2010 “*Mathematical Koloquium*” at Carl von Ossietzky University of Oldenburg organized by T. Kneib, A. May, D. Pfeifer, Oldenburg, Germany
- Mar. 2010 “*Quantitative Methods Seminar*” at Universität St.Gallen organized by M. Fengler, St. Gallen, Switzerland
- Jul. 2009 Seminar at Hong Kong University of Science and Technology organized by Y.-K. Kwok, Hong Kong, China
- Feb. 2009 “*Statistisch/ökonomisches Seminar*” at Christian-Albrechts-Universität zu Kiel organized by H. Herwartz, R. Liesenfeld and V. Golosnoy, Kiel, Germany
- Dec. 2008 “*Quantitativ Ökonomisches Colloquium*” at Freie Universität Berlin organized by U. Rendtel, Berlin, Germany
- Jul. 2008 Seminar “*Finanz- und Versicherungsmathematik*” of the LMU and TU organized by C. Czado, C. Klüppelberg and R. Zagst, Munich, Germany
- May 2007 WIAS Research Seminar “*Mathematical Statistics*” organized by W. K. Härdle and V. Spokoiny, Berlin, Germany

PRESS ABOUT ME – PRESSE ÜBER MICH

- Jun. 2010 “*100 Studenten von denen wir noch hören werden*”, **die ZEIT Campus**, Nr. 3 Mai/Juni 2010
- Apr. 2009 *Zahlen, bitte! Wie ein 24-jähriger Mathematiker aus der Ukraine der jüngste Professor Deutschlands wurde*, **HANDELSBLATT, Karriere**, 30. April 2009, Nr. 83, <http://www.handelsblatt.com/karriere/ostap-okhrin-einstein-junior;2259606>
- Jan. 2009 “*Professor werden*”, **Deutsche Welle**, 24.01.2009, 23:30, <http://www.dw-world.de/dw/article/0,,3867553,00.html>
- Dez. 2008 “*Deutschland jüngster Professor liebt die Mathematik*”, **SPIEGEL Online**, 08.12.2008, <http://www.spiegel.de/unispiegel/jobundberuf/0,1518,594755,00.html>
- Aug. 2008 “*Wir sind Deutschlands jüngste Superhirne*”, **das BILD**, Dienstag, 19. August 2008, 194/34, <http://www.bild.de/BILD/news/vermishtes/2008/08/19/jung-professoren/deutschlands-juengste-superhirne.html>
- Okt. 2008 *Die Welt da draußen: “Ausreißer in der Statistik”*, **die ZEIT Campus**, Nr. 5 September/Oktober 2008, <http://www.zeit.de/campus/2008/05/juengster-prof-deutschland>
- Jul. 2008 “*Who is Who an der Humboldt Universität?*”, **Humboldt-Zeitung**, Ausgabe 9-2007/2008, <http://www.hu-berlin.de/pr/publikationen/humboldt/200807/aktuell/okhrin>