

A Bibliography of Publications of Jim Hamilton Verner

Jim Hamilton Verner
Queen's University
Jeffery Hall, Room 506
Kingston, Ontario, K7L 3N6
CANADA

Tel: +1 613 545 2404
FAX: +1 613 545 2964

E-mail: jim@jhv.mast.queensu.ca (Internet)

19 September 2023
Version 1.15

Abstract

This bibliography records publications of Jim Hamilton Verner.

Title word cross-reference

5 [VZ95a].

Algebraic [Ver79b].

Butcher [Ver79b].

Certain [Ver71a]. **Classification** [Ver94a].

Comparison [Ver92]. **Completely** [SV91, SV94]. **Conditions** [Ver79b].

Consistent [VB68]. **Continuous** [VZ93, VZ94, VZ95a, VZ95b]. **Contrast** [Ver90]. **Convergence** [Ver67].

Derivation [Ver76a]. **Deriving** [Ver71a, Ver71b, Ver71c, Ver82, Ver94b].

Designs [GV76]. **DETEST** [Ver92].
Diagonal [GV76]. **Difference** [Ver67].
Differentiable [Ver93a]. **Differential** [Ver67, Ver69a, Ver69c, Ver70].

Embedded [VZ94, VZ95b]. **Equation** [Ver67]. **Equations** [Ver69a, Ver69c, Ver70].
Error [Ver78]. **Estimates** [Ver78]. **Explicit** [CV72, Ver71b, Ver71c, Ver78, Ver82, VZ93, Ver94a, VZ94, Ver94b, VS95, VZ95b, VZ95a, Ver96].

Families [Ver79a]. **Finite** [Ver67]. **Formula** [Ver90, Ver91, Ver92].

Generalizations [VB68].

High [CV72, Ver76a, Ver93a, Ver96].

High-Order [Ver76a, Ver93a, Ver96].

Hybrid [Ver71a].

Imbedded [SV91, SV94, Ver79a]. **Implicit** [Ver69a, Ver69b, Ver70]. **Interpolants**

[Ver93a, VS95].

John [Ver79b].

Kutta [CV72, SV91, SV94, Ver69b, Ver71b, Ver71c, Ver76a, Ver76b, Ver78, Ver79a, Ver90, Ver91, Ver92, VZ93, Ver93a, Ver94a, VZ94, Ver94b, VZ95a, VS95, VZ95b, Ver96].

Local [Ver78]. **low** [Ver96].

Method [Ver76b]. **Methods** [CV72, VB68, Ver69a, Ver69b, Ver71a, Ver71b, Ver71c, Ver76a, Ver78, Ver79a, Ver82, VZ93, Ver93a, VZ94, VZ95b, VZ95a]. **Motivation** [Ver79b].

Numerical [Ver69c].

Order [CV72, Ver67, Ver69b, Ver76a, VZ93, Ver93a, VZ95a, Ver96]. **Orderings** [VB68]. **Orders** [VZ94, VZ95b, Ver93b]. **Ordinary** [Ver67]. **Orthogonal** [GV76]. **Over-Relaxation** [VB68].

Pairs [SV91, SV94, Ver90, Ver91, Ver92, Ver93b, Ver94a, Ver94b, VS95, Ver96].

Quadratures [Ver70].

Relaxation [VB68]. **Runge** [CV72, SV91, SV94, Ver69b, Ver71b, Ver71c, Ver76a, Ver76b, Ver78, Ver79a, Ver90, Ver91, Ver92, VZ93, Ver93a, Ver94a, VZ94, Ver94b, VZ95a, VS95, VZ95b, Ver96].

Scheme [Ver67, Ver94a]. **Second** [Ver67]. **Selecting** [Ver76b, Ver79b]. **Simplifying** [Ver79b]. **singularity** [Ver67]. **Solution** [Ver69c]. **Some** [CV72, Ver69b, Ver90, Ver91, Ver92]. **stage** [Ver96]. **Strategies** [Ver93b, Ver94b]. **Studying** [Ver94a]. **Successive** [VB68].

Theory [VB68, Ver79b]. **Truncation** [Ver78].

using [Ver92].

Zero [GV76].

References

Cooper:1972:SER

[CV72] G. J. Cooper and J. H. Verner. Some explicit Runge–Kutta methods of high order. *SIAM Journal of Numerical Analysis*, 9(3):389–405, September 1972. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Geramita:1976:ODZ

[GV76] A. V. Geramita and J. H. Verner. Orthogonal designs with zero diagonal. *Canadian J. Math.*, XXVIII(1):215–224, 1976. CODEN CJMAAB. ISSN 0008-414X (print), 1496-4279 (electronic).

Sharp:1991:CIR

[SV91] P. W. Sharp and J. H. Verner. Completely imbedded Runge–Kutta pairs. Technical Report 1991-01, Queen’s University, Kingston, Canada, Department of Mathematics, Queen’s University, Kingston, K7L 3N6, Canada., 1991. 1–24 pp. Published in [SV94].

Sharp:1994:CIR

[SV94] P. W. Sharp and J. H. Verner. Completely imbedded Runge–Kutta pairs. *SIAM Journal of Numerical Analysis*, 31(4):1169–1190, August 1994. CODEN SJNAAM. ISSN

0036-1429 (print), 1095-7170 (electronic).

Verner:1968:GTC

- [VB68] J. H. Verner and M. J. M. Bernal. On generalizations of the theory of consistent orderings for successive over-relaxation methods. *Numerische Mathematik*, 12:215–222, 1968. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic).

Verner:1967:CFD

- [Ver67] J. H. Verner. Convergence of a finite difference scheme for a second order ordinary differential equation with a singularity. Technical Report 001, University of London Institute of Computer Science, 1967. 19 pp.

Verner:1969:IMI

- [Ver69a] J. H. Verner. Implicit methods for implicit differential equations. *Lecture Notes in Mathematics*, 109:261–266, 1969. CODEN LNMAA2. ISBN 3-540-04628-3 (print), 3-540-36158-8 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic).

Verner:1969:OSI

- [Ver69b] J. H. Verner. The order of some implicit Runge–Kutta methods. *Numerische Mathematik*, 13:14–23, 1969. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic).

Verner:1969:NSD

- [Ver69c] James H. Verner. *Numerical Solution of Differential Equations*. PhD thesis, University of Edinburgh, Scotland, Department of Computer Science, University of Edinburgh,

Scotland, 1969. ix + 187 + 3 appendices pp.

Verner:1970:QID

- [Ver70] J. H. Verner. Quadratures for implicit differential equations. *SIAM Journal of Numerical Analysis*, 7(3):373–385, September 1970. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Verner:1971:DCH

- [Ver71a] J. H. Verner. On deriving certain hybrid methods. In R. S. D. Thomas and H. C. Williams, editors, *Proceedings of the Manitoba Conference on Numerical Mathematics*, pages 607–626. Department of Computer Science, University of Manitoba, Winnipeg, Manitoba, Canada, 1971.

Verner:1971:DERa

- [Ver71b] J. H. Verner. On deriving explicit Runge–Kutta methods. Technical Report 5, Queen’s University, Kingston, Canada, 1971. 1–27 pp.

Verner:1971:DERb

- [Ver71c] J. H. Verner. On deriving explicit Runge–Kutta methods. In J. Ll. Morris, editor, *Conference on Applications of Numerical Analysis*, number 228 in *Lecture Notes in Mathematics*, pages 340–347. Springer-Verlag, 1971. ISBN 0-387-05656-4. Short version of the technical report [Ver71b].

Verner:1976:DHO

- [Ver76a] J. H. Verner. The derivation of high-order Runge–Kutta methods. Technical Report 93, University of Auckland, New Zealand, 1976. 1–27 pp.

Verner:1976:SRK

- [Ver76b] J. H. Verner. Selecting a Runge–Kutta method. In B. L. Hartnell and H. C. Williams, editors, *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics*, pages 495–504. Utilitas Mathematica, P.O. Box 7, University centre, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada, 1976. ISBN 0-919628-18-4.

Verner:1978:ERK

- [Ver78] J. H. Verner. Explicit Runge–Kutta methods with estimates of the local truncation error. *SIAM Journal of Numerical Analysis*, 15(4):772–790, August 1978. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Verner:1979:FIR

- [Ver79a] J. H. Verner. Families of imbedded Runge–Kutta methods. *SIAM Journal of Numerical Analysis*, 16(5):857–875, October 1979. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Verner:1979:JBA

- [Ver79b] J. H. Verner. John butcher’s algebraic theory: Motivation for selecting simplifying conditions. In G. H. J. van Rees and H. C. Williams, editors, *Proceedings of the Ninth Manitoba Conference on Numerical Mathematics*, pages 125–155. Utilitas Mathematica, P.O. Box 7, University centre, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada, 1979. ISBN 0-919628-27-3.

Verner:1982:DEM

- [Ver82] J. H. Verner. Deriving explicit methods. Text of a presentation at the Canadian Mathematics Society Seminar on Numerical Analysis, July 1982.

Verner:1990:CSR

- [Ver90] J. H. Verner. A contrast of some Runge–Kutta formula pairs. *SIAM Journal of Numerical Analysis*, 27(5):1332–1344, October 1990. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Verner:1991:SRK

- [Ver91] J. H. Verner. Some Runge–Kutta formula pairs. *SIAM Journal of Numerical Analysis*, 28(2):496–511, April 1991. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Verner:1992:CSR

- [Ver92] J. H. Verner. The comparison of some Runge–Kutta formula pairs using DETEST. In S. O. Fatunla, editor, *Computational Ordinary Differential Equations*, Proceedings of the third and fourth Conferences on Computational Mathematics, pages 271–284. University Press PLC, Ibadan, Nigeria, S.O. Fatunla, University of Benin, Benin City, Nigeria, 1992. ISBN 978-2493-21-X.

Verner:1993:DIH

- [Ver93a] J. H. Verner. Differentiable interpolants for high-order Runge–Kutta methods. *SIAM Journal of Numerical Analysis*, 30(5):1446–1466, October 1993. CODEN SJNAAM. ISSN

0036-1429 (print), 1095-7170 (electronic).

Verner:1993:SPP

- [Ver93b] J. H. Verner. Strategies for pairs, I. pairs of orders 6 and 7. Technical Report 1993-09, Queen's University, Kingston, Canada, Department of Mathematics, Queen's University, Kingston, K7L 3N6, Canada., 1993. 1–24 pp. To appear in *Annals of Numerical Mathematics*, Vol. 1.

Verner:1994:CSS

- [Ver94a] J. H. Verner. A classification scheme for studying explicit Runge–Kutta pairs. In S. O. Fatunla, editor, *Scientific Computation*, Proceedings of the Fifth International Conference on Scientific Computing, Benin City, Nigeria, 1992, pages 201–225. Ada+Jane Press, Benin City, Nigeria, S.O. Fatunla, University of Benin, Benin City, Nigeria, 1994. ISBN 978-32323-1-2.

Verner:1994:SDN

- [Ver94b] J. H. Verner. Strategies for deriving new explicit Runge–Kutta pairs. *Annals of Numerical Mathematics*, 1(1-4):225–244, 1994. ISSN 1021-2655.

Verner:1996:HER

- [Ver96] J. H. Verner. High-order explicit Runge–Kutta pairs with low stage order. *Applied Numerical Mathematics: Transactions of IMACS*, 22(1): 345–357, November 1996. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Verner:1995:E45

- [VS95] J. H. Verner and P. W. Sharp. Explicit Runge–Kutta 4–5 pairs with interpolants. Technical Report 1995-03, Queen's University, Kingston, Canada, Department of Mathematics, Queen's University, Kingston, K7L 3N6, Canada., 1995. 1–20 pp.

Verner:1993:CER

- [VZ93] J. H. Verner and M. Zennaro. Continuous explicit Runge–Kutta methods of order 5. Technical Report 1993-08, Queen's University, Kingston, Canada, Department of Mathematics, Queen's University, Kingston, K7L 3N6, Canada., 1993. 1–32 pp.

Verner:1994:OEC

- [VZ94] J. H. Verner and M. Zennaro. The orders of embedded continuous explicit Runge–Kutta methods. Technical Report 1994-02, Queen's University, Department of Mathematics, Queen's University, Kingston, K7L 3N6, Canada., 1994. 1–11 pp.

Verner:1995:CER

- [VZ95a] J. H. Verner and M. Zennaro. Continuous explicit Runge–Kutta methods of order 5. *Mathematics of Computation*, 64(211):1123–1146, July 1995. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Verner:1995:OEC

- [VZ95b] J. H. Verner and M. Zennaro. The orders of embedded continuous explicit Runge–Kutta methods. *BIT Numerical Mathematics*, 35(3):

406–416, September 1995. CO-
DEN BITTEL, NBITAB. ISSN
0006-3835 (print), 1572-9125 (elec-
tronic). URL <http://www.mai.liu.se/BIT/contents/bit35.html>.