

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
MATHEMATICS - DISCRETE MATHEMATICS - COMPUTER SCIENCE

COURSES AND SEMINARS / SUMMER TERM 2005

Term time : 11. April — 22. July 2005

Abbreviations :

Gr.HS Math.:	Lecture Hall 241 (Großer Hörsaal), Wegelerstr. 10
Kl.HS Math.:	Lecture Hall 242 (Kleiner Hörsaal), Wegelerstr. 10
ZS:	Lecture Room (Zeichensaal), Room 244, Wegelerstr. 10
HS We8:	Lecture Hall Applied Physics, Room 106, Wegelerstraße 8
WP HS	Lecture Hall Wolfgang-Paul-Hörsaal, Lecture Hall building Physics, Kreuzbergweg
AudiMax	Auditorium Maximum of the Computer Science, Römerstr. 164
Gr.HS Botanik:	Lecture Hall Botanic, Nußallee 4
HS Zoologie:	Lecture Hall Zoology, Poppelsdorfer Schloß
HS Pharmacy:	Lecture Hall Pharmacy, Kreuzbergweg 26
SR We6/501:	Room 501, Wegelerstr. 6
SR We6/610:	Room 610, Wegelerstr. 6
SR We10/251:	Room 251, Wegelerstr. 10
SR A:	Room 11, Beringstr. 4
SR B:	Room 37, Beringstr. 4
SR C:	Room 3, Beringstr. 1
SR D:	Room 13, Meckenheimer Allee 160, acces only via Beringstr. 1
SR E:	Room 3, Meckenheimer Allee 160, acces only via Beringstr. 1
SR F:	Room 2, Meckenheimer Allee 160, acces only via Beringstr. 1
SR G:	Room 627, Lecture Hall Building Physics, Kreuzbergweg 28
HS G, F:	Lecture Halls Nassestr. 2
HS 1, A, ..., D:	Lecture Halls Römerstraße 164
Room A*,N*:	Seminar Rooms Römerstraße 164
MPI:	Lecture Hall MPI for Mathematics, Vivatsgasse 7
u.M.:	and staff
n.V.:	Time or place to be announced in lecture, seminar ect.

MATHEMATICS

Activities before and after term time

The programming languages C/C++ 26.9.05 – 14.10.05, 3 hrs, 9-12, Gr.HS Math.	K.W. Jacobs
Exercises thereto (in groups) 2 hrs, in the afternoon n.V.	K.W. Jacobs

General Orientation Course

Lecture for fourth semester 1 hrs, Wednesday afternoon, Gr.HS Math.	FS Mathematik and several professors
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Basic Studies: Courses

Analysis II (obligatory for students of mathematics, recommended for students of physics) 4 hrs, Mo, Thu 8-10, WP HS	J. Franke
Exercises thereto 4 hrs, n.V.	J. Franke u.M.
Linear Algebra II (for mathematicians obligatory, for physicists recommended) 4 hrs, Tu 8-10, Fr 10-12, WP HS	I. Lieb
Exercises thereto 4 hrs, n.V.	I. Lieb u.M.
Mathematics for Computer Scientists II A Logic and discrete structures 2 hrs, Mo 14-16, HS D	P. Koepke
Exercises thereto 2 hrs, n.V.	P. Koepke, B. Irrgang
Mathematics for Computer Scientists II B Analysis 4 hrs, Tu, Thu 9-11, HS D	K. Leschinger
Exercises thereto 2 hrs, n.V.	K. Leschinger u.M.

Analysis IV 4 hrs, We, Fr 8-10, Gr.HS Math.	K.T. Sturm
Exercises thereto 2 hrs, n.V.	K.T. Sturm u.M.
Set Theory II 4 hrs, Tu, Thu 10-12, ZS	P. Koepke
Exercises thereto 2 st, n.V.	P. Koepke, B. Irrgang M. Rapoport
Algebra I 4 hrs, Tu, Thu 8-10, Kl.HS Math.	M. Rapoport I. Vollaard K. Scherer
Exercises thereto 2 hrs, n.V.	K. Scherer u.M.
Practical Mathematics II 4 hrs, Tu, Thu 10-12, Gr.HS Math.	S. Albeverio
Exercises thereto, 2 hrs, n.V.	S. Albeverio u.M.
Mathematics for Informatics IV 4 hrs, Mo, We 9-11, HS D	
Exercises thereto 2 hrs, Fr 13-15, HS D	

Basic Studies: Seminars

Proseminar Elementary Number Theory 2 hrs, n.V.	J. Franke
Proseminar Discrete Optimization n.V., seminarroom, Lennéstraße 2	B. Korte, D. Rautenbach, J. Vygen K. Scherer
Proseminar about Spline-theory 2 hrs, n.V.	

Basic Studies: Practica

Practical training (for computer scientists) 4 hrs, n.V., Lennéstraße 2	B. Korte, D. Rautenbach, J. Vygen
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Courses for other Faculties

Mathematics in the biology II 2 hrs, Mo 11-13, HS Zoology	A. Hahn
Computer Practical training biology Mo-Fr in the afternoon, 14-16 and 16-18, HS Zoology	A. Hahn

Additional thereto 1 st, Fr 11-12, HS Zoologie	A. Hahn
Mathematics and statistical methods for Pharmacists 2 st, Mo 8-10, HS Pharm. Inst. Pop. für Zweit- und Drittsemester	K.W. Jacobs
Mathematics for Scientists II 3 hrs, We 14-16, Thu 17-18, SR G	Th. Wörmann
Additional thereto 2 hrs, Fr 14-16, SR G	Th. Wörmann
Exercises thereto 2 hrs, n.V.	Th. Wörmann

Upper Level Studies for Teacher's Training: Courses

Examination Course for the teacher's examination 4 hrs, Mo, We 10-12, SR D	J. Frehse
Functional Analysis II 4 st, Tu, Thu 8-10, ZS	G. Grün
Exercises thereto 2 st, n.V.	G. Grün
Classical Differential geometry 2 hrs, We 14-16, SR D	W. Klingenberg
Mathematics in the ancient world 2 st, Tu 16-18, ZS	W. Purkert
Revision course of Stochastics 2 st, Mo 14-16, SR C	M. Welter
Exercises thereto 1 st, Mo 13-14, SR C	M. Welter
Introduction in the Theory of transcendental numbers 2 st, We 10-12, SR C	M. Welter
Elementary Number theory 2 hrs, Mo 10-12, SR B	A. Wynands
Exercises thereto 2 hrs, Mo 12-14, SR B	A. Wynands

Upper Level Studies for Teacher's Training: Seminars

Seminar on the numerical treatment of functional differential equations 2 hrs, Mo 14-16, SR We6/610	H. Arndt
Diplomanden- and Doktorandenseminar 2 st, Tu 14-16, SR D	W. Ballmann

Upper Level Studies for Teacher's Training: Seminars on Didactics

Seminar on didactics to the history of mathematics in the ancient world 2 hrs, Thu 14-16, SR B	P. Bungartz W. Purkert
To discover, to give reasons and to exercise in the mathematics class(Sek I) 2 st, Tu 8-10, SR B	A. Wynands

Upper Level Studies for Teacher's Training: Practical Studies

Practical school studies for teachers 3 hrs, n.V.	J. Huber, A. Wynands
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Upper Level Studies for Teacher's Training: Colloquia

Colloquium in didactic Mathematics - Natural Sciences 2 hrs, Mo, 17-19, Kl.HS Math., n.V.	P. Bungartz, A. Wynands
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Diploma Level Studies : Lectures

Partial Differential Equations II 4 hrs, We, Fr 10-12, ZS	H.W. Alt
Exercises thereto 2 hrs, n.V.	H.W. Alt u.M.
Algebraic K-Theory 2 st, We 8-10, SR F	C. Ausoni
Exercises thereto 2 st, We 10-12, SR F	C. Ausoni
Symmetric Spaces 4 st, Tu, Thu 8-10, SR A	W. Ballmann
Topology II 4 hrs, We, Fr 8-10, Kl.HS Math.	C.-F. Bödigeimer
Exercises thereto 2 st, n.V.	C.-F. Bödigeimer
Optimal stopping 2 hrs, We 14-16, Juridicum R. 055	N. Christopeit
Stochastic Analysis II 4 hrs, Mo 10-12, Thu 14-16, Gr.HS Math.	A. Eberle

Exercises thereto 2 hrs, n.V.	A. Eberle u.M.
Arithmetic Geometry 4 hrs, We 10-12, Fr 14-16, SR E	G. Faltings
Partial Differential Equations from continuums-mechanics 4 hrs, Tu, Thu 10-12, SR E	J. Frehse
Modular Curves 4 st, Tu 14-16, SR B, Thu 10-12 SR A	U. Görtz
Fast approximation of high dimensional problems 4 hrs, Tu, Thu 10-12, SR We6/610	M. Griebel
Seminar going with it 2 hrs, n.V.	M. Griebel u.M.
Analysis on manifolds II 2 hrs, Tu, Thu 10-12, SR D	D. Grieser
Functional Analysis II 4 hrs, Tu, Thu 8-10, ZS	G. Grün
Exercises thereto 2 hrs, n.V.	G. Grün
Differential Geometry II 4 st, We, Fr 10-12, Kl.HS Math.	U. Hamenstädt
Exercises thereto 2 st, n.V.	U. Hamenstädt u.M.
Shimura-varities 4 hrs, Mo 10-12, SR C, We 16:30-18:00, MPI	G. Harder
Classical Differential Geometry 2 hrs, We 14-16, SR D	W. Klingenberg
Set Theory II 4 hrs, Tu, Thu 10-12, ZS	P. Koepke
Exercises thereto 2 hrs, n.V.	P. Koepke, B. Irrgang
Discrete Mathematics II 4 st, Tu, Thu 16-18, Gerhard-Konow-Hörsaal, Lennéstraße 2	B. Korte
Exercises for Discrete Mathematics II 2 st, Thu 14-16, Gerhard-Konow-Hörsaal, Lennéstraße 2	B. Korte, M. Struzyna
Scientific Calculation II 4 st, Tu, Thu 10-12, SR We6/610	R. Krause
Exercises thereto 2 st, n.V.	R. Krause, K. Fackeldey
Numeric of Partial Differential Equations IV 4 hrs, Mo 10-12, Kl.HS Math., We 10-12, SR We6/610	A. Kunoth
Exercises thereto 2 hrs, n.V.	A. Kunoth u.M.
Analytic Number Theory II 4 st, Mo, Thu 10-12, SR F	B.Z. Moroz

Nonlinear Partial Differential Equations 4 hrs, Tu, Thu 8-10, SR We6/251	F. Otto
Exercises thereto 2 hrs, SR We10/251 n.V.	F. Otto u.M.
Mathematical Optimization II 4 hrs, Tu, Fr 14-16, Gerhard-Konow-Lecture Hall Lennéstraße 2	D. Rautenbach
Exercises to Mathematical Optimization II 2 hrs, Fr 16-18, Gerhard-Konow-Lecture Hall Lennéstraße 2	D. Rautenbach, U. Brenner
Stochastic Processes 4 st, Mo 12-14, Thu 14-16, Kl.HS Math.	M. Schäl
Exercises thereto 2 st, n.V.	M. Schäl
Topology IV 4 st, Tu, Thu 10-12, SR B	St. Schwede
Analysis IV 4 st, Mi, Fr 8-10, Gr.HS Math.	K.T. Sturm
Exercises thereto 2 st, n.V.	K.T. Sturm u.M.
Chip-Design: Theory and Praxis 4 st, Di, Do 12-14, Gerhard-Konow-Hörsaal, Lennéstraße 2	J. Vygen
Algebraic Geometry II 4 st, Mo, Do 8-10, SR B	T. Wedhorn
Exercises thereto 2 st, n.V.	T. Wedhorn
Introduction in the theory of transcendental numbers 2 st, Mi 10-12, SR C	M. Welter
Exercises thereto 1 st, n.V.	M. Welter

Diploma Level Studies : Seminars

Seminar Partial Differential Equations 2 hrs, n.V.	H.W. Alt
Seminar on the numerical treatment of functional differential equations 2 hrs, Mo 14-16, SR We6/610	H. Arndt
Seminar Topology A 2 hrs, Tu 14-16, SR E	C.-F. Bödigheimer , B. Richter
Seminar on numerical methods for stochastic differential equations 2 hrs, n.V.	A. Eberle, R. Krause

Seminar Algebra 2 hrs, n.V.	J. Franke
Seminar Applied Analysis 2 hrs, n.V.	J. Frehse
Seminar Scientific computing 2 hrs, Tu 14-16, SR We6/610	M. Griebel
Spektral theory boundless Operators 2 st, We 14-16, SR E	D. Grieser, A. Stohmaier
Seminar partial differential equations 2 hrs, n.V.	G. Grün
Seminar Differential Geometry 2 st, n.V.	U. Hamenstädt
Seminar Automorphe Formen 2 st, Di 17-19, SR A	G. Harder
Seminar Set Theory 2 hrs, Tu 14-16, SR A	P. Koepke, B. Irrgang
Seminar Discrete Optimization 2 hrs, n.V., Seminarraum Lennéstraße 2	B. Korte, D. Rautenbach, J. Vygen
Seminar coupling technic for one- and multiscale problems 2 st, n.V.	R. Krause
Seminar Numerical Analysis 2 hrs, Mo 12-14, SR We6/610	A. Kunoth
Seminar on Algebra, Geometry and Physics 2 hrs, Tu 14 Uhr s.t., auditorium MPI	Y. Manin
Seminar Mathematical Modeling in crystal growth 2 st, SR We10/251, n.V.	F. Otto
Seminar Algebraic Geometry 2 hrs, Thu 14-16, SR D	M. Rapoport, J. Stix
Seminar Stochastic Processes 2 hrs, n.V.	M. Schäl
Seminar about approximation 2 hrs, n.V.	K. Scherer
Seminar Topology B 2 hrs, Tu 14-16, SR F	St. Schwede, Ch. Ausoni, G. Gaudens
Seminar Stochastic Analysis 2 hrs, n.V.	K.T. Sturm

Upper Level Studies : Special Seminars

Oberseminar on Stochastics 4 hrs, Thu 16-20, SR We6/501	S. Albeverio, A. Eberle M. Schäl, K.T. Sturm
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AG Configuration Spaces 2 hrs, Fr 14-16, SR We6/501	S. Albeverio, C.-F. Bödigheimer
Oberseminar on Mathematical Physics 2 hrs, Fr 10-12, SR We6/501	S. Albeverio, H. Gottschalk
Diploma Seminar and Special Seminar 2 hrs, n.V.	S. Albeverio
Graduate seminar Partial Differential Equations 2 st, n.V.	H.W. Alt
Graduate seminar Topology 2 st, Di 17-19, SR E	Ch. Ausoni, C.-F. Bödigheimer, G. Gaudens, B. Richter, S. Schwede
Diploma- and Graduate seminar 2 st, Di 14-16, SR D	W. Ballmann
Graduate Seminar 2 hrs, Thu 16.30-18.00, MPI	W. Ballmann, U. Hamenstädt
AG Differential Geometry 2 st, n.V.	W. Ballmann, U. Hamenstädt
MPI-Seminar Topology 1 hr, Mo 15-16, Hörsaal MPI	H.-J. Baues
Working Seminar Homotopy theory (Bochum-Bonn- Düsseldorf-Wuppertal) 3 hrs, Thu 15-18, 14-day, SR E	C.-F. Bödigheimer, K. Knapp, E. Ossa, St. Schwede, W. Singhof
Seminar for Diploma Students 2 hrs, n.V.	A. Eberle
MPI-Oberseminar 1 hrs, on Thursday, at 3 p.m.s.t., lecture hall MPI	G. Faltings, G. Harder, Y. Manin, D. Zagier
Diploma Seminar 2 hrs, n.V.	J. Franke
Diploma Seminar 2 hrs, n.V.	J. Frehse
Graduate Seminar Selected topics in scientific computing 2 hrs, n.V.	M. Griebel
AG Benetzungsmodelle 2 hrs, n.V.	G. Grün
Diploma Seminar Differential Geometry 2 hrs, Mo 14-16, SR E	U. Hamenstädt
Graduate Seminar Mathematical Logic 2 hrs, Thu 16.30-18.30, SR A	P. Koepke, B. Irrgang
Diploma Seminar 2 hrs, Thu, 14-16, SR A	P. Koepke

Working Seminar Mathematical Logic 2 hrs, Tu 16-18, SR D	P. Koepke
Diploma- and Graduate Seminar 2 hrs, We 12-14, conference room Lennéstraße	B. Korte, D. Rautenbach, J. Vygen
Graduate Seminar Discrete Optimization 2 hrs, Mo 17-19, seminar room, Lennéstraße 2	B. Korte, D. Rautenbach, J. Vygen
Graduate Seminar Selected Topics of Numerics of all-solid mechanics under side conditions 2 hrs, SR We6/610, n.V.	R. Krause
Diploma- and Graduate Seminar 2 hrs, Thu 16-18, SR We6/610	A. Kunoth
Working Seminar Mathematical methods in geodasic 2 hrs, n.V.	A. Kunoth
Diploma Seminar 2 st, n.V.	I. Lieb
Working Seminar Complex Analysis (Bonn/MPI/Wuppertal) 4 hrs, 14-day, Mo 15-18, MPI	I. Lieb, K. Diederich
Diploma Seminar Polymerdynamik 2 hrs, n.V.	F. Otto
Working Seminar n.V.	F. Otto
Graduate Seminar Arithmetic Geometry 2 hrs, Thu 16-18, SR B	M. Rapoport
Working Seminar Arithmetic Geometry 2 hrs, Tu 16-18, SR B	M. Rapoport
Diploma Seminar 2 hrs, n.V.	M. Schäl
Seminar for Diploma and Doctoral Students 2 hrs, Mo 14-16, SR We6/501	K.T. Sturm

Diploma Level Studies : Practical Studies

Computational fluid dynamics 6 hrs, We 12-14 and 4 hrs n.V. SR We6/610	M. Griebel
Practical training (for computer scientists) 4 hrs, n.V.	B. Korte, D. Rautenbach, J. Vygen

**Bonn International Graduate School
in Mathematics, Physics and Astronomy**

Graduate Studies : Lectures

Partial Differential Equations II 4 st, We, Fr 10-12, ZS	H.W. Alt
Exercises thereto 2 st, n.V.	H.W. Alt u.M.
Algebraic K-Theory 2 st, We 8-10, SR F	C. Ausoni
Exercises thereto 2 st, Mi 10-12, SR F	C. Ausoni
Symmetric Spaces 4 st, Tu, Thu 8-10, SR A	W. Ballmann
Stochastic Analysis II 4 st, Mo 10-12, Thu 14-16, Gr.HS Math.	A. Eberle
Exercises thereto 2 st, n.V.	A. Eberle u.M.
Arithmetic Geometry 4 hrs, We 10-12, Fr 14-16, SR E	G. Faltings
Modular Curves 4 st, Tu 14-16, SR B, Thu 10-12, SR A	U. Görtz
Fast approximation of high-dimensional problems 4 hrs, Tu, Thu 10-12, SR We6/610	M. Griebel
Seminar going with it 2 hrs, n.V.	M. Griebel u.M.
Analysis on manifolds II 4 st, Tu, Thu 10-12, SR D	D. Grieser
Shimura-varieties 4 hrs, Mo 10-12, SR C, We 16:30-18:00, MPI	G. Harder
Analytic Number Theory II 4 st, Mo, Thu 10-12, SR F	B.Z. Moroz
Topology IV 4 st, Tu, Thu 10-12, SR B	St. Schwede
Analysis IV 4 st, Mi, Fr 8-10, Gr.HS Math.	K.T. Sturm
Exercises thereto 2 st, n.V.	K.T. Sturm u.M.

Bonn International Graduate School in Mathematics, Physics and Astronomy Graduate Studies : Seminars

Oberseminar on Stochastics 4 hrs, Thu 16-20, SR We6/501	S. Albeverio, A. Eberle M. Schäl, K.T. Sturm
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AG Configuration Spaces 2 hrs, Fr 14-16, SR We6/501	S. Albeverio, C.-F. Bödigheimer
Oberseminar on Mathematical Physics 2 hrs, Fr 10-12, SR We6/501	S. Albeverio, H. Gottschalk
Diploma and Special Seminar 2 hrs, n.V.	S. Albeverio
Seminar Partial Differential Equations 2 st, n.V.	H.W. Alt
Graduate Seminar Topology 2 st, Di 17-19, SR E	Ch. Ausoni, C.-F. Bödigheimer, G. Gaudens, B. Richter, S. Schwede
Seminar for Diploma and PhD Students 2 st, Tu 14-16, SR D	W. Ballmann
Graduate Seminar 2 hrs, Thu 16.30-18, MPI	W. Ballmann, U. Hamenstädt
AG Differential Geometry 2 st, n.V.	W. Ballmann, U. Hamenstädt
MPI-Seminar Topology 1 hrs, Mo 15-16, Hörsaal MPI	H.-J. Baues
Working Seminar Homotopy theory (Bochum-Bonn- Düsseldorf-Wuppertal) 3 hrs, Thu 15-18, 14-day, SR E	C.-F. Bödigheimer, K. Knapp, E. Ossa, St. Schwede, W. Singhof
Seminar Numerical methods for stochastic differential equations 2 st, n.V.	A. Eberle, R. Krause
MPI-Oberseminar 1 hrs, on Thursday at 3 p.m.s.t., lecture hall MPI	G. Faltings, G. Harder, Y. Manin, D. Zagier
Diploma Seminar 2 hrs, n.V.	J. Frehse
Graduate Seminar Selected topics in Scientific Computing 2 hrs, n.V.	M. Griebel
Graduate Seminar Randomized and Approximative Algorithms (RAND) 3 hrs, Mo 10-11, SR N327, Fr 14-16, SR N328, Römerstr.164	M. Karpinski
Diploma- and PhD Seminar 2 hrs, n.V.	M. Karpinski
Graduate Seminar Mathematical Logic 2 st, Tu 16-18, SR D	P. Koepke, B. Irrgang
Working Seminar Mathematical Logic 2 st, Tu 16-18, SR D	P. Koepke

Seminar Numerics for control problems 2 hrs, Thu 14-16, SR We6/610	A. Kunoth
Diploma Seminar 2 st, n.V.	I. Lieb
Working Seminar Complex Analysis (Bonn/MPI/Wuppertal) 4 hrs, 14-day, Mo 15-18, MPI	I. Lieb, K. Diederich
Seminar on Algebra, Geometry, and Physics 2 hrs, Tu 14 s.t., HS MPI	Y. Manin
Graduate Seminar Arithmetic Geometry 2 hrs, Thu 16-18, SR B	M. Rapoport
Working Seminar Arithmetic Geometry 2 hrs, Tu 16-18, SR B	M. Rapoport
Seminar Topology B 2 hrs, Tu 14-16, SR F	St. Schwede, Ch. Ausoni, G. Gaudens
Seminar on Stochastic Analysis 2 hrs, n.V.	K.T. Sturm
Seminar for Diploma and Doctoral Students 2 hrs, n.V.	K.T. Sturm

Colloquia

Colloquium on Didactics Mathematics - Natural Sciences 2 hrs, Mo, 17-19, Kl.HS Math., by appointment	P. Bungartz, A. Wynands
Colloquium SFB 611 (SFB-Seminar) 2 hrs, Tu 15.30-18, Kl.HS Math.	The Lecturers of the SFB
Mathematics Colloquium 1 hrs, Fr 17-18, Kl.HS Math.	The Lecturers of Mathematics
Colloquium for Doctoral Students 1 st, Mi 14-16, SR C	The doctorands of Mathematics St. Sagave