

## Publications 2002–2009 within the SSF and VR projects

This version: 2010-03-29

This combined list of publications (scientific journal articles, refereed conference proceedings, Theses, and technical reports) is sorted in alphabetical order by authors. Except for a few cases, the authors of a publication are listed alphabetically, which is the tradition we typically follow.

- [1] B. Adlerborn, B. Kågström, and D. Kressner. Parallel Variants of the Multishift QZ Algorithm with Advanced Deflation Techniques . In B. Kågström et al., editor, *Applied Parallel Computing: State of the Art in Scientific Computing, PARA 2006*, Lecture Notes in Computer Science, LNCS 4699, pages 117–126. Springer, 2007.
- [2] P. Andersson, R. Granat, and B. Kågström. Parallel Algorithms for Triangular Periodic Sylvester-type Matrix Equations. In E. Luque, T. Margalef, and D. Benítez, editors, *Euro-Par 2008 Parallel Processing – 14th International Euro-Par Conference*, volume LNCS 5168 of *Lecture Notes in Computer Science*, pages 780–789. Springer-Verlag, 2008.
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- [10] R. Granat, I. Jonsson, and B. Kågström. Combining Explicit and Recursive Blocking for Solving Triangular Sylvester-Type Matrix Equations in Distributed Memory Platforms. In M. Danelutto, D. Laforenza, and M. Vanneschi, editors, *Euro-Par 2004*, volume 3149, pages 742–750. Lecture Notes in Computer Science, Springer, 2004.
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- [12] R. Granat, I. Jonsson, and B. Kågström. Recursive Blocked Algorithms for Solving Periodic Triangular Sylvester-Type Matrix Equations. In B. Kågström et al., editor, *Applied Parallel Computing: State of the Art in Scientific Computing, PARA 2006*, Lecture Notes in Computer Science, LNCS 4699, pages 531–539. Springer, 2007.
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- [93] P.Å. Wedin and T. Viklands. Algorithms for 3-dimensional weighted orthogonal Procrustes problems. Technical Report UMINF 06.06, Department of Computing Science, Umeå University, Sweden, 2006.
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# Matrix Pencil Computations in Computer-Aided Control System Design: Theory, Algorithms and Software Tools

## Publications 2002–2009 within the SSF project

This version: 2010–03–29

The following list of publications (scientific journal articles, refereed conference proceedings, Theses, and technical reports) is structured by subprojects. Within each subproject, the publications are listed in alphabetical order by authors. Except for a few cases, the authors of a publication are listed alphabetically, which is the tradition we typically follow. Notice that several publications fit more than one subproject and are therefore listed under each of them.

### Algorithms and Tools for Computing Structural Information of Matrix Pencils and Descriptor-Type Systems under Perturbations

- [1] E. Elmroth, P. Johansson, S. Johansson, and B. Kågström. Orbit and Bundle Stratification of Controllability and Observability Matrix Pairs in StratiGraph. In *Proc. Sixteenth International Symposium on Mathematical Theory of Networks and Systems (MTNS-2004)*, 10 pages (CD-ROM), 2004.
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- [8] Pedher Johansson. Software Tools for Matrix Canonical Computations and Web-Based Software Library Environments. *PhD Thesis* UMINF-06.30, Department of Computing Science, Umeå University, S-901 87 Umeå, Sweden, November, 2006.
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- [10] S. Johansson. Reviewing the closure hierarchy of orbits and bundles of system pencils and their canonical forms. Technical Report UMINF 09.02, Department of Computing Science, Umeå University, Sweden, 2009.
- [11] S. Johansson. *Tools for Control System Design — Stratification of Matrix Pairs and Periodic Riccati Differential Equation Solvers*. Ph.D. Thesis, Report UMINF 09.04, Department of Computing Science, Umeå University, Sweden, March 2009. ISBN 978-91-7264-733-6.
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- [21] A. Varga. Computation of Kronecker-like forms of periodic matrix pairs. In *Proc. of MTNS'04, Leuven, Belgium*, pages 176–181, 2004.

## Design and Analysis of Periodic Systems

- [1] P. Andersson, R. Granat, and B. Kågström. Parallel Algorithms for Triangular Periodic Sylvester-type Matrix Equations. In E. Luque, T. Margalef, and D. Benítez, editors, *Euro-Par 2008 Parallel Processing – 14th International Euro-Par Conference*, volume LNCS 5168 of *Lecture Notes in Computer Science*, pages 780–789. Springer-Verlag, 2008.
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# Hierarchically Blocked Algorithms and Optimized Kernels for Dense Matrix Computations on Memory-Tiered High-Performance Computing Systems

## Publications 2002–2009 within the VR project

This version: 2010–03–29

The following list of publications (scientific journal articles, refereed conference proceedings, Theses, and technical reports) is structured by subprojects. Within each subproject, the publications are listed in alphabetical order by authors. Except for a few cases, the authors of a publication are listed alphabetically, which is the tradition we typically follow. Notice that several publications fit more than one subproject and are therefore listed under each of them.

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## Blocked and Parallel Two-Sided Reductions to Condensed Forms

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