

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

COURSES AND SEMINARS / SUMMER TERM 2003

Term time : 22. April — 31. July 2003

Abbreviations :

Gr.HS Math.:	Lecture Hall (Großer Hörsaal) Mathematics, Room 241, Wegelerstr. 10
Kl.HS Math.:	Lecture Hall (Kleiner Hörsaal) Mathematics, Room 242, 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 by appointment in lecture, seminar ect.

MATHEMATICS

Activities before and after term time

The programming languages C/C++ 22.9. - 10.10.03, 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 (for Diploma mathematicians obligatory, for Diploma Physicists recommended) 4 hrs, Mo, Thu 8-10, WP HS	H. Karcher
Exercises thereto 4 hrs, n.V.	H. Karcher u.M.
Linear Algebra II (for Diploma mathematicians obligatory, for Diploma Physicists recommended) 4 hrs, Tu 8-10, Fr 10-12, WP HS	F. Pop
Exercises thereto 4 hrs, n.V.	F. Pop u.M.
Higher Mathematics II - Analysis (for Diploma Computer Scientists) 3 hrs, Tu 8-10 Gr.HS Math., Thu 14-15, HS D	J. Frehse
Exercises thereto 2 hrs, Fr 14-16, HS D	J. Frehse u.M.
Higher Mathematics II - Linear Algebra (for Diploma Computer Scientists) 3 hrs, Mo 14-16, Thu 15-16, HS D	K. Scherer
Exercises thereto 2 hrs, We 11-13, HS D	K. Scherer u.M.

Analysis IV 4 hrs, We, Fr 8-10, Gr.HS Math.	F. Otto
Exercises thereto 2 hrs, n.V.	F. Otto u.M.
Algebra I 4 hrs, Tu, Thu 8-10, Kl.HS Math.	D. Schüth
Exercises thereto 2 hrs, n.V.	D. Schüth u.M.
Practical Mathematics II 4 hrs, Tu, Thu 10-12, Gr.HS Math.	A. Kunoth
Exercises thereto, 2 hrs, n.V.	A. Kunoth

Basic Studies: Seminars

Proseminar Analysis for second semester 2 hrs, n.V.	H. Karcher
Proseminar Elementary number theory for second semester 2 hrs, n.V.	K. Leschinger
Proseminar Analysis for fourth semester 2 hrs, n.V.	F. Otto
Proseminar for second semester 2 hrs, n.V.	F. Pop

Courses for other Faculties

Mathematics and Statistical Methods for Pharmacists for second semester 2 hrs, Mo 10-12, Gr.HS Botanik	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

Stochastical processes 4 hrs, Tu, Thu 12-14, ZS	S. Albeverio
Exercises thereto 2 hrs, n.V.	S. Albeverio
Functional analysis II 4 hrs, We, Fr 8-10, ZS	H. Arndt
Exercises thereto 2 hrs, n.V.	H. Arndt
Examination Course for Teacher's Training 4 hrs, Mo, We 12-14, ZS	J. Frehse
Elementary Set Theory 2 hrs, Mo 16-18, SR C	P. Klein
Exercises thereto 1 hrs, Mo 18-19, SR C	P. Klein
Classical Differential geometry 2 hrs, We 14-16, SR D	W. Klingenberg
Set theory II 4 hrs, Tu, Thu 10-12, SR B	P. Koepke
Exercises thereto 2 hrs, n.V.	P. Koepke u.M.
Variation calculus II 2 hrs, Tu, Thu 8-10, ZS	H. von der Mosel
Exercises thereto 2 hrs, n.V.	H. von der Mosel
Elementary number theory 2 hrs, Mo 10-12, Kl.HS Math.	A. Wynands
Exercises thereto 2 hrs, Mo 12-14, Kl.HS Math.	A. Wynands

Upper Level Studies for Teacher's Training: Seminars

Mathematical models and methods (for applications: in Financial markets, biology,...) 2 hrs, We 10-12 SR We6/501	S. Albeverio
Seminar on Financial Engineering (together with the project group Financial Engineering of the foundation CAESAR) 2 hrs, Thu 14-16, SR We6/501	S. Albeverio, M. Schäl
Topics in Nonlinear Functional Analysis 2 hrs, Mo 16-18, SR We6/610	H. Arndt
Seminar Set theory 2 hrs, Tu 14-16 SR A	P. Koepke
Seminar Differential Geometry 2 hrs, We 18-20, SR B	D. Schüth
Seminar Variation calculus 2 hrs, n.V.	H. von der Mosel

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

Lecture on didactics of stochastics 2 hrs, Tu 14-16, SR B	P. Bungartz
Lecture on didactics of calculus 2 hrs, We 16-18, SR C	P. Klein
Exercises thereto 1 hrs, Mo 18-19, SR C	P. Klein

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

Seminar on didactics of stochastics for Sek. I 2 hrs, Tu 16-18, SR B	P. Bungartz
Seminar on didactics of geometry for Sek. II 2 hrs, Thu 14-16, SR B	P. Bungartz
Lecture on didactis of geometry for Sek. I 2 hrs, Tu 8-10, SR B	A. Wynands

Upper Level Studies for Teacher's Training: Practical Studies

Practical studies for school 3 hrs, n.V.	P. Bungartz, M. Hörstke
Practical studies for school 3 hrs, n.V.	J. Huber, A. Wynands

Upper Level Studies for Teacher's Training: Colloquia

Didactics colloquia 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

Stochastical processes 4 hrs, Tu, Thu 12-14, ZS	S. Albeverio
Exercises thereto 2 hrs, n.V.	S. Albeverio u.M.
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.
Functional Analysis II 4 hrs, We, Fr 8-10, ZS	H. Arndt
Exercises thereto 2 hrs, n.V.	H. Arndt u.M.
Differential Geometry II 4 hrs, We, Fr 10-12, Kl.HS Math.	W. Ballmann
Exercises thereto 2 hrs, n.V.	W. Ballmann u.M.
Topology II 4 hrs, We, Fr 8-10, Kl.HS Math.	C.-F. Bödigeimer
Exercises thereto 2 hrs. n.V.	C.-F. Bödigeimer u.M.
Recursive processes 2 hrs, We 14-16, Juridicum R. 055	N. Christopeit
Quantum Information and Computation 2hrs, Tu 10-12, SR We6/501	S.-M. Fei
Number Theory II 4 hrs, n.V.	J. Franke
Algebra V 4 hrs, We 12-14, Tu 14-16, Gr.HS Math.	J. Franke
Exercises thereto 2 hrs, n.v.	J. Franke
Scientific Computing II 4 hrs, Tu, Thu 10-12, Kl.HS Math.	M. Griebel
Seminar parallel thereto 2 hrs, n.V.	M. Griebel u.M.
Characteristic classes II 4 hrs, Tu, Thu 10-12, SR E	U. Hamenstädt
Solitons 2 hrs, Mo 14-16, SR B	Ch. Devchand
Classical Differential Geometry 2 hrs, We 14-16, SR D	W. Klingenberg
Set Theory II 4 hrs, Tu, Thu 10-12, SR B	P. Koepke
Exercises thereto 2 hrs, n.V.	P. Koepke u.M.
Discrete Mathematics II 4 hrs, Tu, Thu 16-18, Gerhard-Konow-Hörsaal	B. Korte

Exercises for Discrete Mathematics II 2 hrs, Tu 14-16, Gerhard-Konow-Hörsaal	B. Korte, N.N.
Functions of several complex variables II 4 hrs, We, Fr 10-12, SR B	I. Lieb
Class field theory 4 hrs, Mo 14-16, Thu 16-18, SR D	B.Z. Moroz
Global Analysis II 4 hrs, Tu, Thu 10-12, ZS	W. Müller
Mathematical Optimization II 4 hrs, We, Thu 14-16, Gerhard-Konow-Hörsaal	M. Müller-Hannemann
Exercises for Mathematical Optimization II 2 hrs, Thu 12-14, Gerhard-Konow-Hörsaal	M. Müller-Hannemann, N.N.
Free boundary in phase modeling 2 hrs, n.V.	B. Niethammer
Stochastical insurance- and financial models 4 hrs, We, Fr 12-14, SR We6/501	M. Schäl
Geometric measure theory 4 hrs, Tu, Thu 10-12, SR A	R. Schätzle
Exercises thereto 2 hrs, Tu 14-16, SR C oder We 14-16, SR C	R. Schätzle u.M.
Liegroups und Liealgebras 2 hrs, Tu 10-12, SR C	G. Schmalz
Differential Geometry IV cannot take place	D. Schüth
Introduction to knot theory 2 hrs, block lecture, n.V.	A. Stoimenow
Stochastical Analysis II 4 hrs, Mo, We 10-12, SR We6/501	K.T. Sturm
Exercises thereto 2 hrs, n.V.	K.T. Sturm u.M.
Variation calculus II 4 hrs, Tu, Thu 8-10, ZS	H. von der Mosel
Exercises thereto 2 hrs, n.V.	H. von der Mosel
Data structures for efficient algorithms 2 hrs, Tu 12-14, Gerhard-Konow-Hörsaal	J. Vygen

Diploma Level Studies : Seminars

Mathematical models and methods (for applications: in Financial markets, Biology,...) 2 hrs, We 10-12, SR We6/501	S. Albeverio
Seminar on Financial Engineering (together with the Project group Financial Engineering of the foundation CAESAR) 2 hrs, Thu 14-16, SR We6/501	S. Albeverio, M. Schäl

Seminar on Partial Differential Equations 2 hrs, n.V, SR We6/610	H.W. Alt
Topics in Nonlinear Functional Analysis 2 hrs, Mo 16-18, SR We6/610	H. Arndt
Seminar Differential Geometry A 2 hrs, Thu 18-20, SR D	W. Ballmann
Seminar Differential Geometry B 2 hrs, block seminar, n.V.	W. Ballmann
Seminar Differential Geometry C 2 hrs, Fr 15-17, SR D	W. Ballmann
Seminar on Cyclic Cohomology of Algebras 2 hrs, Tu 14-16, SR E	C.-F. Bödigheimer
Seminar Applied Analysis 2 hrs, n.V.	J. Frehse
Seminar Scientific Computing 2 hrs, n.V.	M. Griebel
Seminar Topology 2 hrs, Mo 14-16, SR E	U. Hamenstädt
Seminar Analysis 2 hrs, n.V.	T. Hefer, I. Lieb
Seminar Set Theory 2 hrs, Tu 14-16, SR A	P. Koepke
Seminar Discrete Optimization 2 hrs, Mo 14-16, Seminarraum	B. Korte, M. Müller-Hannemann, J. Vygen
Seminar Numerics for control problems 2 hrs, Thu 14-16, SR We6/610	A. Kunoth
Seminar Global Analysis 2 hrs, Tu 14-16, SR D	W. Müller
Seminar about Anabelian Geometry 2 hrs, Thu 14-16, SG G	F. Pop
Seminar insurance and financial models 2 hrs, n.V.	M. Schäl
Seminar Analysis 2 hrs, Mo 16-18, SR A	R. Schätzle
AG Geometric Analysis 2 hrs, Mo 14-16 SR A	R. Schätzle
Seminar on isospectral manifolds block seminar 2 hrs, n.V.	D. Schüth
Seminar on Stochastic Processes 2 hrs, Mo 14-16, SR We6/501	K.T. Sturm
Seminar on Variation calculus 2 hrs, We 12-14, SR A	H. von der Mosel

Upper Level Studies : Special Seminars

Postgraduate Seminar on Stochastic 3 hrs, Thu 16-19, SR We6/501	S. Albeverio, M. Schäl, K.T. Sturm
Postgraduate Seminar 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
Postgraduate Seminar 2 hrs, Thu 16-18, SR B	W. Ballmann, U. Hamenstädt, H. Karcher, D. Schüth
Diploma Seminar 2 hrs, Fr 13-15, SR D	W. Ballmann
Postgraduate Seminar Topology 2 hrs, Tu 18-20, SR E	C.-F. Bödigheimer
AG Complex Analysis (Bonn/MPI/Wuppertal) 4 hrs, 14-day, Mo 15-18	K. Diederich, T. Hefer, G. Herbort, I. Lieb, G. Schmalz
MPI-Postgraduate Seminar 1 hrs, Thu 15-16, auditorium MPI	G. Faltings, G. Harder, Y. Manin, D. Zagier
Diploma Seminar 2 hrs, n.V.	J. Franke
Postgraduate Seminar Selected Topics on Scientific Computing 2 hrs, n.V.	M. Griebel
Postgraduate Seminar Mathematical Logic 2 hrs, Fr 10-12, SR A	P. Koepke
Diploma Seminar 2 hrs, Thu, 14-16, SR A	P. Koepke
Diploma- and Postgraduate Seminar 2 hrs, We 12-14, conference room	B. Korte, M. Müller-Hannemann, J. Vygen
Postgraduate Seminar Discrete Optimization 2 hrs, Thu 17-19, seminar room (participation only by appointment)	B. Korte, M. Müller-Hannemann, J. Vygen
Postgraduate Seminar Numerical Analysis 2 hrs, Thu 16-18, SR We6/610	A. Kunoth
Diploma Seminar 2 hrs, Thu 14-16, SR D	W. Müller
Diploma Seminar 2 hrs, n.V.	F. Otto

Diploma Seminar 2 hrs, Tu 14-16, SR F	G. Harder, F. Pop
Diploma Seminar 2 hrs, n.V.	M. Schäl
Diploma- and Special Seminar 2 hrs, Mo 16-18, SR We6/501	K.T. Sturm

Diploma Level Studies : Practical Studies

Computational Finance 6 hrs, We 12-14, SR We6/610, 4 hrs, n.V.	T. Gerstner, M. Griebel
Practical training (for computer scientists) 4 hrs, n.V.	B. Korte, M. Müller-Hannemann, J. Vygen

Bonn International Graduate School in Mathematics, Physics and Astronomy

Graduate Studies : Lectures

Arithmetic Geometry 4 hrs, We 10-12, Fr 14-16, SR E	G. Faltings
Quantum Information and Computation 2 hrs, Tu 10-12, SR We6/501	S.-M. Fei
Charakteristic classes II 4 hrs, Tu, Thu 10-12, SR E	U. Hamenstädt
Solitons 2 hrs, Mo 14-16, SR B	Ch. Devchand
Approximation algorithms for NP-hard calculation problems and their applications 4 hrs, Di, Do 11-13, HS 1	M. Karpinski
Set Theory II 4 hrs, Tu, Thu 10-12, SR B	P. Koepke
Exercises thereto 2 hrs, n.V.	P. Koepke u.M.
Functions of several complex variables II 4 hrs, Mi, Fr 10-12, SR B	I. Lieb
Class field theory 4 hrs, Mo 14-16, Thu 16-18, SR D	B.Z. Moroz
Global Analysis II 4 hrs, Tu, Thu 10-12, ZS	W. Müller
Free boundary problems in phase modeling 2 hrs, n.V.	B. Niethammer
Geometric measure theory 4 hrs, Tu, Thu 10-12, SR A	R. Schätzle

Exercises thereto 2 hrs, Tu 14-16, SR C oder We 14-16 SR C	R. Schätzle
Stochastical Analysis II 4 hrs, Mo, We 10-12, SR We6/501	K.T. Sturm
Exercises thereto 2 hrs, n.V.	K.T. Sturm u.M.
Variation calculus II 4 hrs, Tu, Thu 8-10, ZS	H. von der Mosel
Exercises thereto 2 hrs, n.V.	H. von der Mosel

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

Mathematical Models and Methods (For applications: in Financial markets, Biology,...) 2 hrs, We 10-12, SR We6/501	S. Albeverio
Postgraduate Seminar Stochastics 3 hrs, Thu 16-19, SR We6/501	S. Albeverio, M. Schäl, K.T. Sturm
Postgraduate Seminar on Mathematical Physics 2 hrs, Fr 10-12, SR We6/501	S. Albeverio, H. Gottschalk
Seminar on Financial Engineering (together with the Project group Financial Engineering of the foundation CAESAR) 2 hrs, Thu 14-16, SR We6/501	S. Albeverio, M. Schäl
Diploma and Special Seminar 2 hrs, n.V.a	S. Albeverio
Seminar Differential Geomertry A 2 hrs, Thu 18-20, SR D	W. Ballmann
Seminar Differential Geometry B 2 hrs, block seminar, n.V.	W. Ballmann
Seminar Differential Geometry C 2 hrs, Fr 15-17, SR D	W. Ballmann
Postgraduate Seminar Differential Geometry 2 hrs, Thu 16-18, SR B	W. Ballmann, U. Hamenstädt, H. Karcher, D. Schüth
Diploma Seminar 2 hrs, Fr 13-15, SR D	W. Ballmann
MPI-Seminar Topology 1 hrs, Mo 15-16, Hörsaal MPI	H.-J. Baues
Postgraduate Seminar Topology 2 hrs, Tu 18-20, SR E	C.-F. Bödigheimer

AG Homotopy theory (Wuppertal-Düsseldorf-Bonn) 3 hrs, Thu 15-18, 14-day, SR E	C.-F. Bödigheimer, K. Knapp, E. Ossa, W. Singhof
AG Complex Analysis (Bonn/MPI/Wuppertal) 4 hrs, 14-day, Mo 15-18	K. Diederich, T. Hefer, G. Herbort, I. Lieb, G. Schmalz
MPI-Postgraduate Seminar 1 hrs, Thu 15 Uhr s.t., Hörsaal MPI	G. Faltings, G. Harder, Y. Manin, D. Zagier
Postgraduate Seminar Selected Topics on Scientific Computing 2 hrs, n.V.	M. Griebel
Postgraduate Seminar Randomized and Approximative Algorithms (RAND) 3 hrs, Mo 11-12, Fr 14-16, SR N327	M. Karpinski
Postgraduate Seminar Mathematical Logic 2 hrs, Fr 10-12, SR B	P. Koepke
Seminar Numerics for control problems 2 hrs, Thu 14-16, SR We6/610	A. Kunoth
Seminar Global Analysis 2 hrs, Tu 14-16, SR D	W. Müller
Seminar Analysis 2 hrs, Mo 16-18, SR A	R. Schätzle
AG Geometric Analysis 2 hrs, Mo 14-16 SR A	R. Schätzle
Seminar on Isospectral Manifolds block seminar 2 hrs, n.V.	D. Schüth
Seminar Stochastic Processes 2 hrs, Mo 14-16, SR We6/501	K.T. Sturm
Diploma and Special Seminar 2 hrs, Mo 16-18, SR We6/501	K.T. Sturm

Colloquia

Didactics colloquium Mathematics - Natural Sciences 2 hrs, Mo, 17-19, Kl.HS Math., by appointment	P. Bungartz, A. Wynands
Colloquium of the Bonn International Graduate School BIGS 1 hrs, Fr 15-16, Kl.HS Math.	The Lecturers of Mathematics

Colloquium in Applied Mathematics
1 hrs, Tu 16-17, SR We 6/610
Mathematics Colloquium
1 hrs, Fr 17-18, Kl.HS Math.

The Lecturers of Applied Mathematics
The Lecturers of Mathematics

later announced Courses and Seminars:

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| 6751 | Seminar about Automorphic Forms
2 st, Tu 17-19, SR A | G. Harder |
| 6752 | Lecture: Introduction to Moduli Spaces of Riemann Surfaces
2 st, Mo 16-18, SR B | R.M. Kaufmann |
| 6753 | Diploma-and Postgraduate Seminar
2 st, Di 18-20, SR D | U. Hamenstädt |
| 6754 | Seminar about Approximation irregular distribute Data through Radial Basis Functions
2 st, n.V. | K. Scherer |
| 6755 | Lecture of the BIGS: An Introduction to Infinite Dimensional Analysis
2 st, Thu 10-12, SR We6/501 | Y. Lytvynov |
| 6756 | Lecture of the BIGS: Geometry and Differential Equations
2 st, n.V. | G. Weingart |
| 6757 | AG: Constructililitats Theory
2 st, Thu 16-18.30, SR A | P. Koepke |

DISCRETE MATHEMATICS

All Lectures take place in the research institute for Discrete Mathematics,
Lennéstraße 2 statt.

Lectures

Discrete Mathematics II 4 hrs, Tu, Thu 16-18, Gerhard-Konow-Hörsaal	B. Korte
Exercises for Discrete Mathematics II 2 hrs, Tu 14-16, Gerhard-Konow-Hörsaal	B. Korte, N.N.
Mathematical Optimization II 4 hrs, We, Thu 14-16, Gerhard-Konow-Hörsaal	M. Müller-Hannemann
Exercises for Mathematical Optimization II 2 hrs, Thu 12-14, Gerhard-Konow-Hörsaal	M. Müller-Hannemann, N.N.
Data structures for efficient algorithms 2 hrs, Tu 12-14, Gerhard-Konow-Hörsaal	J. Vygen

Seminars and Practics

Seminar Discrete Optimization 2 hrs, Mo 14-16, Seminarraum	B. Korte, M. Müller-Hannemann, J. Vygen
Practical training (for computer scientists) 4 hrs, by appointment	B. Korte, M. Müller-Hannemann, J. Vygen
Diploma- and Special Seminar 2 hrs, We 12-14, conference room	B. Korte, M. Müller-Hannemann, J. Vygen
Postgraduate seminar Discrete Optimization 2 hrs, Thu 17-19, seminar room (participation only by appointment)	B. Korte, M. Müller-Hannemann, J. Vygen
Colloquium Operations Research 2 hrs, Thu 15-17, seminar room (participation only by appointment)	B. Korte, M. Müller-Hannemann, J. Vygen