

# Curriculum Vitae

## Personal data

Name	Dr. Marcel Rosenthal
Born	November 10, 1981 in Schleiz, Germany
Adress	Kahlaische Str. 9, D-07745 Jena
Marital status	unmarried
Phone	004915233858731
Siblings	Melanie (Key-Account-Management, M.Sc. Business Mathematics), Yvonne (IT administration, qualified IT specialist), Larissa (Student, B.Sc. Business and Economics)



## Education

02/2009–09/2013	Friedrich-Schiller-Universität Jena, <b>Doctoral degree in Mathematics</b> Certificate of doctorate (Dr. rer. nat.) from September 19, 2013 Grade: <i>magna cum laude</i> Main research: Fourier Analysis and Function Spaces
10/2004–01/2009	Friedrich-Schiller-Universität Jena, <b>Studies of Mathematics</b> Diploma certificate (equivalent to M.Sc.) from January 9, 2009 Grade: <i>graduated with honors</i> Majoring in Analysis, Optimization and Stochastics
10/2001–09/2004	University of cooperative education Glauchau, <b>Studies of Information Technology</b> Diploma certificate (Dipl.-Ing. (BA) equivalent to Bachelor of Engineering) from September 30, 2004
1992–2000	Dr.-Konrad-Duden-Gymnasium Schleiz, Abitur (equivalent to university-entrance diploma)

## Professional experience

Since 12/2016	<b>Mathematician in the Actuarial Risk-Controlling of the SV SparkassenVersicherung, Stuttgart</b> Software development for the company value prediction model (Risk Agility Financial Modelling, C++) and its data basis (SQL/ VBA) Implementation of an uncondensated data basis of the insurance contracts for the prediction model (SQL/ VBA) Implementation, modification and validating of a Cluster algorithm for condensated prediction Improvement of the prediction quality and modelling of disability and term life insurances (C++) Implementation of the actuary account (analysis on the sufficiency of costs, on the average interest rate of the contracts, on the risk appearing from decreasing interest rates and lapses, solvency under various interest rate scenarios) Since 02/2019 in qualification of Aktuar DAV (four of ten exams successfully completed: Corporate Management, Modelling & Enterprise Risk Management, Financial Mathematics & Risk Assessment and Applied Stochastics; two further exam grades pending on marks: Economic & legal environment and actuarial mathematics)
01/2016–07/2016	<b>Research fellow</b> of the German Academic Exchange Service (DAAD) at the Mathematical Institute of the University of Bilbao in Spain (Universidad del País Vasco), Research group of <i>Prof. Javier Duoandikoetxea</i>

- 10/2013–01/2016 Postdoctoral researcher at the Mathematical Institute of the FSU Jena, Research group of *Prof. Hans-Jürgen Schmeißer*
- 02/2009–09/2013 Doctoral student at the Mathematical Institute of the FSU Jena  
PhD title *Mapping properties of operators in Morrey spaces and wavelet isomorphisms in related Morrey smoothness spaces*  
Supervisor *Prof. Hans-Jürgen Schmeißer*  
Referees: *Prof. Hans-Jürgen Schmeißer, Prof. Hans Triebel, Prof. Leszek Skrzypczak*
- 07/2009–06/2012 **Research fellow** of the Graduate Academy of the state of Thuringia
- Since 10/2007 Teaching positions at the Mathematical Institute of the FSU  
Since 10/2016 Leader of the exercises for the lecture *Approximation theory*  
04/2015–07/2015 Leader of the exercises *Basics of Analysis for computer scientists*  
10/2013–02/2014 Leader of the exercises for *Analysis 3 (PDEs & Complex Analysis)*  
04/2013–08/2013 Leader of the exercises for the lecture *Linear Algebra 1 for teachers*  
10/2012–02/2013 Leader of the exercises for the lecture *Analysis 3 for physicists*  
04/2012–08/2012 Leader of the exercises for the lecture *Analysis 2 for physicists*  
10/2011–02/2012 Leader of the exercises for the lecture *Analysis 1 for physicists*  
04/2011–07/2011 Leader of the exercises for *Ordinary Differential Equations*  
10/2010–02/2011 Leader of the exercises for the lecture *Analysis 3 for teachers*  
04/2010–07/2010 Leader of the exercises for the lecture *Linear Algebra 2 for teachers*  
10/2009–02/2010 *Elementary Probability Theory and Mathematical Statistics*  
04/2009–07/2009 Leader of the exercises for the lecture *Analysis 2*  
10/2008–02/2009 Leader of the exercises for *Analysis 3 (PDEs & Complex Analysis)*  
04/2008–07/2008 Leader of the tutorial for the lecture *Analysis 2*  
10/2007–02/2008 Leader of the exercises for the lecture *Analysis 1*
- 10/2005–09/2009 Student assistant at the Institutes for Computer Science and Psychology and at Student Services Thuringia of the FSU Jena (Germany)  
10/2005–02/2006 Corrector of the exercises *Informatics 1*, Computer Science Institute  
03/2005–09/2005 Work on [www.kompetenztest.de](http://www.kompetenztest.de) at Institute for Psychology  
10/2006–09/2009 Internet access supervisor at student dormitory, Studentenwerk Thüringen
- 08/2005–09/2005 Software development contract with NAVImatix GbR, Jena  
Evolution of a Delphi component which encapsulates the capabilities of a driver's log-book, and an application for demonstration purposes for customers
- 10/2001–09/2004 **Software development** for fm control GmbH, Plauen, in particular with Borland Delphi and Microsoft Visual C++  
Diploma project *Development of a system for video supervision of machines*  
Student engineering project *Development of a system for time-synchronous video and measuring data capturing*  
Student projects *Data visualization of a data block of a Siemens S7 control system with Delphi; Evolution of multilingual applications with Borland Delphi; Investigation of video storage software preparing a system for video supervision of machines*

## Scientific publications

### Journal papers

DUOANDIKOETXEA, J. AND ROSENTHAL, M.: *Muckenhoupt-type conditions on weighted Morrey spaces*. submitted.

Preprint <https://arxiv.org/abs/2010.00250> (2020).

DUOANDIKOETXEA, J. AND ROSENTHAL, M.: *Boundedness properties in a family of weighted Morrey spaces with emphasis on power weights*. *Journal of Functional Analysis*

sis **279**, No. 8, no. 1108687 (2020).  
Preprint <https://arxiv.org/abs/1910.13902> (2019).

DUOANDIKOETXEA, J. AND ROSENTHAL, M.: *Boundedness of operators on certain weighted Morrey spaces beyond the Muckenhoupt range*. *Potential Analysis* **53**, 1255–1268 (2020).  
Preprint <https://arxiv.org/abs/1910.13285> (2019).

DUOANDIKOETXEA, J. AND ROSENTHAL, M.: *Extension and boundedness of operators on Morrey spaces from extrapolation techniques and embeddings*. *The Journal of Geometric Analysis* **28**, 3081–3108 (2018).  
Preprint <http://arxiv.org/abs/1607.04565> (2017).

ROSENTHAL, M. AND SCHMEISSER, H.-J.: *The boundedness of operators in Muckenhoupt weighted Morrey spaces via extrapolation techniques and duality*. *Revista Matemática Complutense* **29**, 623–657 (2016).  
Preprint <http://arxiv.org/abs/1606.06584> (2016).

ROSENTHAL, M. AND SCHMEISSER, H.-J.: *On the boundedness of singular integrals in Morrey spaces and its preduals*. *The Journal of Fourier Analysis and Applications* **22**, No. 2, 462–490 (2016).  
Preprint <http://arxiv.org/abs/1409.0679> (2014).

ROSENTHAL, M. AND TRIEBEL, H., *Morrey spaces, their duals and preduals*. *Revista Matemática Complutense* **28**, 1–30 (2015).

ROSENTHAL, M. AND TRIEBEL, H., *Calderón-Zygmund operators in Morrey spaces*. *Revista Matemática Complutense* **27**, No. 1, 1–11 (2013).

### Theses

ROSENTHAL, M., *Mapping properties of operators in Morrey spaces and wavelet isomorphisms in related Morrey smoothness spaces*. Jena, Univ., Diss., 2013.

ROSENTHAL, M., *Morrey-Räume aus der Sicht der harmonischen Analysis*. Jena, Diplomarbeit, 2009.

### Referee for the following journals

Complex Variables and Elliptic Equations (Taylor & Francis); *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas* (Springer); *Annales Academiæ Scientiarum Fennicæ Mathematica* (Finnish Academy of Science and Letters); *Mathematical Inequalities & Applications* (ele-math); *Periodica Mathematica Hungarica* (Springer); *Open Mathematics* (De Gruyter)

### Mathematical Review

MR3484688: LERNER, ANDREI K., *On pointwise estimates involving sparse operators*. *New York J. Math.* **22** (2016), 341–349.

### Research visits, participation at conferences and schools, seminar talks

Since 09/2017 **Invitation** at the Mathematical Institute of the University of Bilbao *Universidad del País Vasco*, Spain, Research group of *Prof. Javier Duoandikoetxea* (27/09–22/10/2017, 28/10–04/11/2017, 17/02–17/03/2018, 14/09–07/10/2018, 15/02–11/03/2019, 13/10–04/11/2019)

01/2016–07/2016 **Fellow** at the Mathematical Institute of the University of Bilbao (Universidad del País Vasco), Spain, Research group of *Prof. Javier Duoandikoetxea*  
Talk *The boundedness of operators in (Muckenhoupt weighted) Morrey spaces via duality and extrapolation techniques due to Rubio de Francia* January 25, 2016

- 04/07–08/07/2016 *2nd Summer School on Harmonic Analysis and Partial Differential Equations* in Bilbao (BCAM-Basque Center for Applied Mathematics), Spain
- 13/06–17/06/2016 *10th International Conference on Harmonic Analysis and Partial Differential Equations* in El Escorial (Madrid), Spain; <http://www.uam.es/Escorial/2016>
- 15/12/2015 **Invitation** to the seminary of the DFG International Research Training Group 1529 *Mathematical Fluid Dynamics*, TU Darmstadt (Prof. Dr. Matthias Hieber)  
Talk *The boundedness of operators in (Muckenhoupt weighted) Morrey spaces via duality and extrapolation techniques due to Rubio de Francia*
- 05/10–11/10/2014 **Invitation** to the Jean Morlet Research Chair, CIRM (Centre Internationale de Rencontres Mathématiques), Marseille, Frankreich (Prof. Hans G. Feichtinger) to the workshop *Coorbit Theory and Complex Analysis*  
Lecture *On the boundedness of singular integrals in Morrey spaces and its preduals*
- 02/06–08/06/2013 **Invitation** to the International Spring School *Function spaces and Inequalities* in Paseky, Czech Republic
- 09/07–13/07/2012 International Conference *Function Spaces X* in Poznan, Poland  
Talk *Wavelet bases and wavelet isomorphisms in Besov-Triebel-Lizorkin-type spaces and Besov-Triebel-Lizorkin-Hausdorff spaces*
- 17/06/2012 International Seminary for young researchers *Smoothness, Approximation and Analysis in Function spaces* in Simferopol, Ukraine  
Talk *Wavelet bases and wavelet isomorphisms in Besov-Triebel-Lizorkin-type spaces and Besov-Triebel-Lizorkin-Hausdorff spaces*
- 18/06–20/06/2012 International School *Smooth and Oscillating Processes in Analysis and Physics* in Simferopol, Ukraine
- 03/10–31/10/2011 **Visiting researcher** at Beijing Normal University, China (Prof. Dachun Yang)  
Lecture *Local means, wavelet bases/ wavelet representations and wavelet isomorphisms in Besov-Morrey and Triebel-Lizorkin-Morrey spaces*
- 26/09–30/09/2011 **Fellow** of the International Conference *Function Spaces, Weights, and Variable Exponent Analysis* in Barcelona, Spain  
Talk *Local means, wavelet bases/ wavelet representations and wavelet isomorphisms in Besov-Morrey and Triebel-Lizorkin-Morrey spaces*
- 18/09–24/09/2011 International Conference *Function Spaces, Differential Operators, Nonlinear Analysis* (FSDONA 2011) in Tabarz, Germany  
Talk *Local means, Wavelet bases/ Wavelet representations and Wavelet isomorphisms in Besov-Morrey and Triebel-Lizorkin-Morrey spaces*
- 29/05–04/06/2011 International Spring School *Function spaces, Approximation, Inequalities and Lineability* in Paseky, Czech Republic
- 09/05–13/05/2011 Visiting researcher at University of Adam Mickiewicz, Poznan, Poland (Prof. Leszek Skrzypczak)  
Talk *Local means, Wavelet bases/ Wavelet representations and Wavelet isomorphisms in Besov-Morrey and Triebel-Lizorkin-Morrey spaces*
- 10/10–16/10/2010 International Workshop *Smoothness, Approximation and Function Spaces* (SASF 2010) in Oppurg, Germany  
Talk *Wavelet characterization of Besov-Morrey and Triebel-Lizorkin-Morrey spaces* (<http://safs2010.uni-jena.de/web-abs/rosenthal.pdf>)
- 11/09–17/09/2010 International Conference *Nonlinear Analysis, Function Spaces and Applications 9* (NAF-SA 2010) in Trest, Czech Republic

- 07/2007–07/2015 Participation of the three-day Symposia *Function spaces, Theoretical Numerics and its Applications* in Siegmundsburg, Germany, 2007, 2008, 2009, 2010, 2011, 2012 and 2015  
Selected Talk *Characterizations of the Muckenhoupt weights and Marcinkiewicz spaces via Morrey norms* July 27, 2015
- 07/2009–07/2015 Talks in the research seminary of our research group (<https://cms.rz.uni-jena.de/matia2/Forschung/Seminarplan-p-86.html>)  
*Extrapolation in weighted Morrey spaces* July 3, 2015  
*Duality with respect to Morrey spaces* May 24, 2013  
*On the boundedness of operators in (vector-valued) Morrey spaces* July 19, 2012  
*Wavelet characterization in Besov-Morrey and Triebel-Lizorkin-Morrey spaces* January 7, 2011  
*Some properties of Morrey spaces* October 23, 2009

### **Volunteering**

- 01/2009–03/2009 Member of student representatives which were used in the accreditation of the new Bachelor and Master degree programs for questioning by the accreditation commission
- 10/2006–09/2007 Member of student representatives of the math students, organization and accomplishment of the study introduction days and the day of the mathematics (an event for pupils who are interested in studying mathematics)
- 01/2009–01/2016 Organization and captain of a recreational football team, 1988–2002 Regular participation in championship matches of SV Grün-Weiß Tanna
- 07/2001–06/2010 Football referee (of the fifth lowest league of Germany, being in charge for 35 games per year and regular participation of advanced training)
- 06/2005–12/2007 Lifeguard of the Red Cross Rescue and Water Safety, FSU Jena

### **Several skills**

- Languages German (native), English (fluent), Spanish (B1), French (progressed), Portuguese (A1.1)
- Hobbies Running (four times successful Marathon participation), Fitness, Handball
- Other matters driver's license: B, A1; Military service: 07/2000 – 04/2001

Last change: Bilbao, October 4, 2020