

## References

- [1] S.A. Abramov, M. Bronstein, and D.E. Khmelnov. On regular and logarithmic solutions of ordinary linear differential systems. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 1–12. Springer-Verlag, Berlin-Heidelberg, 2005.
- [2] Saugata Basu and Michael Kettner. Computing the betti numbers of arrangements in practice. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 13–31. Springer-Verlag, Berlin-Heidelberg, 2005.
- [3] I.N. Belyaeva, N.A. Chekanov, A.A. Gusev, V.A. Rostovtsev, Yu.A. Ukolov, Y. Uwano, and S.I. Vinitsky. A maple symbolic-numeric program for solving the 2d-eigenvalue problem by a self-consistent basis method. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 32–39. Springer-Verlag, Berlin-Heidelberg, 2005.
- [4] Rudolf Berghammer and Frank Neumann. Relview — an obdd-based computer algebra system for relations. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 40–51. Springer-Verlag, Berlin-Heidelberg, 2005.
- [5] M. Borges-Quintana, M.A. Borges-Trenard, and E. Martínez-Moro. On the use of gröbner bases for computing the structure of finite abelian groups. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata,*

Greece, September 12-16, 2005), volume 3718 of *LNCS*, pages 52–64. Springer-Verlag, Berlin-Heidelberg, 2005.

- [6] Alexander D. Bruno and Victor F. Edneral. Normal forms and integrability of ode systems. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 65–74. Springer-Verlag, Berlin-Heidelberg, 2005.
- [7] Laurent Busé, Houssam Khalil, and Bernard Mourrain. Resultant-based methods for plane curves intersection problems. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 75–92. Springer-Verlag, Berlin-Heidelberg, 2005.
- [8] Carlo Cattani, Evgenii A. Grebenikov, and Alexander N. Prokopenya. Symbolic calculations in studying the stability of dynamically symmetric satellite motion. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 93–104. Springer-Verlag, Berlin-Heidelberg, 2005.
- [9] Dmytro Chibisov, Victor Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov. Generation of orthogonal grids on curvilinear trimmed regions in constant time. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 105–114. Springer-Verlag, Berlin-Heidelberg, 2005.
- [10] Dmytro Chibisov, Victor Ganzha, Sergey Pankratov, and Christoph Zenger. Computer algebra in nanosciences: Modeling electronic states in quantum dots. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 115–124. Springer-Verlag, Berlin-Heidelberg, 2005.

- [11] Arthur D. Chtcherba, Deepak Kapur, and Manfred Minimair. Cayley-dixon resultant matrices of multi-univariate composed polynomials. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 125–137. Springer-Verlag, Berlin-Heidelberg, 2005.
- [12] Arno Eigenwillig, Lutz Kettner, Werner Krandick, Kurt Mehlhorn, Susanne Schmitt, and Nicola Wolpert. A descartes algorithm for polynomials with bit-stream coefficients. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 138–149. Springer-Verlag, Berlin-Heidelberg, 2005.
- [13] Ioannis Z. Emiris and Elias P. Tsigaridas. Real solving of bivariate polynomial systems. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 150–161. Springer-Verlag, Berlin-Heidelberg, 2005.
- [14] J. Gago-Vargas, M.I. Hartillo-Hermoso, and J.M. Ucha-Enríquez. Nouvelle cuisine for the computation of the annihilating ideal of  $f^s$ . In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 162–173. Springer-Verlag, Berlin-Heidelberg, 2005.
- [15] Vladimir P. Gerdt and Yuri A. Blinkov. Janet-like gröbner bases. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 184–195. Springer-Verlag, Berlin-Heidelberg, 2005.
- [16] Vladimir P. Gerdt and Yuri A. Blinkov. Janet-like monomial division. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors,

- Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 174–183. Springer-Verlag, Berlin-Heidelberg, 2005.
- [17] Domingo Gómez, Jaime Gutierrez, and Álvar Ibeas. Circulant digraphs and monomial ideals. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 196–207. Springer-Verlag, Berlin-Heidelberg, 2005.
- [18] Rocio Gonzalez-Diaz, Belen Medrano, Pedro Real, and Javier Sánchez-Peláez. Algebraic topological analysis of time-sequence of digital images. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 208–219. Springer-Verlag, Berlin-Heidelberg, 2005.
- [19] Laureano Gonzalez-Vega, Carlo Traverso, and Alberto Zanoni. Hilbert stratification and parametric gröbner bases. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 220–235. Springer-Verlag, Berlin-Heidelberg, 2005.
- [20] E.A. Grebenicov, D. Kozak-Skoworodkin, and M. Jakubiak. Investigation of the stability problem for the critical cases of the newtonian many-body problem. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 236–243. Springer-Verlag, Berlin-Heidelberg, 2005.
- [21] Alexander Gusev, Vladimir Gerdt, Michail Kaschiev, Vitaly Rostovtsev, Valentin Samoylov, Tatyana Tupikova, Yoshio Uwano, and Sergue Vinitsky. Symbolic-numerical algorithm for solving the time-dependent schrödinger equation by split-operator method. In Victor G. Ganzha,

- Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 244–258. Springer-Verlag, Berlin-Heidelberg, 2005.
- [22] Valentin Irtegov and Tatyana Titorenko. On some results of investigation of kirchhoff equations in case of a rigid body motion in fluid. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 259–271. Springer-Verlag, Berlin-Heidelberg, 2005.
- [23] Vladimir V. Korniyak. On compatibility of discrete relations. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 272–284. Springer-Verlag, Berlin-Heidelberg, 2005.
- [24] C. Koukouvinos and E. Lappas. Construction of two level orthogonal arrays via solutions of linear systems. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 285–293. Springer-Verlag, Berlin-Heidelberg, 2005.
- [25] C. Kravvaritis, M. Mitrouli, and Jennifer Seberry. Counting techniques specifying the existence of submatrices in weighing matrices. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 294–305. Springer-Verlag, Berlin-Heidelberg, 2005.
- [26] Shinya Miyajima, Takeshi Ogita, and Shin'ichi Oishi. Fast verification for respective eigenvalues of symmetric matrix. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the*

- 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 306–317. Springer-Verlag, Berlin-Heidelberg, 2005.
- [27] Kosaku Nagasaka. Towards more accurate separation bounds of empirical polynomials ii. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 318–329. Springer-Verlag, Berlin-Heidelberg, 2005.
- [28] David G. Richardson and Werner Krandick. Compiler-enforced memory semantics in the saclib computer algebra library. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 330–343. Springer-Verlag, Berlin-Heidelberg, 2005.
- [29] E. Roanes-Lozano, R. García, E. Roanes-Macías, A. Aparicio, and L.M. Laita. Meta-petro: An expert system for training undergraduates in metamorphic rocks recognition and classification using photomicrographs. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 344–354. Springer-Verlag, Berlin-Heidelberg, 2005.
- [30] Susanne Schmitt. The diamond operator — implementation of exact real algebraic numbers. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 355–366. Springer-Verlag, Berlin-Heidelberg, 2005.
- [31] Leonid Semin and Vasily Shapeev. Constructing the numerical method for navier-stokes equations using computer algebra system. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16,*

- 2005), volume 3718 of *LNCS*, pages 367–378. Springer-Verlag, Berlin-Heidelberg, 2005.
- [32] Alexander Shermenev. Nonlinear waves in a rod. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 379–386. Springer-Verlag, Berlin-Heidelberg, 2005.
- [33] Liu Shu and Andreas Weber. A symbolic-numeric method for solving boundary value problems of kirchhoff rods. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 387–398. Springer-Verlag, Berlin-Heidelberg, 2005.
- [34] Sergey Slavyanov and Vladimir Papshev. Differential and difference equations for products of classical orthogonal polynomials. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 399–404. Springer-Verlag, Berlin-Heidelberg, 2005.
- [35] Akhmadjon Soleev. Algorithm of local resolution of singularities of a space curve. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 405–415. Springer-Verlag, Berlin-Heidelberg, 2005.
- [36] Thomas Sturm. Quantifier elimination for constraint logic programming. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 416–430. Springer-Verlag, Berlin-Heidelberg, 2005.
- [37] Akira Suzuki. Computation of full comprehensive gröbner bases. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors,

*Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 431–444. Springer-Verlag, Berlin-Heidelberg, 2005.

- [38] Akira Terui. Recursive polynomial remainder sequence and the nested subresultants. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 445–456. Springer-Verlag, Berlin-Heidelberg, 2005.
- [39] S.Yu. Vernov. Interdependence between the laurent-series and elliptic solutions of nonintegrable systems. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 457–468. Springer-Verlag, Berlin-Heidelberg, 2005.
- [40] Volker Weispfenning. Solving linear differential problems with parameters. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 469–488. Springer-Verlag, Berlin-Heidelberg, 2005.
- [41] Serguey Zemskov. Approximate solution of the dirichlet problem for elliptic pde and its error estimate. In Victor G. Ganzha, Ernst W. Mayr, and Evgenii V. Vorozhtsov, editors, *Proceedings of the 8th International Workshop on Computer Algebra in Scientific Computing, CASC'2005 (Kalamata, Greece, September 12-16, 2005)*, volume 3718 of *LNCS*, pages 489–500. Springer-Verlag, Berlin-Heidelberg, 2005.