

- 2011 rédacteur adjoint de Vestnik St. Petersburg University: Mathematics
2007 rédacteur adjoint de Scientific J. of Riga Technical Univ. : Computer Science
2009 rédacteur adjoint de Journal of Wavelet Transforms and Applications
2011 Examineur externe de la thèse de Ph.D. de M.A. QURESHI
à l'Univ. d'Auckland, Nouvelle Zélande.
- 2011 Examineur de la thèse de Ph.D. de S. AL-GARNI à l'Univ. Carleton,
2011 Examineur de la thèse de Ph.D. de Y. ZHOU à l'Univ. Carleton,
2010 Examineur de la thèse de M.Sc. de G. GIORDANO à l'Univ. d'Ottawa,
2010 Président de la soutenance de thèse de Ph.D. (Chimie)
de Katherine MCGILVRAY
- 2010 Examineur de la thèse de D.Sc. de R. K. DEKA à l'Univ. Gauhati, Inde,
2009 Examineur de la thèse de doctorat d'Olivier ROUSSEAU,
2009 Examineur de la thèse de maîtrise d'Alexandre IOLO,
2009 Examineur de la thèse de maîtrise de Xiaobo ZHU, à l'Univ. Carleton,
2009 Examineur de la thèse de doctorat
d'Imad CHADDAD, à l'Univ. Technique de Riga,
- 2007- Rédacteur d'une section spéciale de *Cubo* **12**(3) (2010) 167–253,
2007- Comité de rédaction de *J. of Wavelet Theory and Applications*,
2007 Examineur de la thèse de doctorat
d'Ikona DZENITE, à l'Univ. Technique de Riga,
- 2007 Évaluateur pour EPSRC Research Proposal, UK,
2006 Évaluateur pour EPSRC Research Proposal, UK,
2006 Arbitre pour *Comp. Math. Applic., Proc. AMS,*
International J. Computers & Math. with Applic.,
Applicable Analysis, Image and Vision Computing,
Trans. on Internet Research.
- 2005- Comité de rédaction de *Scientific Proc. of Riga Technical University.*
2005 Examineur de la thèse de M.Sc. (Sci. syst.)
de Baozhu LIANG, 2005.03.24.
- 2004 Évaluateur pour EPSRC Research Proposal, UK.
2004 Examineur de la thèse de doctorat en techn. de l'information
de Hussein A. ALY à Éiti, 2004.02.13.
- 2002–05 Assesseur externe de l'Institut de mathématiques de l'Université
de Malaya.
- 2002–05 Examineur externe du programme de mathématiques
de 1er cycle de l'Université de Malaya.

f) Direction de travaux d'études supérieures :

Nombre total dirigé : 28 maîtrises, 13 doctorats
Nombre complété : 21 maîtrises, 6 doctorats
Nombre en cours : 0 maîtrise, 4 doctorats

Nom des étudiants présentement dirigés et année du début des études

- Huong Thu Nguyen, Ph.D. (Math.) sept. 2009–
- Hemza Yagoub, Ph.D. (Math.) mai 2009–
- Han Hao, Ph.D. (Math.) sept. 2006–
- Alex McLaren, Ph.D. (Math.) sept. 2006–

Étudiants dirigés ou co-dirigés depuis 2003.

- Parviz Rasoulipour, Ph.D. (Math.) sept. 2008–, en suspend
- Artur Przybylo, M.Sc. (Math.) sept. 2007–juin 2009
- Hemza Yagoub, M.Sc. (Math.) sept. 2007–mai 2009
- Melanie McKay, M.Sc. (Math.) sept. 2006–mars 2009
- Vladan Bozic, M.Sc. (Math.) sept. 2006–mai 2008
- Yuchuan Zhuang, M.Sc. (Systems Science) sept. 2006–2008
- Yi Li, M.Sc. (Systems Science) jan. 2006–2008
- Yu Zhang, M.Sc. (Syst. Sci) mai 2006–2007
- Trichthenko, Alexandre, M.Sc. (Math) sept. 2006–abandon
- Yuchuan Zhuang, M.Sc. (Comp. Sci.) sept. 2005–abandon
- Mohamed Ali Hajji, Ph.D. (Math.) (Carleton), 2002–2003
- Tharmalingam RATNARAJAH, Ph.D. (Math.) sept. 2000–2003

g) Cours supérieurs : 2011: MAT6991 A Directed studies (Conservation laws and SSP methods); 2010: MAT5187 Topics in applied mathematics (Numerical methods for ODEs); 2009: MAT5623 (équations différentielles algébriques); 2008: MAT5580 (calcul matriciel), MAT5991 T (équations différentielles avec retard); 2007: MAT 5187 (méthodes numériques pour équations différentielles); 2006: MAT 5187 (ondelettes pour appareils auditifs); 2003: CSI 5190;

h) Subventions de recherche externes :

Chercheur principal : Rémi VAILLANCOURT, sauf un cas ci-indiqué.

2007–12	CRSNG	24 000\$	Recherche numérique multidisciplinaire
2003–07	CRSNG	24 000\$	Recherche numérique multidisciplinaire
1999–03	CRSNG	12 075\$	Recherche numérique multidisciplinaire

Subventions de recherche internes :

Chercheur principal : Rémi VAILLANCOURT.

2008	octroi de dév.	8 000\$	Ondelettes
2007	FESP	6 500\$	Ét. doct.
2007	octroi de dév.	14 000\$	Ondelettes
2006	octroi de dév.	12 133\$	Ondelettes
2005	octroi de dév.	12 133\$	Ondelettes
2004	octroi de dév.	12 000\$	Ondelettes
2003	octroi de dév.	14 500\$	Ondelettes

j) Publications :

1) Résumé indiquant un total pour la carrière entière :

- Livres rédigés par l'auteur : 8
- Livres édités ou édités et traduits par l'auteur : 3
- Chapitres de livres : 5
- Articles publiés dans des revues *avec comité de lecture* : 182
- Communications publiées dans les compte-rendus de congrès *avec comité de lecture* : 17
- Brevets : 1
- Rapports techniques : 127
- Résumés de communications et présentations : 33
- Revues pour *Mathematical Reviews* et *Zentralblatt* : 821

2) Description détaillée des publications pour les sept dernières années.

Livres écrits par l'auteur :

1. S.M. Bauer, S.B. Filippov, A.L. Smirnov, P.E. Tovstik & R. Vaillancourt *Asymptotic Methods in Mechanics of Solids*, International Series of Numerical Mathematics. Springer Basel. In press.
2. R. Ashino & R. Vaillancourt, *Hayawakari Matlab (Matlab Compendium)*, 2e éd. refondue, 2e tirage, Kyoritsu Shuppan, Tokyo, 2010, 227 pages. (En japonais). [Il y eut au moins 11 tirages de la 1ère éd.]

Livres édités par l'auteur :

1. A. Guran, D. J. Steigmann, A. L. Smirnov & R. Vaillancourt, éd., *Advances in Mechanics of Solids: In Memory of Prof. Eliza Haseganu*, Series on Stability, Vibration and Control of Systems, Series B, Vol. 15, World Scientific, Singapore, 2006.

Chapitres de livres :

1. Xinhua Hua & R. Vaillancourt, *Dynamics of permutable maps*. in Early Days in Complex Dynamics, AMS Dec. 2011, pp. 307–322,
2. A. A. Kolyshkin, R. Vaillancourt & I. Volodko, *On the stability of transient viscous flow in an annulus*, in Advances in Mechanics of Solids: In Memory of Prof. E. M. Haseganu, Series on Stability, Vibration and Control of Systems, Series B, Vol. 15, World Scientific, Singapore, 2006, pp. 139–150.

Articles publiés dans des revues *avec comité de lecture* :

1. T. Nguyen-Ba, H. Nguyen-Thu & R. Vaillancourt, *Strong-stability-preserving, k-step, 4- to 10-stage, Hermite–Birkhoff time-discretizations of order 11*, Automation Computers Applied Mathematics, **20**(1) (2011) 7–28.
2. T. Nguyen-Ba, H. Nguyen-Thu & R. Vaillancourt, *Strong-stability-preserving, k-step, 5- to 10-stage, Hermite–Birkhoff time-discretizations of order 12*, Amer. J. Comput. Math., **1** (2011) 72–82. doi:10.4236/ajcm.2011.12008 pub. élec. juin 2011 (<http://www.scirp.org/journal/ajcm>).
3. M. Bahri, R. Ashino & R. Vaillancourt, *Two-dimensional quaternion wavelet transform*, Appl. Math. Comput., **218** (2011) 1–21. doi: 10.1016/j.amc.2011.05.030.
4. T. Nguyen-Ba, H. Nguyen-Thu, T. Giordano & R. Vaillancourt, *Strong-stability-preserving 4-stage Hermite–Birkhoff time-discretization methods*, Can. Appl. Math. Q., **19**(1) (2011) 79–110..
5. H. Yagoub, T. Nguyen-Ba & R. Vaillancourt, *Variable-step variable-order 3-stage Hermite–Birkhoff–Obrechhoff DDE solver of order 4 to 14*, Appl. Math. Comput., **217** (2011) 10247–10255. doi:10.1016/j.amc.2011.05.023
6. T. Nguyen-Ba, H. Yagoub, H. Hao & R. Vaillancourt, *Pryce pre-analysis adapted to some DAE solvers*, Appl. Math. Comput., **217** (2011) 8403–8418. doi:10.1016/j.amc.2011.03.037.
7. X. Wang, X. Hua & R. Vaillancourt, *Permutable functions concerning differential equations II*, Complex Variables and Elliptic Equations, **56**(1–4) (2011) 155–170. DOI: 10.1080/17476930903394853.
8. T. Nguyen-Ba, H. Nguyen-Thu, T. Giordano & R. Vaillancourt, *Strong-stability-preserving 7-stage Hermite–Birkhoff time-discretization methods* J. Sci. Comput., sous presse. DOI 10.1007/s10915-011-9473-7.
9. T. Nguyen-Ba, H. Hao, H. Yagoub & R. Vaillancourt, *One-step 9-stage Hermite–Birkhoff–Taylor DAE solver of order 10*, J. Appl. Math. and Comput., **35** (2011) 363–378. DOI: 10.1007/s12190-009-0362-2, pub. élec. 2009.12.01.
10. E. Kengne & R. Vaillancourt, *Stability of exact solutions of the cubic-quintic nonlinear Schrödinger equation with periodic potential*, Nonlinear Oscillations, **13**(4) (2011) 569–583. (Original ukrainien **13**(4), (octobre-décembre 2010) 533–545).
11. T. Nguyen-Ba, H. Nguyen-Thu, T. Giordano & R. Vaillancourt, *Strong stability preserving 3-stage Hermite–Birkhoff time-discretization methods* Appl. Num. Math., **61**(4) (2011), 487–500. doi: 10.1016/j.apnum.2010.11.013.
12. R. Ashino & R. Vaillancourt, *Mean breakdown points for compressed sensing by uniformly distributed matrices*, JSIAM Letters, **2** (2010) 111–114.

13. T. Nguyen-Ba, H. Yagoub, H. Hao & R. Vaillancourt, *Solution of electric circuits by a 9-stage Hermite–Birkhoff–Taylor DAE solver of order 11*, Scientific Proceedings of Riga Technical University, **45**(52), (2010) 87–94.
14. M. Bahri, E.S.M. Hitzer, R. Ashino & R. Vaillancourt, *Windowed Fourier transform of two-dimensional quaternionic signals*, Appl. Math. Comput., **216** (2010), 2366–2379. doi: 10.1016/j.amc.2010.03.082.
15. V. Bozic, T. Nguyen-Ba & R. Vaillancourt, *A three-stage, VSVO, Hermite–Birkhoff–Taylor, ODE solver*, Appl. Math. Comput., **216** (2010) 598–610. doi:10.1016/j.amc.2010.01.082.
16. E. Kengne, A. Kakhssassi, T. Nguyen-Ba & R. Vaillancourt, *Dispersive shock waves propagating in the cubic-quintic derivative NLS equation*, Can. J. Phys./Rev. Can. Phys., **88**(1) (2010), 55–66.
17. E. Kengne, R. Vaillancourt & B. A. Malomed, *Modulational instability and exact soliton and periodic solutions for two weakly coupled effectively 1D condensates trapped in a double-well potential*, Int. J. of Modern Physics B, **24**(14) (2010) 2211–2227. DOI: 10.1142/S021797921005541X
18. T. Nguyen-Ba, V. Bozic, E. Kengne & R. Vaillancourt, *A one-step 7-stage Hermite–Birkhoff–Taylor ODE solver of order 11*, J. Comput. Appl. Math., **234** (2010) 192–208. doi:10.1016/j.cam.2009.12.015.
19. R. Ashino, T. Nguyen-Ba & R. Vaillancourt, *Linear codes and compressed sensing with equivalent average breakdown points*, Scientific Proceedings of Riga Technical University, **41**(51), (2009), 91–96.
20. T. Nguyen-Ba, H. Nguyen-Thu & R. Vaillancourt, *Strong stability preserving 5-stage Hermite–Birkhoff time-discretization methods*, Scientific Proceedings of Riga Technical University, **41**(51) (2009) 67–90.
21. T. Nguyen-Ba, H. Nguyen-Thu & R. Vaillancourt, *Solution of electric circuits by a 9-stage Hermite–Birkhoff–Taylor DAE solver of order 10*, Scientific Proceedings of Riga Technical University, **41**(51) (2009) 97–108.
22. T. Nguyen-Ba, H. Hao, H. Yagoub & R. Vaillancourt, *One-step 9-stage Hermite–Birkhoff–Taylor DAE solver of order 10*, J. Appl. Math. and Comput., **35** (2011) 363–378. DOI: 10.1007/s12190-009-0362-2, pub. élec. 2009.12.01.
23. R. Ashino, T. Nguyen-Ba & R. Vaillancourt, *Low-dimensional linear codes with high breakdown points by QR decomposition*, Int. J. Pure Appl. Math., **57**(2) (2009) 151–163.

24. A. Madrane & R. Vaillancourt, *Three-dimensional adaptive central schemes on unstructured staggered grids*, SIAM J. Sci. Computing, **31**(5) (2009) 3979–3999.
25. T. Nguyen-Ba, V. Bozic, E. Kengne & R. Vaillancourt, *Nine-stage multi-derivative Runge–Kutta method of order 12*, Publications de l’Institut Mathématique, Nouvelle série, **86**(100) (2009) 75–96.
26. E. Kengne, C. Tadmon, T. Nguyen-Ba & R. Vaillancourt, *Higher order bright solitons and shock signals in nonlinear transmission lines*, Chinese J. Phys., **47**(5) (October 2009) 713–718.
27. H. Yagoub, T. Nguyen-Ba, T. Giordano & R. Vaillancourt, *Convergence of the variable-step variable-order 3-stage Hermite–Birkhoff ODE/DDE solver of order 5 to 15*, Scientific Proceedings of Riga Technical University, **41**(51) (2009) 49–66.
28. E. Kengne & R. Vaillancourt, *2D Ginzburg–Landau system of complex modulation for coupled nonlinear transmission lines*, J. Infrared, Millimeter, Terahertz Waves, **30**(7) (2009) 679–699 doi:10.1007/s10762-009-9485-7.
29. E. Kengne & R. Vaillancourt, *Exact equilibrium solutions of a diffusion equation with a nonlinear diffusion term by means of Jacobian elliptic functions*, Integral Transforms and Special Functions, **20**(9) (sept. 2009) 701–721.
30. E. Kengne, C. Tadmon & R. Vaillancourt, *On the dissipative complex Ginzburg–Landau equation governing the propagation of solitary pulse in dissipative nonlinear transmission lines*, Chinese J. of Physics, **47**(1) (fév. 2009) 81–92.
31. T. Nguyen-Ba, H. Hao, H. Yagoub & R. Vaillancourt, *One-step 5-stage Hermite–Birkhoff–Taylor ODE solver of order 12*, Appl. Math. Comput., **211** (2009) 313–328, doi:10.1016/j.amc.2009.01.043.
32. T. Nguyen-Ba, V. Bozic, E. Kengne & R. Vaillancourt, *One-step 9-stage Hermite–Birkhoff–Taylor ODE solver of order 10*, J. Appl. Math. and Comput., **31**(1) (2009) 335–358. DOI 10.1007/s12190-008-0216-3.
33. E. Kengne & R. Vaillancourt, *Propagation of solitary waves on lossy nonlinear transmission lines*, International J. of Modern Physics B, **23**(23) (2009) 1–18.
34. E. Kengne & R. Vaillancourt, *Transmission of solitary pulse in dissipative nonlinear transmission lines*, Commun. Nonlinear Sci. Numer. Simulat., **14**(11) (2009) 3804–3810. doi:10.1016/j.cnsns.2008.08.016.
35. E. Kengne, R. Vaillancourt & B. A. Malomed, *Coupled nonlinear Schrödinger equations for solitary-wave and kink signals propagating in discrete nonlinear*

- dispersive transmission lines*, Int. J. of Modern Physics B, **23**(2) (2009) 133–147.
36. T. Nguyen-Ba, H. Hao, H. Yagoub & R. Vaillancourt, *One-step 4-stage Hermite–Birkhoff–Taylor DAE solver of order 12*, Can. Appl. Math. Q., **16**(4) (2008) 415–438.
 37. R. Ashino, T. Nguyen-Ba & R. Vaillancourt, *Decoding low-dimensional linear codes by linear programming*, Can. Appl. Math. Q., **16**(3) (2008) 241–254.
 38. H. Yagoub, T. Nguyen-Ba & R. Vaillancourt, *Variable-step 7-stage Hermite–Birkhoff–Taylor DDE Solver of order 8*, Scientific Proceedings of Riga Technical University, **37**(50), (2008), 130–144.
 39. T. Nguyen-Ba, E. Kengne & R. Vaillancourt, *One-step 4-stage Hermite–Birkhoff–Taylor ODE Solver of order 12*, Can. Appl. Math. Q., **16**(1) (Spring 2008) 77–94.
 40. T. Nguyen-Ba, H. Yagoub, Y. Zhuang & R. Vaillancourt, *Variable-step variable-order 2-stage Hermite–Birkhoff–Obrechhoff ODE solver of order 3 to 14*, Scientific Proceedings of Riga Technical University, **37**(50) (2008) 79–102.
 41. E. Kengne & R. Vaillancourt, *Integrability conditions for two-component Bose–Einstein condensates in periodic potentials*, Scientific Proceedings of Riga Technical University, **37**(50) (2008) 103–111.
 42. T. Nguyen-Ba, H. Hao, H. Yagoub, & R. Vaillancourt, *One-step 9-stage Hermite–Birkhoff–Taylor DAE solver of order 11*, Scientific Proceedings of Riga Technical University, **37**(50) (2008) 55–78.
 43. E. Kengne & R. Vaillancourt, *Bose–Einstein condensates in optical lattices: The cubic–quintic nonlinear Schrödinger equation with a periodic potential*, J. of Physics B: Atomic, Molecular & Optical Physics, **41** (2008) 205202 (9pp).
 44. E. Kengne, V. Bozic, M. Viana & R. Vaillancourt, *Transverse stability of solitary waves propagating in coupled nonlinear dispersive transmission lines*, Physical Review E, **78**, 026603 (2008) 1–8.
 45. V. Bozic, A. Przybylo, T. Nguyen-Ba & R. Vaillancourt, *One-step 9-stage Hermite–Birkhoff–Taylor ODE Solver of order 11*, University Scientific J., Telecommunications and Electronics Series, University of Technology and Life Sciences (UTP), Bydgoszcz, Poland, **11**, (2008) 33–52.
 46. T. Nguyen-Ba, V. Bozic & R. Vaillancourt, *One-step 7-stage Hermite–Birkhoff–Taylor ODE solver of order 13*, Int. J. Pure Appl. Math., **43**(4) (2008) 569–592.

47. T. Nguyen-Ba, P. W. Sharp & R. Vaillancourt, *Hermite-Birkhoff-Obrechhoff 4-stage 4-step ODE solver of order 14 with quantized stepsize*, J. of Computational and App. Math., **222**(2) (2008) 608–621.
48. X.-H. Hua & R. Vaillancourt, *Prime factorization of entire functions*, Cubo, **10**(1) (2008) 1–10.
49. T. Nguyen-Ba, P. W. Sharp, H. Yagoub & R. Vaillancourt, *Hermite-Birkhoff-Obrechhoff 3-stage 4-step ODE solver of order 14 with quantized stepsize*, Can. Appl. Math. Q., **15**(2) (2007) 181–201
50. R. Vaillancourt & V. G. Zakharov, *Interval wavelets adapted to monomial differential operators*, J. of Wavelet Theory and Applications, **1**(1) (2007) 31–63.
51. T. Nguyen-Ba, P. W. Sharp, H. Yagoub, & R. Vaillancourt, *Hermite-Birkhoff-Obrechhoff 5-stage 4-step ODE solver of order 15 with quantized stepsize*, Scientific Proceedings of Riga Technical University, **33**, Boundary Field Problems and Computer Simulation, 49th issue, (2007) 6–25.
52. E. Kengne & R. Vaillancourt, *Traveling wave propagation on coupled nonlinear transmission lines*, Scientific Proceedings of Riga Technical University, **33**, Boundary Field Problems and Computer Simulation, 49th issue, (2007) 42–58.
53. T. Nguyen-Ba, V. Bozic, E. Kengne & R. Vaillancourt, *One-step 4-stage Hermite-Birkhoff-Taylor ODE Solver of order 14*, Scientific Proceedings of Riga Technical University, **33**, Boundary Field Problems and Computer Simulation, 49th issue, (2007) 26–41.
54. E. Kengne & R. Vaillancourt, *On exact solutions of the Gross-Pitaevskii equation in periodic potential in the presence of external source*, J. Mathematical Physics, **48** (2007) 073520-1–13.
55. X.-H. Hua, R. Vaillancourt & X. L. Wang, *Permutable functions concerning differential equations*, J. Aust. Math. Soc., **83** (2007) 369–384.
56. T. Nguyen-Ba, H. Yagoub, Y. Zhang & R. Vaillancourt, *Variable-step variable-order 3-stage Hermite-Birkhoff-Obrechhoff ODE solver of order 4 to 14*, Can. Appl. Math. Q., **14**(4) (Winter 2006) 413–437.
57. R. Vaillancourt, R. & V. G. Zakharov, *Biorthogonal wavelet bases for solving time-dependent PDEs*, Scientific Proceedings of Riga Technical University, Boundary Field Problems and Computer Simulation, **29**(48) (2006) 25–52.

58. T. Nguyen-Ba, H. Yagoub, S. J. Desjardins & R. Vaillancourt, *Variable-step variable-order 4-stage Hermite–Birkhoff–Obrechhoff ODE solver of order 5 to 14*, Scientific Proceedings of Riga Technical University, Boundary Field Problems and Computer Simulation, **29**(48) (2006) 53–80.
59. M. A. Hajji & R. Vaillancourt, *Matrix derivation of Gaussian quadratures*, Scientific Proceedings of Riga Technical University, Boundary Field Problems and Computer Simulation, **29**(48), (2006) 198–213.
60. E. Kengne & R. Vaillancourt, *Stabilized soliton in attractive Bose-Einstein condensate in hyperbolic potential*, Scientific Proceedings of Riga Technical University, Boundary Field Problems and Computer Simulation, **29**(48) (2006) 81–94.
61. E. Kengne & R. Vaillancourt, *Ginzburg–Landau system of complex modulation equations for a distributed nonlinear-dissipative transmission lines*, Nonlinear Oscillations, **9**(4) (2006) 451–489.
62. T. Nguyen-Ba, H. Yagoub, Y. Li & R. Vaillancourt, *Variable-step variable-order 3-stage Hermite–Birkhoff ODE Solver of order 5 to 15*, Can. Appl. Math. Q., **14**(1) (Spring 2006) 43–69.
63. T. Nguyen-Ba & R. Vaillancourt, *Hermite–Birkhoff–Obrechhoff 3-stage 6-step ODE solver of order 14*, Can. Appl. Math. Q., **13**(2) (Summer 2005) 151–181.
64. A. Morimoto, R. Ashino & R. Vaillancourt, *Multiwavelet neural network pre-processing of irregularly sampled data*, Scientiae Mathematicae Japonicae, (e-2006) 301–317.
65. A. Morimoto, Y. Shimano, R. Ashino & R. Vaillancourt, *Wavelets and block singular value denoising*, Scientific Proceedings of Riga Technical University, **29**, Boundary Field Problems and Computer Simulation, 48th issue, (2006) 6-14.
66. P. W. Sharp & R. Vaillancourt, *New Nyström pairs for the general second-order problem*, Scientific Proceedings of Riga Technical University, **29**, Boundary Field Problems and Computer Simulation, 48th issue, (2006) 15-24.
67. P. W. Sharp & R. Vaillancourt, *Explicit Pouzet Runge–Kutta pairs for Volterra integro-differential equation*, Scientific Proceedings of Riga Technical University, **29**, Boundary Field Problems and Computer Simulation, 48th issue, (2006) 95–104.
68. T. Ratnarajah & R. Vaillancourt, *Complex singular Wishart matrices and applications*, Computers Math. Applic., **50** (2005) 399–411.

69. A.A. Kolyshkin, R. Vaillancourt & I. Volodko, *Approximate method for the calculation of the change in impedance due to a flaw in a conducting cylindrical layer*, Scientific Proceedings of Riga Technical University, **26**, Boundary Field Problems and Computer Simulation, 47th issue, (2005) 62-66.
70. A. Madrane, A. El Boukili & R. Vaillancourt, *A new overlapping unstructured grid algorithm*, Scientific Proceedings of Riga Technical University, **26**, Boundary Field Problems and Computer Simulation, 47th issue, (2005) 7-17.
71. E. F. Pelletier & R. Vaillancourt, *Modelling instrument's sounds using Malvar wavelets*, Scientific Proceedings of Riga Technical University, **26**, Boundary Field Problems and Computer Simulation, 47th issue, (2005) 18-24.
72. X.-H. Hua & R. Vaillancourt, *Dynamics of permutable meromorphic functions*, Scientific Proceedings of Riga Technical University, **26**, Boundary Field Problems and Computer Simulation, 47th issue, (2005) 25-31.
73. P. W. Sharp & R. Vaillancourt, *Error growth of some symplectic explicit Runge-Kutta Nyström methods for a simulation of the gas giants*, Scientific Proceedings of Riga Technical University, **26**, Boundary Field Problems and Computer Simulation, 47th issue, (2005) 32-38.
74. P. W. Sharp & R. Vaillancourt, *Efficient order-five second-derivative explicit Runge-Kutta pairs with interpolants*, Scientific Proceedings of Riga Technical University, **26**, Boundary Field Problems and Computer Simulation, 47th issue, (2005) 39-47.
75. A.A. Kolyshkin, R. Vaillancourt & I. Volodko, *Weakly Nonlinear Analysis of Rapidly Decelerated Channel Flow*, IASME Transactions, Issue 7, Volume 2, (September 2005) 1157-1165.
76. T. Ratnarajah & R. Vaillancourt, *Quadratic forms on complex random matrices and multiple-antenna systems*, IEEE Transactions on Information Theory, **51**(8), (Aug. 2005) 2976-2984.
77. T. Ratnarajah, R. Vaillancourt & M. Alvo, *Complex random matrices and Rician channel capacity*, Problems of Information Transmission. **41**(1) (Jan.-March 2005) 1-21.
78. R. Ashino, A. Morimoto, M. Nagase & R. Vaillancourt, *Image compression with multiresolution singular value decomposition and other methods*, Mathematical and Computer Modeling, **41** (2005) 773-790.
79. T. Ratnarajah, R. Vaillancourt & M. Alvo, *Eigenvalues and condition numbers of complex random matrices*, SIAM J. Matrix Anal. Appl. **26**(2) (2005) 441-456.

Articles soumis à des revues *avec comité de lecture* :

1. T. Nguyen-Ba, H. Nguyen-Thu & R. Vaillancourt, *Strong-stability-preserving 6-stage Hermite–Birkhoff time-discretization methods combining k -step and RK4 methods*, J. Comput. Sci., Special issue Comput. Meth. Hyp. Probs, soumis le 22 sept. 2011.
2. R. Ashino & R. Vaillancourt, *Phase transition in error correcting codes by ℓ_1 linear programming* JIAM. Soumis juillet 2011.

Communications publiées dans les compte-rendus de congrès *avec comité de lecture* :

1. T. Nguyen-Ba, H. Nguyen-Thu & R. Vaillancourt, *Strong-stability-preserving Hermite–Birkhoff time-discretizations of order 4 to 12*, International Conference on Applied Mathematics, Modeling and Computational Science - Waterloo, Ontario, Canada, 25 Jul 2011 - 29 Jul 2011, AIP Conference Proceedings. In press.
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