CV of **MARTIN ZIEGLER** (born Nov 19, 1968 in Stuttgart, married…with children)

Dooray Apt.105-1304, Gajeong-ro 65, Sinseong-dong, Yuseong-gu, Daejeon, South Korea

RESEARCHER ID: I-3331-2015

GOOGLE SCHOLAR: user=YDPR_K4AAAAJ

EDUCATIONAL HISTORY:

1979–88: High School *Pelizaeus-Gymnasium* Paderborn (Germany), *Abitur*
1988–90: 20 months service in retirement home as substitute for mandatory military service
1990–97: Studying Computer Science, Mathematics, and Physics at *Paderborn University*
May 1997: Graduate (Master) with double major in Mathematics and Theoretical Physics
1997-2002: Research/teaching assistant and PhD student of Theoretical Computer Science
Nov. 2002: PhD defense, 120 page thesis (ISBN 3935433247)
Referees Peter Bürgisser, Friedhelm Meyer auf der Heide, Klaus Weihrauch
Mar.2008: Habilitation/*Venia Legendi* in Computer Science, Paderborn University
Thesis "*Real Computability and Hypercomputation*" (160 pages)
Referees Peter Bürgisser, Felipe Cucker, Friedhelm Meyer auf der Heide, Klaus Weihrauch
Exam/lectures: „*Many-Body Simulation*" and „*Fast Polynomial Arithmetic*"

EMPLOYMENT HISTORY:

2003–04 postdoc at the *PAderborn institute of SCientific COmputing* (PaSCo)
2005 guest lecturer at IMADA, *Syddansk Universitet i Odense*, Denmark
2006 JSPS postdoctorial researcher, JAIST, host: Professor Hajime Ishihara
2007–08 Researcher at Paderborn University, Dept.of Electr.Engineering/Computer Science/Mathematics
2009 DFG Heisenberg Fellow at Vienna Technical University, host: Professor Karl Svozil
2010–15 Professor (temporary W2) for Mathematics/*Applied Logic* at TU Darmstadt, Germany
since 2015 Associate Professor of Computer Science at KAIST

AWARDS AND GRANTS/FUNDING:

2006 Mar-Sep (7 months) JSPS postdoctoral fellowship PE05501 at JAIST*; Humboldtianer*
2007-08 Head of DFG project Zi1009/1, €180.000, "*Real Hypercomputation*", at Paderborn University
2009 DFG Heisenberg Scholar Zi1009/2 at Vienna Technical University; host: Karl Svozil
2009 *Best paper award* at conference *Artificial Intelligence* (joint.with F.Neumann & A.Reichenberger)
2011 **two** *Athene* Teaching Awards (@TU Darmstadt)
2013–15 Head of DFG grant Zi1009/4 (@TU Darmstadt)
funding first PhD student Carsten Rösnick, then *Habilitand* Dr. Matthias Schröder
2013–15 *Principal Investigator* in International Research Training Group IRTG1529 Darmstadt-Tokyo
2013 JSPS BRIDGE Fellow BR130101 at Kyoto University, host: professor Hideki Tsuiki
2014 Head of DFG project Zi1009/5 funding conference CCA 2014 @TU Darmstadt
2014 EU H2020 ***ERC Consolidator*** *Grant* (rejected, move to Korea)
2015 HRK/DWIH Tokio: co-funding *Workshop on Theory and Practice of Real Computation*
2015–2018 KAIST *Seed Grant* (100.000.000₩) *Computational Complexity in Physics and Analysis*
2016–2021 P.I. of "*Computing with Infinite Data*", 4x 50.000.000 ₩ NRF co-funding to **EU H2020** *IRSES*,
2017–2021 P.I of NRF project "*Reliable Computing over Continuous Structures*", 4x120.000.000 ₩
2019–2021 P.I of NRF *BrainPool* grant for Dr.Svetlana Selivanova with 2x64.000.000 ₩

INVITED TALKS (SINCE 2011)

Computability in Europe 2020 (Salerno)
Logic Colloquium 2019 (Prague)
21st Japan-Korea Workshop on Algorithms and Computation (2018, Fukuoka)
Computability in Europe (2016, Paris)
Continuity, Computability, Constructivity (3rd CCC 2014, Ljubljana)
Amsterdam Quantum Logic Workshop (31.1.-2.4.2014)
DAAD Tokyo + JSPS-Club *Wissenschaftlicher Gesprächskreis* (8.Nov 2013)
NII Shonan Meeting "Implicit Computational Complexity and applications" (Nov 2013)
Computability and Complexity in Analysis CCA'2013 (Nancy)
Exploring the Limits of Computation (Feb 2013, Tokyo)
5th International Workshop on Physics and Computation (Swansea 2012)
Kyoto Symposium on Computable Analysis 2012 (Kyoto Sangyo University + Kyoto University Feb. 2012)
Dagstuhl 11051 "Computing with Infinite Data: Topological and Logical Foundations"
Foundations of Computational Mathematics, Workshop on Real-number Complexity (Budapest 2011)

PHD STUDENTS AND POSTDOCS

Dr. Svetlana Selivanova (Mar.2018 – Dec.2021)
Sewon Park (Sep.2017 – Aug.2021)
Dr. Hugo Férée (Jan.-Aug. 2015, now *Université Diderot Paris 7*)
Dr. Matthias Schröder (Dez.2014 to Sept.2015, now *Birmingham University*)
Yasuyuki Tsukamoto (DAAD visiting PhD student, Apr.-Sep. 2014 + Jan.-Mar.2015, now *Hakuryo*)
Florian Steinberg (Oct.2013 to Sept.2017, PhD defended November 2016, now *INRIA*)
Carsten Rösnick (Apr.2011 to Mar.2015, PhD defended 2014, now *TNG Consulting*)
Dr. Stéphane Le Roux (Apr.2010 – Aug.2014, now *ENS Paris-Saclay*)
Katharina Lürwer-Brüggemeier (PhD defended 2008, now high school teacher)

REFEREE FOR DISSERTATIONS AND *HABILITATIONS*

Jiwon Park (2019)
Dr. Matthias Schröder (2015)
Dr. Vassilis Gregoriades (2015)
Carsten Rösnick (2014)
Alexander Kreuzer (2012)
Gregorio de Miguel Casado (2009)
Katharina Lürwer-Brüggemeier (2008)

REFEREE FOR JOURNALS

Theoretical Computer Science (TCS), *Journal of Complexity* (JoC), *Computability, Theory of Computing Systems* (TCS), *Logical Methods in Computer Science* (LMCS), *Journal of Universal Computer Science* (JUCS), *Applied Mathematics and Computation* (JAMC), *Mathematical Logic Quarterly* (MLQ), *Journal of Symbolic Logic* (JSL), *Annals of Pure and Applied Logic* (APAL), *Mathematical Structures in Computer Science* (MSCS), *Algorithms and Combinatorics* (JAC), *International Journal of Theoretical Physics* (IJTP), *Physics Letters A, Discrete Mathematics* (JDM), *Information Processing Letters* (IPL), *Information and Computation* (JIC), *Journal of Computation and Mathematics* (JCM), *Journal of the Association for Computing Machinery* (JACM). 2016ff Guest Editor of *Logical Methods in Computer Science*

REFEREE FOR CONFERENCES/PROCEEDINGS (SELECTED EXAMPLES)

Logic in Computer Science (LiCS), *Mathematical Foundations of Computer Science* (MFCS), *International Colloquium on Automata, Languages and Programming* (ICALP), *Computability in Europe* (CiE), *Workshop on Algorithms and Data Structures* (WADS), *Symposium on Computational Geometry* (SoCG)

FURTHER REFEREEING: DFG, Alexander von Humboldt, Royal Society of New Zealand

PROGRAMME COMMITTEE MEMBERSHIPS:

47th International Colloquium on Automata, Languages, and Programming (ICALP'20)
37th International Symposium on Theoretical Aspects of Computer Science (STACS'20)
12th—14th Annual International Conference on Combinatorial Optimization and Applications (COCOA)
25th International Computing and Combinatorics Conference (COCOON'19)
15th Int. Conference on Computability and Complexity in Analysis (CCA'18, chair)
2nd Workshop on Mathematical Logic and Its Applications (JAIST, 2018)
International Symposium on Algorithms and Computation (ISAAC, 2017)
Colloquium Logicum (*2016*), *PhDs in Logic* (2016)
12th Int. Conference on Computability and Complexity in Analysis (Tokyo 2015, chair)
Logical Approaches to Barriers in Computing and Complexity (Greifswald 2010)
3rd Int. Workshop on Physics and Computation (Nil 2010)
7th Int. Conf. on Computability and Complexity in Analysis (Zhenjiang 2010)

SCIENTIFIC STAYS ABROAD (≥1 MONTH)

2018 The University of Toyko (1 month)
2013 Kyoto University (1 month)
2009 Institute of Theoretical Physics, Vienna University of Technology (5 months)
2008 KAIST (1 month)
2007 Korea Institute for Advanced Study (KIAS, 1 month)
2006 JAIST (8 months)
2005 Syddansk Universitet i Odense, Denmark (7 months)

HOSTING VISITING PROFESSORS:

Fritz Mayer-Lindenberg (1 month, 2018)
Norbert Müller (1 month, 2017)
Michal Konečný (1 month, 2017)
Pieter Collins (1 month, 2017)
Friedhelm Meyer auf der Heide (1 month, 2017)
Dieter Spreen (2 months, 2017)
Takakazu Mori (6 months, 2012)
Akitoshi Kawamura (2 months, 2011)

CONFERENCE AND WORKSHOP ORGANISATION

22nd Korea-Japan Joint Workshop on Algorithms and Computation (2019)
Dagstuhl Seminar 17481 *Reliable Computation and Complexity on the Reals* (2017)
14th Int. Conf. on Computability and Complexity in Analysis (CCA 2017, KAIST)
Mathematical Aspects of Computer and Information Science (Berlin 2015, Special Session)
German-Japanese Workshop on Theory and Practice of Real Computation (Meiji University, 2015)
11th Int. Conf. on Computability and Complexity in Analysis (CCA 2014)
20th Workshop on Logic, Language, Information and Computation (WoLLIC 2013)
IANUS *Cyberpeace* (Apr.2013)
64. GI Workshop über Algorithmen und Komplexität ("Theorietag", Oct.2012)

ACADEMIC COMMITTEES

2018—2021: KAIST *International Faculty Council* (vice/chair)
since 2017: KAIST 2031 *Globalization Committee* and *Internationalization Committee*
since 2016: council of the *Association Computability in Europe* (ACiE)
2016 Organizer of KAIST's Computer Science Colloquium (jointly with 유신교수님)
since 2014: executive board of „*Deutsche Verein. Mathemat.Logik und Grundlagenforschung*“ (DVMLG)
2012–2015: spokesperson of „*Interdisziplˌ.Arbeitsgruppe Naturwissenschaft, Technik, Sicherheit*“ (IANUS)
2013–2015: elected member of TU Darmstadt's university convent
3× re-/elected (=6 years total) member of TU Darmstadt's faculty council
5 times member in appointment committees
17 times member in PhD examination committees

PROFESSIONAL MEMBERSHIPS

Society for Industrial and Applied Mathematics (SIAM)
Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)
Deutsche Mathematiker Vereinigung (DMV)
Mathematical Society of Japan (MSJ)
Korean Mathematical Society (KMS)
Société Mathématique de France (SMF)
Deutscher Verein zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU)
Deutsche Vereinigung für Mathematische Logik und Grundlagenforschung (DVMLG)
Gesellschaft für Informatik (GI)
European Association for Theoretical Computer Science (EATCS)
Institute of Electrical and Electronics Engineers (IEEE)

RECENT TEACHING

"CS700=MAS583: *Algorithmic Foundations of Numerics*" (crosslisted): fall'16+summer'18
"CS500: *Design and Analysis of Algorithms*" (KAIST, 70 students): annualy in Spring
"CS408: *Capstone Programming*" (KAIST): Spring 2018
"CS422: *Theory of Computation*" (KAIST): every second Fall semester
"CS300: *Introduction to Algorithms*" (KAIST, >250 students): fall 2018+spring 2021+fall 2021+2022
"CS204: *Discrete Mathematics*" (KAIST, ca.50 students): fall'17+spring'18+fall'18
"*Algebraic Complexity Theory*" (TU Darmstadt, crosslisted): summer'14
"Computability and *Computational Complexity in Analysis*" (TU Darmstadt, crosslisted Math and CS)
"*Advanced Complexity Theory*" (TU Darmstadt, crosslisted as Mathematics and Computer Science)
"Linear Algebra in Physics" (TU Darmstadt, 150 students): summer 2012+2014
"Logical Foundations of Computer Science I+II" (TU Darmstadt, 450 students): summer '11+'13
"Mathematics for Chemistry" (TU Darmstadt, new lecture, co-teaching): 2010–2012+2014/15

ONLINE COURSES:

CS300 *Introduction to Algorithms*
CS422 *Theory of Computation*
CS500 *Design and Analysis of Algorithms*
CS700 *Computer Science for Continuous Data*

SOFTWARE:

Library of *Continuous* Data Types in C++

PUBLICATIONS

(1070 citations according to *Google Scholar* ⇒ h-index=20)

[1] M. Ziegler: "Computability on Regular Subsets of Euclidean Space", pp.157-181 in *Mathematical Logic Quarterly v*ol.**48S1** (2002).

[2] M. Ziegler: "Computable operators on regular sets", pp.392-404 in *Mathematical Logic Quarterly* vol.**50** (2004).

[3] M. Ziegler, V. Brattka: "Computability in linear algebra", pp.187-211 in *Theoretical Computer Science* vol.**326** (2004).

[4] B. Fuchssteiner, M. Ziegler: "Nonlinear Reformulation of Heisenberg's Dynamics", pp.693-717 in *International Journal of Theoretical Physics* vol.**44:7** (2005).

[5] M. Ziegler: "Computational Power of Infinite Quantum Parallelism", pp.2059-2071 in *International Journal of Theoretical Physics* vol.**44:11** (2005).

[6] M. Ziegler: "Stability versus Speed in a Computable Algebraic Model", pp.14-26 in *Theoretical Computer Science* vol.**351** (2006).

[7] M. Ziegler: "Effectively Open Real Functions", pp.827-849 in *Journal of Complexity* vol.**22** (2006).

[8] C. Schindelhauer, K. Volbert, M. Ziegler: "Geometric spanners with applications in wireless networks", pp.197-214 in *Computational Geometry* vol.**36:3** (2007).

[9] M. Ziegler: "Real Hypercomputation and Continuity", pp.177-206 in *Theory of Computing Systems* vol.**41** (2007).

[10] K. Meer, M. Ziegler: "An explicit solution to Post's Problem over the reals", pp.3-15 in *Journal of Complexity* vol.**24:1** (2008).

[11] S.Le Roux, M. Ziegler: "Singular Coverings and Non-Uniform Notions of Closed Set Computability", pp.545-560 in *Mathematical Logic Quarterly* vol.**54** (2008).

[12] M.R. Emamy-K., M. Ziegler: "On the coverings of the d-cube for d≤6", pp.3156-3165 in *Discrete Applied Mathematics* vol.**156:17** (2008).

[13] K. Meer, M. Ziegler: "Real Computational Universality: The Word Problem for a Class of Groups with Infinite Presentation, pp.599-609 in *Foundations of Computational Mathematics* vol.**9** (2009).

[14] M. Ziegler: "Physically-relativized Church-Turing Hypotheses: Physical foundations of computing and complexity theory of computational physics", pp.1431-1447 in *Applied Mathematics and Computation* vol.**215:4** (2009).

[15] T. Gärtner, M. Ziegler: "Real Analytic Machines and Degrees", pp.1-20 in *Logical Methods in Computer Science* vol.**7:3** (2011)

[16] M. Ziegler: "Real Computation with Least Discrete Advice: A Complexity Theory of Nonuniform Computability with Applications to Effective Linear Algebra", pp.1108-1139 in *Annals of Pure and Applied Logic* vol.**163** (2012)

[17] A.M. Pauly, M. Ziegler: "Relative Computability and Uniform Continuity of Relations", in the *Journal of Logic and Analysis* vol.**5** (2013).

[18] A. Kawamura, H. Ota, C. Rösnick, M. Ziegler: "Computational Complexity of Smooth Differential Equations", *Logical Methods in Computer Science* vol.**10:1** (2014).

[19] A. Kawamura, N. Müller, C. Rösnick, M. Ziegler: "Computational Benefit of Smoothness: Parameterized Bit-Complexity of Numerical Operators on Analytic Functions and Gevrey's Hierarchy", pp.689–714 im *Journal of Complexity* vol.**31:5** (2015).

[20] C. Herrmann, M. Ziegler: "Computational Complexity of Quantum Satisfiability", *Journal of the ACM* vol.**63:2** (2016)

[21] R. Hesse, M. Ziegler: "Logik im Mathematikunterricht", pp.51–53+95–104+140–161 in *Mathe vernetzt* Band **4** (2016).

[22] C. Herrmann, Y. Tsukamoto, M. Ziegler: "On the Consistency Problem for Modular Lattices and Related Structures", pp.1573-1595 in the *Intern. Journal Algebra and Computation* vol.**26:8** (2016)

[23] A. Kawamura, F. Steinberg, M. Ziegler: "Computational Complexity of the Dirichlet Problem for Poisson's Equation", pp.1437—1465 in *Mathematical Structures in Comp. Science* vol.**27:8** (2017).

[24] C. Herrmann, M. Ziegler: "Definable Relations in Finite-Dimensional Subspace Lattices with Involution", article #68 in *Algebra Universalis* vol.**79** (2018).

[25] C. Herrmann, M. Ziegler: “"Definable Relations in Finite-Dimensional Subspace Lattices with Involution II", article #3 in *Algebra Universalis* vol.**80** (2019).

[26] I. Koswara, G. Pogudin, S. Selivanova, M. Ziegler: "Bit-Complexity of Classical Solutions of Linear Evolutionary Systems of Partial Differential Equations", *Journal of Complexity* im Druck (2023).

Selected publications in refereed conference proceedings:

[27] M. Ziegler: "Fast Relative Approximation of Potential Fields", pp.140-149 in *Proc. 8th Workshop on Algorithms and Data Structures* (WADS'03), Springer LNCS vol.**2748**.

[28] M. Ziegler: "Quasi-Optimal Arithmetic for Quaternion Polynomials", pp.705-715 in *Proc. 14th Ann. International Symposium on Algorithms and Computation* (ISAAC'03), Springer LNCS vol.**2906**.

[29] M. Nüsken, M. Ziegler: "Fast Multipoint Evaluation of Bivariate Polynomials", pp.544-555 in *Proc. 12th Ann. Europ. Symp. Algorithms* (ESA'04), Springer LNCS vol.**3221**.

[30] M. Ziegler: Revising Type-2 Computation and Degrees of Discontinuity, pp.255-274 in *Proc. 3rd International Conference on Computability and Complexity in Analysis* (CCA'06), Electronic Notes in Theoretical Computer Science vol.**167** (Jan.2007)

[31] S. Köhler, M. Ziegler: "On the Stability of Fast Polynomial Arithmetic", pp.147-156 in *Proc. 8th Conf. on Real Numbers and Computers* (Bruguera, Daumas Edts.), Jul.2008 Santiago de Compostela.

[32] K. Lürwer-Brüggemeier, M. Ziegler: "On Faster Integer Calculations Using Non-arithmetic Primitives", pp.111-128 in *Proc. 7th Int. Conf. on Unconvent. Computation* (UC'08), LNCS **5204**.

[33] F.Neumann, A.Reichenberger, M.Ziegler: "Variations of the Turing Test in the Age of Internet and Virtual Reality", pp.355-362 in Proc. *32nd Conf. on Artificial Intelligence* (KI2009), LNAI vol.**5803**.

[34] K. Ambos-Spies, U. Brandt, M. Ziegler: "Real Benefit of Promises and Advice", pp.1-11 in *Proc. 9th Conf. on Computability in Europe* (CiE'2013), Springer LNCS vol.**7921**.

[35] Herrmann, J. Sokoli, M. Ziegler: "Satisfiability of cross product terms is complete for real nondeterministic polytime Blum-Shub-Smale machines", in *Proc. 6th Int. Conf. Machines, Computations and Universality*, pp.85-92 of EPTCS vol.**128** (2013).

[36] N. Müller, M. Ziegler: "From Calculus to Algorithms without Errors", pp.718–724 in *Proc. 4th International Congress on Mathematical Software* (ICMS2014), LNCS vol.**8592**.

[37] S.M. Sun, N. Zhong, M. Ziegler: "Computability of the Navier-Stokes Equation", pp.334–342 in *Proc. 11th Conf. on Computability in Europe*, LNCS vol.**9136** (2015).

[38] H. Férée, M. Ziegler: "On the Computational Complexity of Positive Linear Functionals on C[0;1]", pp.489–504 in *Proc. 6th Int. Conf. on Mathematical Aspects of Computer and Information Sciences* (MACIS 2015), Springer LNCS vol.**9582** (2016).

[39] M.Schröder, F. Steinberg, M. Ziegler: "Average-Case Bit-Complexity Theory of Real Functions", pp.505–519 in *Proc. 6th Int. Conf. on Mathematical Aspects of Computer and Information Sciences* (MACIS 2015), Springer LNCS vol.**9582** (2016).

[40] A. Kawamura, F. Steinberg, M. Ziegler: "Complexity Theory of (Functions on) Compact Metric Spaces, pp.847–846 in *Proc. 31st Ann. ACM-IEEE Symp. Logic in Computer Science* (LiCS'2016)

[41] J. Cho, S. Park, M. Ziegler: "Computing Periods…", pp.132—143 in Proc. 12th Internat. Workshop on Algorithms and Computation (2018), Springer LNCS vol.**10755**.

[42] A. Kawamura, H. Thies, M. Ziegler: „Average-case polynomial-time computability of Hamiltonian dynamics", in Proc. 43rd Internat. Symp. Mathemat. Foundations of Computer Science (MFCS 2018).

[43] I. Koswara, S. Selivanova, M. Ziegler: "Computational Complexity of Real Powering and Improved Solving Linear Differential Equations", *Proc.14th Int.Comp.Sci.Russia*, Springer LNCS **11532** (2019)

[44] A. Pauly, D. Seon, M. Ziegler: "Computing Haar Measures", pp.34:1—34:17 in *Proc. 28th International Conference on Computer Science Logic* (CSL 2020), LIPIcs vol. **152** (2020).

[45] D. Lim, M. Ziegler: "Quantitative Coding and Complexity Theory of Compact Metric Spaces", pp.205—214 in *Proc. 16th Conf. on Computability in Europe* (CiE 2020), Springer LNCS vol.**12098.**

[46] S. Sun, N. Zhong, M. Ziegler: "Computability of Navier-Stokes' Equation", pp.80—112 in *Complexity and Approximation*, Springer LNCS vol.**26000.**

[47] S. Selivanova, F.Steinberg, H.Thies, M.Ziegler: „Exact Computation of Solutions for Linear Analytic Systems of Partial Differential Equations", pp.370—390 in Proc. CASC 2021, LNCS vol.**12865**

[48] I. Koswara, G. Pogudin, S. Selivanova, M. Ziegler: "Bit-Complexity of Solving Systems of Linear Evolutionary Equations", pp.223—241 in Proc. CSR 2021, LNCS vol. **12730**.

[49] F. Braußе, P. Collins, M. Ziegler: Survey, Vision, Theory, and Practice of a Computer ~~Algebra~~ *Analysis* System, pp.62—82 in Proc. CASC 2022, Springer LNCS vol.**13366**.

Theses supervision:

https://ziegler.theoryofcomputation.asia/teaching.html#theses

UNIVERSITÄT PADERBORN
Die Universität der Informationsgesellschaft

URKUNDE

Unter dem Präsidium des Professors Dr. Nikolaus Risch
und unter dem Dekanat des Professors Dr. Michael Dellnitz

verleiht die

Fakultät für Elektrotechnik, Informatik und Mathematik

Herrn

Dr. rer. nat. Martin Ziegler

geboren am 19. November 1968 in Stuttgart

die Lehrbefugnis

(venia legendi)

für das Fachgebiet

Informatik

nachdem er aufgrund seiner Habilitationsschrift

Real Computability and Hypercomputation

sowie der übrigen Habilitationsleistungen am 14. März 2008 habilitiert hat.

Mit der Verleihung der Lehrbefugnis ist das Recht zur Führung der Bezeichnung

Privatdozent

verbunden

Paderborn, den 17. März 2008

Der Präsident

Professor Dr. Nikolaus Risch

Der Dekan

Professor Dr. Michael Dellnitz

UNIVERSITÄT - GESAMTHOCHSCHULE PADERBORN

Unter dem Rektorat des Universitätsprofessors Dr. rer. pol. habil. Dr. h. c. Wolfgang Weber
und unter dem Dekanat des Universitätsprofessors Dr. rer. nat. Gregor Engels

verleiht die

Fakultät für Elektrotechnik, Informatik und Mathematik

Herrn Diplom-Mathematiker

Martin Ziegler

geboren am 19. November 1968 in Stuttgart

den akademischen Grad

Doktor der Naturwissenschaften
(Dr. rer. nat.)

nachdem er in einem ordnungsgemäßen Promotionsverfahren im Bereich der Informatik
durch die Dissertation

ZUR BERECHENBARKEIT REELLER GEOMETRISCHER PROBLEME

sowie durch die mündliche Prüfung seine wissenschaftliche Befähigung erwiesen
und dabei das Gesamturteil

„sehr gut"

erhalten hat.

Paderborn, den 11. November 2002

Der Rektor

Der Dekan

UNIVERSITÄT - GESAMTHOCHSCHULE - PADERBORN
FACHBEREICH 17 · MATHEMATIK/INFORMATIK

Diplomprüfung

Prüfungszeugnis

Herr/~~Frau~~

Martin Z i e g l e r

geboren am 19.11.1968 in Stuttgart

hat sich am 25. April 1997 gemäß der Prüfungsordnung der Diplomprüfung für den integrierten Studiengang Mathematik (Regelstudienzeit 9 Semester) an der Universität - Gesamthochschule - Paderborn unterzogen und die Prüfung mit der Gesamtnote

- mit Auszeichnung -

bestanden.

Thema der Diplomarbeit:
"Eine alternative Formulierung der Quantenmechanik"

Die Leistungen wurden im einzelnen wie folgt bewertet:

	Prüfer:	Note:
Diplomarbeit	Fuchssteiner	- sehr gut - *
Reine Mathematik	Kiyek	- sehr gut - *
Angewandte Mathematik	Deimling	- sehr gut - *
Spezialgebiet	Fuchssteiner	- sehr gut - *
Nebenfach Physik	Schröter	- sehr gut - *

Paderborn, den 25. April 1997

Universität-Gesamthochschule 2 Paderborn

Prüfungsausschuß
Der Vorsitzende

UNIVERSITÄT - GESAMTHOCHSCHULE - PADERBORN
FACHBEREICH 6 · PHYSIK

PRÜFUNGSZEUGNIS

Herr Martin Z i e g l e r

geboren am 19.11.1968 in Stuttgart

hat sich am 21.04.1997 gemäß der Prüfungsordnung der

DIPLOMPRÜFUNG

für den Diplom-Physiker (Regelstudienzeit zehn Semester)
an der Universität-Gesamthochschule Paderborn unterzogen
und die Prüfung mit der Gesamtnote

- mit Auszeichnung -

bestanden.

Thema der Diplomarbeit:
"Eine alternative Formulierung der Quantenmechanik"

Die Leistungen wurden im einzelnen wie folgt bewertet:

	Betreuer / Prüfer	Note
Diplomarbeit:	Fuchssteiner	- sehr gut -
Experimentalphysik	Holzapfel	- sehr gut -
Theoretische Physik	Schröter	- sehr gut -
Stochastik I (Wahlpflichtfach 1)	Deimling	- sehr gut -
Gruppentheorie (Wahlpflichtfach 2)	Anthony	- sehr gut -

Zusatzfächer siehe Rückseite

Universität-Gesamthochschule Paderborn

Paderborn, den 04.06.1997

Der Vorsitzende
des Prüfungsausschusses

i.V. (Prof. Dr. Schwermann)

Zusatzfächer:	Betreuer/Prüfer	Note
Partielle Differential-gleichungen	Deimling	- sehr gut -
Funktionentheorie I	Kiyek	- sehr gut -
Topologie	Kaniuth	- sehr gut -
Funktionalanalysis I + II	Fuchssteiner	- sehr gut -

URKUNDE

TECHNISCHE UNIVERSITÄT DARMSTADT

Die Carlo und Karin Giersch-Stiftung an der Technischen Universität Darmstadt verleiht den

Athene Preis für Gute Lehre

Fachbereichspreis 2011

des Fachbereichs Mathematik

an

Prof. Dr. Martin Ziegler

für besonders engagiertes Lehren (- deutlich über das Deputat hinausgehendes Angebot, - innovative Ansätze, - neue Lehrkonzepte).

Mit dem Preis sollen die Bedeutung der akademischen Lehre für die TU Darmstadt exponiert und zusätzliche Anreize geschaffen werden, sich im Sinne der Grundsätze für die Lehre zu engagieren. Die Carlo und Karin Giersch-Stiftung an der Technischen Universität Darmstadt und das Präsidium der TU Darmstadt sprechen ihre Anerkennung aus.

Darmstadt, den 15. November 2011

Prof. Dr. Hans Jürgen Prömel
Präsident der Technischen Universität Darmstadt

Senator E.h. Prof. Carlo Giersch
Carlo und Karin Giersch-Stiftung an der Technischen Universität Darmstadt