

## Research Seminars / Advanced Student Seminars

Oberseminar: Algebraische Geometrie <i>J. Ayoub, C. Okonek, G. Wüstholtz</i>	Mo 13:15 Y27-H-25
Symplectic Geometry Seminar <i>A. Cannas da Silva, D. A. Salamon</i>	Mo 15:15 HG G 43
Optimization Seminar * <i>R. Zenklusen</i>	Mo 16:30 HG G 19.1
Research Seminar: Discrete Mathematics <i>V. Féray</i>	Tu 11:15 Y27-H-46
Seminar in Theoretical Computer Science <i>E. Welzl, B. Gärtner, M. Hoffmann, J. Lenker, A. Steger, B. Sudakov</i>	Tu 12:15/ Th 12:15 CAB G 51
Student Seminar: On Cramer's Theorem in Infinite Dimension <i>B. Mallein</i>	Tu 15:00 Y27-H-46
Analysis Seminar <i>A. Carlotto, F. Da Lio, A. Figalli, N. Hungerbühler, T. Kappeler, T. Riviere, D. A. Salamon, M. Struwe</i>	Tu 15:15 HG G 43
Algebraic Geometry and Moduli Seminar * <i>R. Pandharipande</i>	We 13:30/ Fr 16:00 HG G 43
Epidemiology and Biostatistics Methods Seminar <i>T. Hothorn, M. Puhan</i>	We 14:00 HRS F05
Arbeitsgemeinschaft in Codierungstheorie und Kryptographie <i>E. Gorla, J. Rosenthal</i>	We 15:00 Y27-H-28
Geometry Seminar <i>M. Burger, M. Einsiedler, A. Iozzi, U. Lang, V. Schroeder, A. Sisto</i>	We 15:45 HG G 43
Zurich Colloquium in Applied and Computational Mathematics* <i>R. Abgrall, R. Alatifari, H. Ammari, U. S. Fjordholm, A. Jentzen, S. Mishra, S. Sauter, C. Schwab</i>	We 16:15 Y27-H-25

\* dates by announcement

Seminar on Stochastic Processes <i>J. Bertoin, E. Bolthausen, A. Nikeghbali, P. Nolin, B. Schlein, A.-S. Sznitman, V. Tassion, W. Werner</i>	We 17:15 Y27-H-25
Products and Nonlinearities in Function Space Theory <i>L. Keller, T. Riviere</i>	Th 13:15 ML F 38
Student Seminar: Selected Topics in Geometric Measure Theory <i>C. De Lellis, A. Marchese</i>	Th 13:00 Y27-H-46
Talks in Mathematical Physics <i>A. Cattaneo, G. Felder, M. Gaberdiel, G.-M. Graf, H. Knörrer, T. H. Willwacher</i>	Th 15:15 HG G 43
ZüKoSt: Seminar on Applied Statistics * <i>P. Bühlmann, R. Furrer, L. Held, T. Hothorn, M. Kalisch, M. Maathuis, M. Mächler, L. Meier, N. Meinshausen, M. Robinson, C. Strobl, S. Van de Geer</i>	Th 16:15 HG G 19.1
Research Seminar in Applied Statistics * <i>R. Furrer, L. Held, T. Hothorn (alternating with ZüKoSt)</i>	Th 16:15 Y27-H-46
Seminar PDE and Mathematical Physics <i>C. De Lellis, T. Kappeler, B. Schlein</i>	Th 17:15 Y27-H-35/36
Talks in Financial and Insurance Mathematics * <i>P. Cheridito, P. Embrechts, M. Schweizer, M. Soner, J. Teichmann, M. V. Wüthrich</i>	Th 17:15 HG G 43
Student Seminar: Selected Topics in Quantum Field Theory <i>N. Moshayedi</i>	Fr 13:00 Y27-H-25
Number Theory Seminar <i>Ö. Imamoglu, P. S. Jossen, E. Kowalski, P. D. Nelson, R. Pink, G. Wüstholtz</i>	Fr 14:15 HG G 43
Research Seminar on Statistics <i>P. L. Bühlmann, L. Held, T. Hothorn, D. Kozbur, M. H. Maathuis, N. Meinshausen, S. Van de Geer, M. Wolf</i>	Fr 15:15 HG G 19.1

For more informations see:

<http://www.math.ethz.ch/research/seminars>

<http://www.math.uzh.ch/index.php?id=oberseminare>

## Colloquia

### Zurich Colloquium in Mathematics

alternating with

*R. Abgrall, J. Ayoub, P. L. Bühlmann, M. Burger, C. De Lellis, S. Mishra, R. Pandharipande, W. Werner*  
Tuesday 17:15-18:30

room: UZH KO2 F-150

### Zurich Graduate Colloquium

*C. De La Cruz, A. Iozzi, J. Lorand, J. Oesinghaus, V. Schlegel, J. Schmitt*

Tuesday 17:15-18:30

room: UZH KO2 F-150

## German Language Courses

### Level A2 Course

Requirement: Basic knowledge of German / completed A1 level.  
Goal: Complexer sentences, improving speaking skills.  
The dates of the two double lessons a week are fixed via doodle.

### Level B1.2 Course

Requirement: Advanced knowledge of German.  
Goal: Advanced grammar, idiomatic expressions, mathematical vocabulary and phrases, teaching Mathematics in German.  
The dates of the two double lessons a week are fixed via doodle.

## Transferable Skills

The ZGSM again offers workshops in transferable skills held by Dr. Monika Clausen ([www.clausen-netzwerkpartner.ch](http://www.clausen-netzwerkpartner.ch)).  
For this semester there are two one-day workshops offered:

- **Friday, March 31, 2017:** How to apply for jobs in private industry (topics: application documents, transferable competences, job selection and career impact)
- **Monday, April 03, 2017:** Training for job interviews in private industry (topics: settings, typical questions, self-marketing)

### Level B2.2 Course

Requirement: Successfully completed B1 level / B2.1 level.  
Goal: Useful phrases for discussions & presentations, sayings, special vocabulary & grammar (on topics in society & politics).  
The dates of the two double lesson a week are fixed via doodle.

**If you are interested in one of the announced courses, please contact us at [info@zgsm.ch](mailto:info@zgsm.ch). You will then receive further information by e-mail.**

### Impressum

**Publisher:** Zurich Graduate School in Mathematics  
**Contact:** [info@zgsm.ch](mailto:info@zgsm.ch)

# Zurich Graduate School in Mathematics

uzh | eth | zürich

Issue No 22 - Spring Semester 2017

## Welcome

We welcome at the Zurich Graduate School in Mathematics (ZGSM):

### PhD students

Simon Brun (ETH)

Luca Fresta (UZH)

Andrea Gabrielli (ETH)

Christoph Glanzer (ETH)

Luc Groscheintz (ETH)

Soumil Gurjar (ETH)

Karan Khathuria (UZH)

Solt Kovacs (ETH)

Maximilian Nitzschner (ETH)

Raul Penaguião (UZH)

Céline Torres (UZH)

Gabriele Visentin (UZH)

Violetta Weger (UZH)

### Postdocs

Giovanni Antinucci (UZH)

Aditi Dandapani (ETH)

Linda De Cave (UZH)

Benjamin Frot (ETH)

Rafael Greenblatt (UZH)

Cagri Sert (ETH)

Mindaugas Skujus (UZH)

Stefan Weltge (ETH)

### Faculty & Lecturers

Vincent Tassion (ETH)

## Congratulations

The following members have successfully completed their PhD exams:

Gabriel Hernán Berzunza Ojeda (UZH)

Raoul Bourquin (ETH)

Laura Buzdugan (ETH)

Raffael Casagrande (ETH)

Philippe Deprez (ETH)

Ruben Dezeure (ETH)

Jan Christoph Ernest (ETH)

Benjamin Miesch (ETH)

Jusuf Ramic (UZH)

Quan Shi(UZH)

## Course Program

Please find enclosed the course program of the spring semester 2017. In particular we would like to invite you to the Zurich Colloquium in Mathematics and the Zurich Graduate Colloquium. See separate announcements for further details.

## Social Activities

### Barbecue

The Graduate School organizes its barbecue party on **Monday, May 29, 2017** in the Irchel park. Barbecue and soccer match start at 18:00. All faculty members, PhD students and postdocs of the ZGSM are invited. Please note the date in your calendar.

### Soccer

Join the weekly soccer match at the Irchel campus. Details and contact: [yannick.widmer@math.uzh.ch](mailto:yannick.widmer@math.uzh.ch).

### Stammtisch

After the Zurich Graduate Colloquium, PhD students and postdocs usually meet in front of the lecture room for a pizza snack. These meetings are a chance to get to know each other better. The new PhD students and postdocs are particularly welcome.

# GRADUATE COURSE PROGRAM SPRING 2017

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	
8	Brownian Motion and Stochastic Calculus (V) M. Larsson - 2 KE 08:15 - 10:00 -- ETH HG G 3	Brownian Motion and Stochastic Calculus (V) M. Larsson 08:15 - 10:00 -- ETH HG G 3	Differential Geometry II (V) U. Lang 08:15 - 10:00 -- ETH HG F 1 Causality (G) M. H. Maathuis - 2 KE 08:15 - 10:00 -- ETH HG D 7.1 Harmonic Analysis: Theory & Applications in Advanced (U) Signal Processing H. Bölcskei, E. Riegler 08:15 - 10:00 -- ETH F 26.5	Algebraic Topology II (G) P. S. Jossen 08:15 - 10:00 -- ETH HG G 26.5 Differential Geometry II (U) => or 09:15, 10:15, 12:15 U. Lang 08:15 - 09:00 -- ETH HG E 1.1 Brownian Motion and Stochastic Calculus (U) * => or Wed M. Larsson 08:15 - 09:00 -- ETH HG E 21 An Introduction to Random Matrix Theory (U) G. Lambert 08:00 - 09:45 -- UZH Y27-H-28 Invariants of Knots and 3-Manifolds (U) A. Beliakova 08:00 - 09:45 -- UZH Y27-H-12 Quantum Field Theory II (V) N. Beisert 08:45 - 10:30 -- ETH HCI J 3	
9	Functional Analysis II (U) M. Struwe 09:15 - 10:00 -- ETH HG D 3.1 / D 5.3 / F 26.5 / G 26.3	Survival Analysis (V) T. Hothorn - 1 KE 09:00 - 11:00 -- UZH room tba Computational Quantum Physics (V) G. Carleo - 2 KE 09:45 - 11:30 -- ETH HCI J 4	Topics in Scalar Curvature (V) R. Schoen - 2 KE 09:15 - 11:00 -- ETH HG G 43 => starts on March 30	Differential Geometry II (U) => or 08:15, 10:15, 12:15 U. Lang 09:15 - 10:00 -- ETH HG E 1.1 Brownian Motion and Stochastic Calculus (U) * => or Wed M. Larsson 09:15 - 10:00 -- ETH HG E 21	
10	Functional Analysis II (V) M. Struwe - 3 KE 10:15 - 12:00 -- ETH HG G 5 Mathematics of (Super-Resolution) Biomedical Imaging (G) H. Ammari - 3 KE 10:15 - 12:00 -- ETH HG E 22 Algebraic Geometry II (V) J. Ayoub - 2 KE 10:15 - 12:00 -- UZH Y27-H-28	Differential Geometry II (V) U. Lang - 3 KE 10:15 - 12:00 -- ETH HG D 7.2 Die Gödel'schen Sätze (V) L. Halbeisen - 2 KE 10:15 - 12:00 -- ETH HG D 7.1 Algebraic Geometry II (V) J. Ayoub 10:15 - 12:00 -- UZH Y27-H-28	Self-Organized Dynamics. From Emerging Consensus to (V) Hydrodynamic Flocking E. Tadmor - 2 KE 10:15 - 12:00 -- ETH HG G 43 Algebraic Topology II (G) P. S. Jossen - 3 KE 10:15 - 12:00 -- ETH HG G 26.5 Numerical Methods for Hyperbolic PDEs (V) U. S. Fjordholm 10:15 - 12:00 -- ETH HG F 26.5 Nonlinear Dynamics and Chaos II (G) G. Haller - 2 KE 10:15 - 12:00 -- ETH ML H 43 Quantitative Stratification for Singular Sets of Harmonic Maps (V) D. Valtorta - 2 KE 10:15 - 12:00 -- UZH Y27-H-25 Quantum Field Theory from Functional Integral Point of View (V) S. Kandel - 3 KE 10:15 - 12:00 -- UZH Y27-H-46 Invariants of Knots and 3-Manifolds (V) A. Beliakova 10:15 - 12:00 -- UZH Y27-H-12 Graph Theory (V) B. Sudakov - 2 KE 10:15 - 12:00 -- ETH HG E 1.1	Quantitative Risk Management (V) P. Cheridito - 2 KE 10:15 - 12:00 -- ETH HG G 3 Harmonic Analysis: Theory & Applications in Advanced (V) Signal Processing H. Bölcskei, E. Riegler - 2 KE *** 10:15 - 12:00 -- ETH F 26.5 => first lecture at 08:15 Graph Theory (V) B. Sudakov 10:15 - 12:00 -- ETH HG E 1.1 Quantum Field Theory from Functional Integral Point of View (V) S. Kandel 10:15 - 12:00 -- UZH Y27-H-46 Differential Geometry II (U) => or 08:15, 09:15, 12:15 U. Lang 10:15 - 11:00 -- ETH HG E 1.1 Neutral Nets, High Dimensional Statistics, and Spin Glasses (V) E. Bolthausen - 2 KE 10:15 - 12:00 -- UZH Y27-H-12 Quantum Field Theory II (U) => or 14:45 N. Beisert 10:45 - 12:30 -- ETH HCI F 8 / J 8	
11		Survival Analysis (U) T. Hothorn 11:15 - 12:00 -- UZH room tba		Brownian Motion and Stochastic Calculus (U) * => or Wed M. Larsson 11:15 - 12:00 -- ETH HG E 22	
12	Quantum Field Theory II (V) N. Beisert - 3 KE 12:45 - 13:30 -- ETH HCI J 3 => ev. preponed Computational Quantum Physics (U) G. Carleo 12:45 - 14:30 -- ETH HCI J 7 => HCI D 8 on Feb 21			Differential Geometry II (U) => or 08:15, 09:15, 10:15 U. Lang 12:15 - 13:00 -- ETH HG E 1.1 Brownian Motion and Stochastic Calculus (U) * => or Wed M. Larsson 12:15 - 13:00 -- ETH HG E 22	
13	Numerical Methods for Hyperbolic PDEs (V) U. S. Fjordholm - 3 KE 13:15 - 15:00 -- ETH HG F 26.5 Representation Theory of Lie Groups (G) E. Kowalski - 3 KE 13:15 - 15:00 -- ETH HG F 26.3 An Introduction to Stochastic PDEs (G) A. Jentzen - 2 KE 13:15 - 15:00 -- ETH HG G 26.3 Invariants of Knots and 3-Manifolds (V) A. Beliakova - 3 KE 13:00 - 14:45 -- UZH Y27-H-12	Concentration of Measure (V) J. Aru, T. Lupu - 1 KE 13:15 - 15:00 -- ETH HG D 1.2 Introduction to Data Science (V) G. Lake - 2 KE 13:00 - 14:45 -- UZH Y35-F-47	Topics in the Calculus of Variations (V) A. Figalli - 2 KE 13:15 - 15:00 -- ETH HG E 5 Computational Methods for Quantitative Finance: PDE Methods (V) ** C. Schwab - 3 KE 13:15 - 15:00 -- ETH HG D 1.2 An Introduction to the Modelling of Extremes (V) P. Embrechts - 2 KE 13:15 - 15:00 -- ETH HG D 5.2 High Performance Computing 1b: Parallel Computing (V) R. Teyssier, J. D. Potter - 2 KE 13:00 - 14:45 -- UZH Y13-L-11/13 => starts April 12	Functional Analysis II (V) M. Struwe 13:15 - 15:00 -- ETH HG G 5 Mathematics of (Super-Resolution) Biomedical Imaging (G) H. Ammari 13:15 - 15:00 -- ETH HG E 22 Stochastic Optimal Control (V) M. Soner - 2 KE 13:15 - 15:00 -- ETH HG F 26.3 Die Gödel'schen Sätze (V) L. Halbeisen 13:15 - 14:00 -- ETH HG D 7.1 An Introduction to Random Matrix Theory (V) G. Lambert - 2 KE 13:00 - 14:45 -- UZH Y27-H-28 Introduction to Data Science (U) G. Lake 13:00 - 15:00 -- UZH Y13-L-11/13	Computational Methods for Quantitative Finance: PDE Methods (V) ** C. Schwab 13:15 - 14:00 -- ETH HG D 1.2 High Performance Computing 1b: Parallel Computing (U) R. Teyssier 13:00 - 14:45 -- UZH Y13-L-11/13 => starts April 28
14	Combinatorial Optimization (U) R. Zenklusen 14:15 - 15:00 -- ETH HG G 26.5 => starts on Feb 27		Brownian Motion and Stochastic Calculus (U) * => or Fri M. Larsson 14:15 - 15:00 -- ETH HG E 33.3	Computational Methods for Quantitative Finance: PDE Methods (U) ** C. Schwab 14:15 - 15:00 -- ETH HG D 1.2 / D 3.2 / G 26.1 Quantum Field Theory II (U) => or 10:45 N. Beisert 14:45 - 16:30 -- ETH HCI D2	
15	Mathematical Themes in General Relativity II (V) A. Carlotto - 2 KE 15:15 - 17:00 -- ETH HG F 26.3 Numerical Methods for Hyperbolic PDEs (U) U. S. Fjordholm 15:15 - 16:00 -- ETH HG F 26.5 Poisson Point Processes (V) J. Bertoin - 3 KE 15:00 - 17:00 -- UZH Y27-H-25	Algebraic Curves (G) R. Pandharipande - 2 KE 15:15 - 17:00 -- ETH HG E 1.2 An Introduction to Stochastic PDEs (G) A. Jentzen 15:15 - 17:00 -- ETH HG G 26.3 Codierungstheorie (V) J. Rosenthal - 2 KE 15:00 - 17:00 -- UZH Y27-H-12	Representation Theory of Lie Groups (G) E. Kowalski 15:15 - 17:00 -- ETH HG F 26.3 Percolation and Ising Model (V) V. Tassion - 1 KE 15:15 - 17:00 -- ETH HG G 19.2	Poisson Point Processes (V) J. Bertoin 15:00 - 17:00 -- UZH Y27-H-25 Codierungstheorie (V) J. Rosenthal 15:00 - 17:00 -- UZH Y27-H-12 Graph Theory (U) B. Sudakov 15:15 - 16:00 -- ETH HG D 5.3 / E 21 / G 26.1	
16	Economic Theory of Financial Markets (V) M. V. Wüthrich - 1 KE 16:15 - 18:00 -- ETH HG D 1.1		Stochastic Loss Reserving Methods (V) R. Dahms - 1 KE 16:15 - 18:00 -- ETH ML E 12	Combinatorial Optimization (V) R. Zenklusen - 2 KE 16:15 - 18:00 -- ETH HG G 26.1 Nonlinear Dynamics and Chaos II (G) G. Haller 16:15 - 18:00 -- ETH ML J 34.3	
17/18	Zurich Colloquium in Mathematics/ Zurich Graduate Colloquium 17:15-18:30 -- UZH KO2-F-150 -> alternating			* depending on sufficient demand ** permission from lecturers required *** exam required to get credits	

Next to the name of the instructor you find the credit units (KE) for PhD students. For exercises there are no credit units. If there is no declaration please inquire the credit units with the instructor. We assume no responsibility for accuracy.