

Annual Meeting of the
GAMM Activity Group on
Applied and Numerical Linear Algebra



Braunschweig, August 23, 2011

12:30h – 14:00h

Room F 316, Forumsgebäude, TU Braunschweig
Pockelsstr. 14, 38106 Braunschweig, Germany



Agenda

Annual Meeting
of the
GAMM Activity
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Algebra

Activity Report

Future Activities

Elections

GAMM Annual
Meeting Novi Sad
2013

Miscellaneous

- 1 Activity Report
- 2 Future Activities
- 3 Elections
- 4 Discussion of suggestions for plenary speakers, minisymposia and organizers for our section (GAMM annual meeting 2013 in Novi Sad)
- 5 Miscellaneous



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Peter Benner (Magdeburg)
Matthias Bollhöfer (Braunschweig)
Matthias Bolten (Wuppertal)
Ljiljana Cvetković (Novi Sad)
Tobias Damm (Bayreuth)
Ludwig Elsner (Bielefeld)
Heike Faßbender (Braunschweig)
Melina Freitag (Bath)
Lars Grasedyck (Aachen)
Iveta Hnětynková (Prague)
Elias Jarlebring (Leuven)
Daniel Kressner (Lausanne)
Jörg Liesen (Berlin)

Christian Mehl (Berlin)
Volker Mehrmann (Berlin)
Yvan Notay (Brussels)
Martin Plešinger (Prague)
Daniel Potts (Chemnitz)
Miro Rozložník (Prague)
Jens Saak (Magdeburg)
Christian Schröder (Berlin)
Martin Stoll (Magdeburg)
Zdeněk Strakoš (Prague)
Miroslav Tůma (Prague)
Jens Zemke (Hamburg)
Krystyna Ziętak (Wrocław)

- 1 Applied Linear Algebra in honor of Hans Schneider (ALA 2010), May 24–28, 2010, Novi Sad
 - URL : <http://ala2010.pmf.uns.ac.rs/>
 - Annual GAMM ANLA workshop and assembly embedded: May 26–27, URL <http://ala2010.pmf.uns.ac.rs/workshop.php>, special topic: Positivity, plenary speakers: P. Butkovic (Birmingham, UK), J.M. Peña (Saragossa, Spain), M. Tsatsmeros (Washington, USA).
 - 3 GAMM Young Researchers' Travel Grants (300€) awarded: Olga Kushel, Jagjit Singh, Patanjali Sharma.
- 2 ILAS Conference 2010, June 21–25, 2010, Pisa, Italy
- 3 GAMM Annual Meeting 2011, April 18–21, Graz
- 4 ICIAM 2011, June 18–22, 2011, Vancouver

- 1 Applied Linear Algebra in honor of Hans Schneider (ALA 2010), May 24–28, 2010, Novi Sad
- 2 ILAS Conference 2010, June 21–25, 2010, Pisa, Italy
 - Plenary speakers:
 - Z. Strakoš, *Moments, Model Reduction and Nonlinearity in Solving Linear Algebraic Problems*
 - D.B. Szyld, *Modifications to Block Jacobi with Overlap to Accelerate Convergence of Iterative Methods for Banded Matrices*
 - O. Ernst (SIAG/LA speaker), *Krylov Subspace Approximations of the Action of Matrix Functions for Large-Scale Problems*
 - Invited Minisymposia:
 - *Markov Chains*, organized by S. Kirkland, M. Neumann.
 - *Matrix Functions and Matrix Equations*, organized by C.-H. Guo, V. Simoncini.
 - Contributed Minisymposia:
 - *Nonlinear Eigenvalue Problems*, organized by D. Kressner, V. Mehrmann.
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 - Plenary speakers:
 -
 - Minisymposia
 - *Matrix functions*, organized by M. Hochbruck, O. Ernst.
 - Young Researchers' Minisymposia
 - *Nonlinear and structured eigenvalue problems*, organized by E. Jarlebring, C. Schröder.
 - *Numerical methods for PDEs with uncertainties*, organized by E. Rosseel, E. Ullmann.
 - Section 17: *Applied and Numerical Linear Algebra*, organized by P. Birken, M. Bolten; 20 contributed talks (up from 15).
- 4 ICIAM 2011, June 18–22, 2011, Vancouver



1. Activity Report

05/2010 – 08/2011

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 - Minisymposium *Numerical Linear Algebra beyond Linear Systems and Eigenvalues*, organized by P. Benner, M. Benzi, as joint activity of SIAG/LA and GAMM ANLA.
 - Speakers: I. Dhillon, D. Gleich, D. Kressner, T.G. Kolda, E. de Sturler, N. Higham, V. Simoncini, S. Güttel.
 - Numerous other activities of ANLA members, e.g. invited minisymposium *Nonlinear Eigenvalue Problems*, organized by S. Mackey, V. Mehrmann.

5 ILAS Conference 2011, August 22–26, 2011, Braunschweig *Pure and Applied Linear Algebra: The Next Generation*

- Local organization: H. Faßbender (with P. Benner, M. Bollhöfer)
- GAMM ANLA general assembly embedded.
- Plenary speakers:
 - Young: R. Pereira, R. Hildebrand, M. Hochstenbach (SIAG/LA speaker), M. Freitag (GAMM speaker)
 - Senior: D. Hinrichsen
 - In-between: D. Potts, J. Landsberg, Z. Drmač (NICONET speaker)
- Invited Minisymposia:
 - *Compressed Sensing and Sparse Approximation Algorithms*, organized by G. Kutyniok, H. Rauhut.
 - *Tensor Decompositions*, organized by E. Tyrtyshnikov, L. Grasedyck.
 - ...
- Young Researchers' Minisymposia:
 - *Modern Methods for PDE Eigenvalue Problems*, organized by J. Gedicke, A. Miedlar.
 - *Parallel Computing in Numerical Linear Algebra*, organized by A. Remón, J. Saak.
 - ...

See also the report in IMAGE 47, pp. 11–13, 2011, available at
<http://www.ilasic.math.uregina.ca/iic/IMAGE/>.

6 Members:

- 14 new members: Michele Benzi, Steffen Börm, Melina Freitag, Stefan Güttel, **Iveta Hnětynková**, Karsten Kahl, Olga Kushel, Gitta Kutyniok, Leila Lebtahi, Elena Pelican, **Martin Plešinger**, Nicolai Rehbein, Elisabeth Ullmann, Bart Vandereycken, **now 84 members**.
- Volker Mehrmann is GAMM President (in-office 01/2011–12/2013).
- Peter Benner joined the GAMM board (in-office 01/2011–12/2013).
- Heike Faßbender is on the Programme Committee for the GAMM Annual Meetings 2012/13 (Darmstadt/Novi Sad).
- Daniel Kressner was elected to the GAMM Committee on Future Perspectives.

- 7 Annual report (authored by P. Benner, D. Kressner) appeared in *GAMM Rundbrief*, 1/2011, p. 26.

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- 7 Annual report** (authored by P. Benner, D. Kressner) appeared in *GAMM Rundbrief*, 1/2011, p. 26.

- 1 **GAMM ANLA Workshop 2011, September 22–23, Bremen**
 - Organization: P. Benner, A. Bunse-Gerstner, H. Faßbender, R. Stöver.
 - Followed by *Festkolloquium* in honor of the 60th birthday of Angelika Bunse-Gerstner.
 - Special topic: **Model reduction**, plenary lectures by A.C. Antoulas (Rice U/JU Bremen), P. Van Dooren (UC Louvain), C. BöB (Allianz AG, Munich).
 - For details, see <http://www.math.uni-bremen.de/zetem/gamm11>.
- 2 GAMM ANLA Workshop 2012, September 2–5, 2012, Chateau Liblice (CZ)
- 3 GAMM ANLA Workshop 2013, Wuppertal
- 4 GAMM ANLA Workshop 2014, Barcelona (E)
- 5 GAMM ANLA Summer School(s)
- 6 4th Workshop on Matrix Equations *and Tensor Methods*, November 21–22, 2011, RWTH Aachen
- 7 GAMM Annual Meeting Darmstadt, March 26–30, 2012.
- 8 GAMM Mitteilungen special issue:

- 1 GAMM ANLA Workshop 2011, September 22–23, Bremen
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- Organization: M. Rozložnik, Z. Strakoš.
- Special topic: **Adaptivity**, plenary lectures by R. Rannacher (U Heidelberg, confirmed), M. Arioli (Rutherford), M. Vohralik (U. Pierre et Marie Curie, Paris).

- For details, see <http://www.cs.cas.cz/gamm>.

Deadline for early registration and abstract submission: May 30, 2012.

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2. Future Activities

Workshops and Conferences

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Joint workshop with Spanish LA network ALAMA.
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- 5 GAMM ANLA Summer School(s)
 - Summer School on Numerical Linear Algebra for Dynamical and High-Dimensional Problems
 - October 10-15, 2011, Hotel Medena, Trogir (Croatia).
 - Local organization by N. Truhar, Z. Tomljanović, I. Slapnicar (excursion).
 - Organizers: P. Benner, Z. Drmač, D. Kressner, N. Truhar.
 - Topic and further details:
<http://www.mpi-magdeburg.mpg.de/mpcsc/events/trogir/>.
 - Some support from GAMM.
 - See also the report in IMAGE 47, p. 14, 2011, available at
<http://www.ilasic.math.uregina.ca/iic/IMAGE/>.
 - Another Będlewo Young Researchers' Workshop?
Reactions were positive \rightsquigarrow A. Miedlar prepares a proposal for 2013 (with support from P. Benner, D. Kressner, V. Mehrmann).
 - Future joint summer schools with ILAS?
- 6 4th Workshop on Matrix Equations and Tensor Methods, November 21–22, 2011, RWTH Aachen

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- 6 4th Workshop on Matrix Equations *and Tensor Methods*, November 21–22, 2011, RWTH Aachen
 - Organizers P. Benner, H. Faßbender, D. Kressner, L. Grasedyck.
 - <http://www.igpm.rwth-aachen.de/matrix-equations-workshop>.
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 - Plenary speakers: A. Wathen (University of Oxford, GB), M. Hochbruck (KIT).
 - Minisymposia:
 - *Preconditioning in Optimization with PDE constraints*, organized by M. Stoll, W. Zuhlechner.
 - *High-Performance Linear Algebra on GPUs*, organized by E. Quintana-Ortí, P. Bientinesi.
 - Section organizers: T. Huckle, M. Rozložník.
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Issue 2013/1 allocated for ANLA, 5 papers in preparation.

- P. Benner (chair) and D. Kressner (co-chair) are in office 01/01/2009 – 31/12/2011.
- Due to GAMM regulations, ANLA will be terminated in 2013 (date unclear), but may apply for re-establishment.
- New chair/co-chair and possible officers need to be elected for remaining phase.
- **Proposal:**
 - P. Benner and D. Kressner continue for the remainder of ANLA's existence.
 - New founding chair of the ANLA successor will be elected in the 2012 meeting.
 - Old and new (co-)chairs will cooperate in the proposal writing, suggestion: extend towards **multi-linear algebra**.

Voting: the proposal is accepted by the attending ANLA members unanimously with 2 abstentions.

Proposals, sent to the GAMM officials:

- Plenary speakers:
 - Andreas Frommer (U. Wuppertal).
- Minisymposia:
 - *Parameter-dependent Matrix Equations*, organized by Ljiljana Cvetković, (U. Novi Sad, Serbia), Ninoslav Truher (U. Osijek, Croatia).
- Section organizers:
Matthias Bollhöfer (TU Braunschweig), Vladimir Kostić (U. Novi Sad).

Most recently:

Huckle/Rozložnik (2012), Birken/Bolten (2011), Grasedyck/Mehl (2010), Kressner/Zižtak (2009), Liesen/Cvetković (2008), Nabben/Tuma (2006).

Co-operation with other societies:

- Cooperation with ILAS

- ILAS President S. Kirkland and GAMM ANLA Chair P. Benner agreed on attempt to initiate plenary speaker exchange for ILAS Conferences and GAMM ANLA workshops; ILAS will provide US-\$ 1,000, similar amount was requested from GAMM. GAMM granted a GAMM speaker for the ILAS conference 2011, but on a regular basis, the proposal was declined by GAMM during its board meeting 04/2011.
- Possible joint summer schools in the future.
- Further suggestions?

- Cooperation with SIAG/LA

- Cooperation with ALAMA: joint workshop in 2014.

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Co-operation with other societies:

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- Cooperation with SIAG/LA
 - Joint minisymposium at ICIAM.
 - SIAM LA12 conference in Valencia, June 18–22, 2012.
 - P. Benner is GAMM-ANLA representative in the Scientific Committee.
 - L. Grasedyck is the GAMM-ANLA speaker.
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*Thanks for your continuing support,
see you in Darmstadt and/or Chateau Liblice 2012!*