

# List of talks

A \* indicates that the paper is included in this volume.

BELAGA E.G. (France): Nonlinear lower bounds to circuits complexity.

- \* BOZZINI M., DE TISI F. and LENARDUZZI L. (Italy): Reduced set of leads for electrocardiography, maintaining significant information.

BULTHEEL A. and VAN BAREL M. (Belgium): Padé techniques for model reduction in linear system theory: a survey.

CALMET J. and COHEN I. (U.S.A.): Identification of recurrence relations in a computer algebra system.

- \* CALUWAERTS R. (Belgium): An automatic procedure for the calculation of bifurcation points of integral equations.

CENSOR Y. (Israel): Iterative data refinement—a computational tool for solving problems with deficient data.

- \* CHAWLA M.M. (India): Superstable two-step methods for the numerical integration of general second order initial-value problems.

CHEN T.-S., Lu W.-T. and CHANG H.-C. (Taiwan): Symbolic solution for partial differential equation by associative approach.

- \* CUYT A. (Belgium): A review of multivariate Padé approximation.

- \* DARGAHI-NOUBARY G.R. (Iran): A procedure for estimation of the upper bound for earthquake magnitudes.

DELLWO D.R. and FRIEDMAN M.B. (U.S.A.): Accelerated spectral analysis of compact operators.

- \* DE MEY G. (Belgium): The auxiliary boundary element method for time dependent problems.

DE SITTER J. (Belgium): Use of fast Fourier techniques for the approximate calculation of some singular Fourier integrals.

- \* DICK E. (Belgium): A multigrid technique for steady Euler equations, based on a conservative relaxation scheme.

DIERCKX P. (Belgium): An algorithm for fitting data on a circle using tensor product splines.

- \* DÖRING B. (West Germany): On the zeros of Flett's function.

EIERMANN M. (West Germany): Padé-type approximation by Faber expansions.

- \* EL-SIRAFY I.H. (Egypt): Two-dimensional flow of a nonstationary micropolar fluid in the half-plane for which the shear stresses are given on the boundary.

EPPEL D. and HÄUSER J. (West Germany): Numerical treatment of time dependent coupled partial differential equations based on error minimization.

ERLICH M. (France): On stochastic models of sedimentation process.

FETTIS H.E. (U.S.A.): A new series representation for the Bessel function cross-product.

FOGLIA C. (Italy): Evaluation of molecular integrals.

GELMAN A. (U.S.A.): A new numerical method for equations describing thermohydraulic phenomena.

- \* GOOVAERTS M.J. and GROSJEAN C.C. (Belgium): On the series expansion of certain types of integrals.

GRAVES-MORRIS P.R. (England): Vector valued rational interpolation, etc.

- \* GROSJEAN C.C. (Belgium): Theory of recursive generation of systems of orthogonal polynomials.

- \* HADJIDIMOS A. (Greece): Optimum iterative methods for the solution of singular linear systems arising from the discretization of elliptic P.D.E.'s.

- \* HANSEN C. and CHRISTIANSEN S. (Denmark): An SVD analysis of linear algebraic equations derived from first kind integral equations.

- \* HOUGH D.M. (England): Orthogonal polynomial solutions of first kind integral equations for numerical conformal mapping.

- \* IGARASHI M. (Japan): Practical stopping rule for roots finding of nonlinear equation.

- \* IKEUCHI M. and SAKAKIHARA M. (Japan): Linear boundary elements in steady convective diffusion problem.

ILLIOPOULOS C.S. (U.S.A.): Improved worst-case complexity bounds on computations on abelian groups represented by a set of generators.

IOAKIMIDIS N.I. (Greece): A new quadrature method for locating the zeros of analytic functions with applications to engineering problems.

JACKIEWICZ Z. (U.S.A.): Stability analysis of reducible quadrature methods for Volterra integral equations of the second kind.

JAMART B.M. (Belgium): A note on the solution of Helmholtz equation using the finite element method.

\* JOE S. (Australia): Collocation methods using piecewise polynomials for second kind integral equations.

\* JONES W.B. (U.S.A.): Computation of special functions in the complex domain.

KADALBAJOO M.K. and RAMAN K.S. (India): Cubic spline solutions of boundary value problems over infinite intervals.

KAMEL M.S. (Canada): An automatic partitioning technique for large sparse stiff ODE's.

\* LAMBERT J.P. (U.S.A.): Quasi-Monte Carlo, low discrepancy sequences, and ergodic transformations.

\* LARIE D.P. (South Africa): Practical error estimation in numerical integration.

\* LOIZOU G. and FARMER M.R. (England): An algorithm for the computation of zeros of a special class of the entire functions.

\* LONGMAN I.M. (Israel): The summation of power series and Fourier series.

\* MAAS C. (West Germany): Computing and interpreting the eigenvalues and eigenvectors of traffic networks.

\* MAGNUS A. and CHAUVAUX R. (Belgium): On the discretization of the double Layer integral operator for surfaces of revolution.

MARKOV L.A. (U.S.A.): Application of the Benders partitioning procedure to the two-dimensional placement problem.

MEINGUET J. (Belgium): On the Davis-Kahan-Weinberger solution of the norm-preserving dilation problem.

\* MISSIRLIS N. and HATZOPOULOS M. (Greece): Advantages for solving linear systems in an asynchronous environment.

MITSUI T. and SAITO K. (Japan): An implementable version of the Sturm's algorithm for the number of zeros of a real polynomial.

NAJFELD I. (U.S.A.): Minkowski addition and set valued applied mathematics.

NATVIG J., NOUR-OMID B. AND PARLETT B.N. (U.S.A.): Efficient eigenvalue sub-routines on vector computers.

\* NEVANLINNA O. (Finland): Some matrix theorems with applications to time discretization.

\* NIESSNER H. and RIBAUT M. (Switzerland): Condition of boundary integral equations arising from flow computations.

NZUMBE-MESAPE Ntoko (Cameroon): A solution of the Bezier and Coons patch equations with a view to taining NC cutter paths in parallel planes.

OJIKI T., WATANABE S. and MITSUI T. (Japan): Hybrid manipulations for the solution of a large scale system of nonlinear algebraic equations.

OLIVEIRA ALEIXO F. (Coimbra): Interval-form for Halley's root-finding method.

ORTEGA M. and TROYA J.M. (Spain): A distributed branch and bound scheme for permutational problems.

PASTIJN H. and JANSSEN H. (Belgium): A parabolic partial differential problem solved with orthogonal polynomial approximations.

PATRICIO M.F. (Portugal): Two exponentially fitted methods.

\* POTIER C. and VERCKEN C. (France): Surface smoothing by finite elements.

\* PUN K.S. and ORTIZ E.L. (England): Numerical solution of nonlinear partial differe tial equations with a formulation of the tau method in two dimensions.

RAGOZIN D.L. (U.S.A.): The discrete spline transform and  $k$ -functional: tools for analyzing scattered data.

RASSIAS T.M. (Greece): A solution to a problem of R.K. Guy and D. Silverman in number theory.

REALI M., DASSIE G. and PENNATI V. (Italy): Recent numerical advances by general finite difference forms.

\* ROOSE D. (Belgium): A direct method for the computation of Hopf bifurcation points.

\* RUDD W.G. (U.S.A.): Efficient integration over polytopes.

RUEHR O.G. (U.S.A.): Power series and continued fractions applied to nonlinear problems in differential equations.

- \* SABLONNIERE P. (France): Composite finite element of class  $C^k$ .
- SAWAMI H. and NIKI H. (Japan): On an iterative solution of non-linear eigenvalue problems.
  
- SEATZU S. and DI COLA G. (Italy): On the numerical parameter identification in ordinary differential equations.
  
- SINGH P. (England): Least squares finite element method for the solution of a set of nonlinear partial differential equations via the optimization techniques.
  
- \* SMYTH W.F., (Canada): Algorithms for the reduction of matrix bandwidth and profile.
  
- \* SPIJKER M.N. (The Netherlands): On the algebraic equations arising in implicit Runge–Kutta methods.
  
- \* STEINER G. (Canada): An algorithm for minimizing setups in precedence constrained scheduling.
  
- \* STERNBERG R.L. (U.S.A.): On a numerical minimization problem for a new class nonlinear partial differential equations arising in nonspherical geometrical optics.
  
- SUNG Y.Y. (Singapore): R-simplex partition algorithms for quadratic concave minimization problems.
  
- \* TEMME N.M. (The Netherlands): A convolution integral equation solved by Laplace transformation.
  
- TIRANI R. and DE TISI F. (Italy): A statistical bound for the global error in the numerical solution of the initial value problem.
  
- \* VAN ASSCHE W. (Belgium): Some results on the asymptotic distribution of the zeros of orthogonal polynomials.
  
- VAN DER LAAN C.G. (The Netherlands): Some numerical aspects of recurrence relations in special functions.
  
- WALSH J. (England): Design of algorithms for elliptic equations.
  
- WERNER H. (West-Germany): Multivariate Padé-Approximation—a local study of Cuyt’s method.
  
- \* WHEELER F.P. (England): Aspects of the simulation of wave propagation through a clear, turbulent medium.
  
- \* YAMADA S., OHSAKI I., IKEUCHI M. and NIKI H., (Japan): Non-adaptive and adaptive SAOR-CG algorithms.

YOUSIF S.M. (U.S.A.): The matrix adjoint algorithmic approach for linear control systems synthesis.

\* ZLATEV Z. and PRAHM L.P. (Denmark): Mathematical model for studying the sulphur pollution over Europe.