
References

1. Alili, L. and Chaumont, L. Quelques nouvelles identités de fluctuation pour les processus de Lévy. C. R. Acad. Sci. Paris, t. **328**, Série I, 613–616, (1999).
2. Alili, L. and Chaumont, L. A new fluctuation identity for Lévy processes and some applications. Bernoulli **7**, 557–569, (2001).
3. Alili, L., Chaumont, L., and Doney, R.A. On a fluctuation identity for random walks and Lévy processes Bull. London. Math. Soc., **37**, 141–148, (2005).
4. Alili, L. and Doney, R.A. Wiener–Hopf factorisation revisited and some applications. Stochastics and Stochastics Reports, **66**, 87–102, (1999).
5. Alili, L. and Doney, R.A. Martin boundaries associated with a killed random walk. Ann. Inst. Henri Poincaré, **37**, 313–338, (2001).
6. Andrew, P. On the limiting behaviour of Lévy processes at zero. To appear in Probab. Theory Relat. Fields (2007).
7. Andrew, P. On the possible limiting values of the probability that a Lévy process is positive and the probability it leaves an interval upwards. Preprint, (2005).
8. Avram, F., Kyprianou, A.E., Pistorius, M.R. Exit problems for spectrally positive Lévy processes and applications to (Canadized) Russian options. Ann. Appl. Probab., **14**, 215–238, (2003).
9. Bertoin, J. Sur la décomposition de la trajectoire d’un processus de Lévy spectralement positif en son infimum. Ann. Inst. Henri Poincaré, **27**, 537–547, (1991).
10. Bertoin, J. An extension of Pitman’s theorem for spectrally positive Lévy processes. Ann. Probab. **20**, 1464–1483, (1992).
11. Bertoin, J. Splitting at the infimum and excursions in half-lines for random walks and Lévy processes. Stoch. Process, Appl. **47**, 17–35, (1993).
12. Bertoin, J. *Lévy Processes*. Cambridge University Press, Cambridge, (1996).
13. Bertoin, J. On the first exit time of a completely asymmetric stable process from a finite interval. Bull. London Math. Soc., **28**, 514–520, (1996).
14. Bertoin, J. Regularity of the half-line for Lévy processes. Bull. Sci. Math., **121**, 345–354, (1997).
15. Bertoin, J. Exponential decay and ergodicity of completely asymmetric Lévy processes in a finite interval. Ann. Appl. Probab., **7**, 156–169, (1997a).
16. Bertoin, J. *Subordinators: Examples and Applications*. Ecole d’été de Probabilités de St-Flour XXVII, Lecture Notes in Math. 1717, Springer, Berlin, (1999).

17. Bertoin, J. and Doney, R.A. On conditioning a random walk to stay nonnegative. *Ann. Probab.*, **22**, 2152–2167, (1994).
18. Bertoin, J. and Doney, R.A. Spitzer's condition for random walks and Lévy processes. *Ann. Inst. Henri Poincaré*, **33**, 167–178, (1997).
19. Bingham, N.H. Fluctuation theory in continuous time. *Adv. Appl. Probab.*, **7**, 705–766, (1975).
20. Bingham, N.H., Goldie, C.M., and Teugels, J.L. *Regular Variation*. Cambridge University Press, Cambridge, (1987).
21. Bingham, N.H., and Goldie, C.M. Extensions of regular variation. II: Representation and indices. *Proc. London Math. Soc.*, **44**, 497–534, (1982).
22. Bretagnolle, J. Résultats de Kesten sur les processus à accroissements indépendants. *Sem. de Probab. V*, 21–36, (1971).
23. Chaumont, L. Sur certains processus de Lévy conditionnés à rester positifs. *Stochastics and Stoch. Rep.*, **47**, 1–20, (1994).
24. Chaumont, L. Conditionings and path decompositions for Lévy processes. *Stoch. Proc. Appl.*, **64**, 39–54, (1996).
25. Chaumont, L. and Doney, R.A. On Lévy processes conditioned to stay positive. *Elect. J. Probab.*, **10**, 948–961, (2005).
26. Chow, Y.S. On moments of ladder height variables. *Adv. Appl. Math.* **7**, 46–54, (1986).
27. Chow, Y.S. and Lai, T.L. Moments of ladder variables in driftless random walks. *Z.f. Wahrscheinlichkeitsth.*, **48**, 253–257, (1979).
28. Doney, R.A. Spitzer's condition for asymptotically symmetric random walk. *J. Appl. Probab.* **17**, 856–859, (1980).
29. Doney, R.A. On the existence of the mean ladder height for random walk. *Z. Wahr. verw Gebiete*, **59**, 373–392, (1982).
30. Doney, R.A. On the Wiener–Hopf factorisation and the distribution of extrema for certain stable processes. *Ann. Probab.* **15**, 1352–1362, (1987).
31. Doney, R.A. Last exit times for random walks. *Stoch. Proc. Appl.* **31**, 321–331, (1989).
32. Doney, R.A. A path decomposition for Lévy processes. *Stoch. Proc. Appl.* **47**, 167–181, (1993).
33. Doney, R.A. Spitzer's condition and ladder variables for random walks. *Probab. Theory Relat. Fields*, **101**, 577–580, (1995).
34. Doney, R.A. Tanaka's construction for random walks and Lévy processes. *Sem. de Probab. XXXVIII, Lecture Notes in Math.* 1857, 1–4, (2004).
35. Doney, R.A. Some excursion calculations for spectrally one-sided Lévy processes. *Sem. de Probab. XXXVIII, Lecture Notes in Math.* 1857, 5–15, (2004).
36. Doney, R.A. Stochastic bounds for Lévy processes. *Ann. Probab.*, **32**, 1545–1552, (2004).
37. Doney, R.A. Small-time behaviour of Lévy processes. *Elect. J. Probab.*, **9**, 209–229, (2004).
38. Doney, R.A. and Greenwood, P.E. On the joint distribution of ladder variables of random walk. *Probab. Theory Relat. Fields*, **94**, 457–472, (1993).
39. Doney, R.A. and Kyprianou, A.E. Overshoots and Undershoots in Lévy processes. *Ann. Appl. Probab.*, **16**, 91–106, (2006).
40. Doney, R.A. and Maller, R.A. Stability and attraction to normality at zero and infinity for Lévy processes. *J. Theor. Probab.*, **15**, 751–792, (2002).

41. Doney, R.A. and Maller, R.A. Stability of the overshoot for Lévy processes. *Ann. Probab.* **30**, 188–212, (2002).
42. Doney R.A. and Maller R.A. Moments of passage times for transient Lévy processes. *Ann. Inst. H. Poincaré*, **40**, 279–297, (2004).
43. Doney R.A. and Maller R.A. Passage times of random walks and Lévy processes across power-law boundaries, *Probab. Theory Relat. Fields*, **133**, 57–70, (2005).
44. Duquesne, T. Path decompositions for real Lévy processes. *Ann. Inst. H. Poincaré Probab. Statist.* **39**, 339–370, (2003).
45. Emery, D.J. Exit problem for a spectrally positive process. *Adv. Appl. Probab.*, **5**, 498–520, (1973).
46. Erickson, K.B. The strong law of large numbers when the mean is undefined. *Trans. Amer. Math. Soc.* **185**, 371–381, (1973).
47. Feller, W. *An Introduction to Probability Theory and Its Applications*. Vol II, 2nd edition, Wiley, New York, (1971).
48. Fridstedt, B.E. Sample functions of processes with stationary, independent increments. *Adv. in Probab.*, **3**, 241–396, (1974).
49. Greenwood, P.E., Omey, E., and Teugels, J.L. Harmonic renewal measures and bivariate domains of attraction in fluctuation theory. *Z. für Wahrschein. Verw. Geb.*, **61**, 527–539, (1982).
50. Greenwood, P.E. and Pitman, J.W. Fluctuation identities for Lévy processes and splitting at the maximum. *Adv. Appl. Probab.*, **12**, 893–902, (1980).
51. Greenwood, P.E. and Pitman, J.W. Construction of local time and Poisson point processes from nested arrays. *J. London. Math. Soc.*, **22**, 182–192, (1980).
52. Griffin, P.S. and Maller, R.A. On the rate of growth of the overshoot and the maximum partial sum. *Adv. Appl. Prob.* **30**, 181–196, (1998).
53. Griffin, P.S. and McConnell, T.R. On the position of a random walk at the time of first exit from a sphere. *Ann. Probab.*, **20**, 825–854, (1992).
54. Griffin, P.S. and McConnell, T.R. L^p -boundedness of the overshoot in multi-dimensional renewal theory. *Ann. Probab.*, **23**, 2022–2056, (1995).
55. Hirano, K. Lévy processes with negative drift conditioned to stay positive. *Tokyo J. Math.*, **24**, 291–308, (2001).
56. Itô, K. Poisson point processes attached to Markov processes. *Proc. 6th Berkely Symp. Math. Stat. Probab. III*, 225–239, (1970).
57. Janson, S. Moments for first-passage and last-exit times, the minimum, and related quantities for random walks with positive drift. *Adv. Applied Probab.*, **18**, 865–879, (1986).
58. Kesten. H. Hitting probabilities of single points for processes with independent increments. *Mem. Amer. Math. Soc.*, **178**, 459–479, (1969).
59. Kesten. H. The limit points of a normalized random walk. *Ann. Math. Stat.* **41**, 1173–1205, (1970).
60. Kesten, H. and Maller, R.A. Infinite limits and infinite limit points of random walks and trimmed sums. *Ann. Probab.*, **22**, 1473–152, (1994).
61. Kesten, H. and Maller, R.A. Two renewal theorems for random walks tending to infinity. *Prob. Theor. Rel. Fields*, **106**, 1–38, (1996).
62. Kesten, H. and Maller, R.A. Divergence of a random walk through deterministic and random subsequences. *J. Theor. Prob.*, **10**, 395–427, (1997).
63. Kesten, H. and Maller, R.A. Random walks crossing power law boundaries. *Studia Scientiarum Math. Hungarica*, **34**, 219–252, (1998).
64. Kesten, H. and Maller, R.A. Random walks crossing high level curved boundaries. *J. Theoret. Prob.*, **11**, 1019–1074, (1998).

65. Kesten, H. and Maller, R.A. Stability and other limit laws for exit times of random walks from a strip or a halfplane. *Ann. Inst. Henri Poincaré*, **35**, 685–734, (1999).
66. Klüppelberg, C., Kyprianou, A.E., and Maller, R.A. Ruin probabilities and overshoots for general Lévy insurance risk processes. *Ann. Appl. Probab.*, **14**, 1766–1801, (2004).
67. Koryluk, V.S., Suprun, V.N. and Shurenkov, V.M. Method of potential in boundary problems for processes with independent increases and jumps of the same sign. *Theory Probab. Appl.*, **21**, 243–249, (1976).
68. Kyprianou, A.E. Reflected Stable processes. Preprint, (2005).
69. Kyprianou, A.E. *Introductory Lectures on Fluctuations of Lévy processes with Applications*. Springer-Verlag, Berlin, (2006).
70. Kyprianou, A.E. and Palmowski, Z.A. martingale review of some fluctuation theory for spectrally negative Lévy processes. *Sem. de Probab. XXXVIII, Lecture Notes in Math.* 1857, 16–29, (2004).
71. Lai, T.L. Asymptotic moments of random walks with applications to ladder variables and renewal theory. *Ann. Probab.*, **4**, 51–66, (1976).
72. Lambert, A. Completely asymmetric Lévy processes confined in a finite interval. *Ann. Inst. H. Poincaré Prob. Stat.*, **36**, 251–274, (2000).
73. Lévy, Paul. *Théorie de l'addition des variables aléatoires*. 2nd edition, Gauthier-Villiers, Paris, (1954).
74. Maisonneuve, B. Ensembles régénératifs, temps locaux et sousordonateurs, *Sem. de Probab. V, Lecture Notes in Math.* **191**, 147–169, (1971).
75. Marchal, P. On a new Wiener–Hopf factorization by Alili and Doney. *Sém. de Probab. XXXV, Lecture Notes in Math.*, **1755**, 416–420, (2001).
76. Millar, P.W. Exit properties of processes with stationary independent increments. *Trans. Amer. Math. Soc.*, **178**, 459–479, (1973).
77. Millar, P.W. Zero–one laws and the minimum of a Markov process. *Trans. Amer. Math. Soc.* **226**, 365–391, (1977).
78. Nguyen-Ngoc, L. and Yor, M. Some martingales associated to reflected Lévy processes. *Sem. de Probab. XXXVIII, Lecture Notes in Math.*, **1857**, 42–69, (2004).
79. Pecherskii, E.A. and Rogozin, B.A. On the joint distribution of random variables associated with fluctuations of a process with independent increments. *Theory Probab. Appl.*, **14**, 410–423, (1969).
80. Pistorius, M.R. On exit and ergodicity of the spectrally negative Lévy process reflected at its infimum. *J. Theor. Probab.* **17**, 183–220, (2004).
81. Pistorius, M.R. A potential-theoretical review of some exit problems of spectrally negative Lévy processes. *Séminaire de Probabilités XXXVIII, Lecture Notes in Math.*, **1857**, 30–41, (2004).
82. Pitman, J.W. One-dimensional Brownian motion and the three-dimensional Bessel process. *Adv. Appl. Probab.*, **7**, 511–526, (1975).
83. Pruitt, W.E. The growth of random walks and Lévy processes. *Ann. Probab.* **9**, 948–956, (1981).
84. Rivero, V. Sinai’s condition for real valued Lévy processes. Preprint, (2005).
85. Rogers, L.C.G. A new identity for real Lévy processes. *Ann. Inst. Henri Poincaré*, **20**, 21–34, (1984).
86. Rogers, L.C.G. The two-sided exit problem for spectrally positive Lévy processes. *Adv. Appl. Probab.*, **22**, 486–487, (1990).

87. Rogers, L.C.G. Evaluating first-passage probabilities for spectrally one-sided Lévy processes. *J. Appl. Probab.*, **37**, 1173–1180, (2000).
88. Rogozin, B.A. Local behaviour of processes with independent increments. *Theory Probab. Appl.*, **13**, 482–486, (1968).
89. Rogozin, B.A. The distribution of the first hit for stable and asymptotically stable walks in an interval. *Theory Probab. Appl.* **17**, 332–338, (1968).
90. Sato, K-I. *Lévy Processes and Infinitely Divisible Distributions*, Cambridge University Press, Cambridge, (1999).
91. Sato, K-I. Basic results on Lévy processes. In: *Lévy Processes, Theory and Applications*, O. E. Barndorff-Nielsen, T. Mikosch, S. Resnick, Eds, Birkhäuser, Boston, (2001).
92. Silverstein, M.L. Classification of coharmonic and coinvariant functions for a Lévy process. *Ann. Probab.*, **8**, 539–575, (1980).
93. Skorokhod, A.V. Limit theorems for stochastic processes with independent increments. *Theory Probab. and Appl.*, **2**, 138–171, (1957).
94. Spitzer, F. *Principles of Random Walk*; 2nd edition, Springer-Verlag, New York, (1976).
95. Suprun, V.N. The ruin problem and the resolvent of a killed independent increment process. *Ukrainian Math. J.*, **28**, 39–45, (1976).
96. Takács, L. *Combinatorial methods in the theory of stochastic processes*. Wiley, New York, (1966).
97. Tanaka, H. Time reversal of random walks in one dimension. *Tokyo J. Math.*, **12**, 159–174, (1989).
98. Tanaka, H. Lévy processes conditioned to stay positive and diffusions in random environments. *Advanced Studies in Pure Mathematics*, **39**, 355–376, (2004).
99. Vigon, V. Votre Lévy ramp-t-il? *J. London Math. Soc.* **65**, 243–256, (2002).
100. Vigon, V. Simplifiez vos Lévy en titillant la factorisation de Wiener–Hopf. Thèse de l’INSA, Rouen, (2002). (This is down-loadable from: www-irma.u-strasbg.fr/~vigon/index.htm)
101. Vigon, V. Abrupt Lévy processes. *Stoch. Proc. Appl.*, **103**, 155–168, (2003).
102. Vigon, V. Comparaison des deux composantes d’un subordonateur bivarié, puis étude de l’enveloppe supérieure d’un processus de Lévy. *Ann. I. H. Poincaré*, **39**, 993–1011, (2003).
103. Williams, D. Path decomposition and continuity of local time for one-dimensional diffusions. *Proc. London Math. Soc.*, **28**, 738–768, (1974).

Index

- arc-sine law for Lévy processes, 32
- arc-sine law for subordinators, 15
- associated Lévy measure, 98

- bounded variation, 6, 7
- Brownian motion, 3, 5, 106

- Cauchy process, 3
- characteristic measure, 4, 81, 109
- characteristics, 2, 17, 43, 51
- compensation formula, 5, 13, 23, 49, 72
- compound Poisson process, 3, 7, 32
- conditioning to stay positive, 81
- continuous passage, 13, 34
- counting process, 4
- creeping, 14, 35, 56, 59

- drift coefficient, 6
- drift of ladder height process, 35
- drift to infinity, 32
- duality, 8, 28, 43

- entrance law, 43
- équation amicale, 43, 52, 54, 62
- excessive, 82
- excursion measure, 22
- excursion measure of the reflected process, 88
- excursion process, 23
- excursion space, 22
- excursion theory, 108
- excursions of the reflected process, 19
- exit problem, 70, 95, 99, 103
- exit time, 104

- exponential decay, 107
- exponential formula, 5, 97

- Feller property, 8
- Feller's lemma, 26
- Fristedt's formula, 26, 29, 31, 41, 97
- Frullani integral, 10, 29, 97

- Gamma process, 3, 10

- h-transform, 81
- harmonic, 81, 109
- harmonic renewal measure, 42
- holding point, 20, 23

- instantaneous point, 20
- invariant, 81, 82
- inverse local time, 22, 66
- irregular point, 24

- killed subordinator, 17

- ladder height process, 26
- ladder process, bivariate, 27, 41
- ladder time process, 26, 66
- Laplace exponent, 9, 66
 - of a spectrally negative process, 95
 - of the bivariate ladder process, 29, 97
 - of the ladder time process, 32
- laws of large numbers, 129
- Lévy exponent, 2
- Lévy-Itô decomposition, 5
- Lévy-Khintchine formula, 2
 - for spectrally negative processes, 95

- local limit theorem, 68
- local time, 19
- Markov property, 7
- Martin boundary, 43
- mean ladder height, 53
- Mittag-Leffler function, 106
- optional stopping, 74
- oscillation, 32
- overshoot, 13, 47, 49, 105, 123
- passage across a level, 13
- passage time, 34, 37, 96, 105
- pathwise constructions of the process
 - conditioned to stay positive, 89
- Pitman's decomposition, 92
- Poisson measure, 3
- Poisson point process, 4, 23
- potential measure, 10
- Pruitt's bounds, 70
- q -scale function, 104
- random walk, 35, 75, 98
- reflected process, 27, 108
- regular downwards, 81
- regular upwards, 81
- regularity of a half-line, 32, 61
 - for spectrally negative processes, 96
- regularity of a point for a Markov process, 20
- relative stability, 113, 124
- relative stability of the overshoot, 123
- renewal function, 10, 33, 82
 - Erickson type bound, 39, 52
- resolvent kernel, 8
- scale function, 100
- Sparre Andersen identity, 32
- spectrally negative, 73, 95
- spectrally positive, 79
- Spitzer's condition, 32, 65, 69
 - for $0 < \rho < 1$, 79
 - for $\rho = 0, 1$, 76
- Spitzer's formula, 32
 - for random walks, 26
- stable process, 3, 29, 50, 100, 106, 111
- stable subordinator, 10, 50
- strong Feller property, 8
- strong law for subordinators, 16
- strong law of large numbers, 61, 124
- strong Markov property, 8
- subadditivity, 11, 82
- subordinator, 9
- supremum process, 59
- time-reversal, 8, 28
- undershoot, 13, 49
- Wiener-Hopf factorisation, 28, 36, 43, 96, 105
 - for Brownian motion, 29
 - for random walks, 26
 - of the Lévy exponent, 31
- Williams' type decomposition at the minimum, 84
- zero set of a Markov process, 20
- zero set of the reflected process, 27

List of Participants

Lecturers

Ronald DONEY	Univ. Manchester, UK
Steven N. EVANS	Univ. California, Berkeley, USA
Cédric VILLANI	ENS Lyon, F

Participants

Larbi ALILI	Univ. Warwick, Coventry, UK
Sylvain ARLOT	Univ. Paris-Sud, Orsay, F
Fabrice BAUDOIN	Univ. Paul Sabatier, Toulouse, F
Hermine BIERMÉ	Univ. Orléans, F
François BOLLEY	ENS Lyon, F
Maria Emilia CABALERRO	Univ. Mexico
Francesco CARAVENNA	Univ. Pierre et Marie Curie, Paris, F
Loïc CHAUMONT	Univ. Pierre et Marie Curie, Paris, F
Charles CUTHBERTSON	Univ. Oxford, UK
Latifa DEBBI	Univ. Henri Poincaré, Nancy, F
Pierre DEBS	Univ. Henri Poincaré, Nancy, F
Jérôme DEMANGE	Univ. Paul Sabatier, Toulouse, F
Hacène DJELLOUT	Univ. Blaise Pascal, Clermont-Ferrand, F
Coralie DUBOIS	Univ. Claude Bernard, Lyon, F
Anne EYRAUD-LOISEL	Univ. Claude Bernard, Lyon, F
Neil FARRICKER	Univ. Manchester, UK

Uwe FRANZ	Inst. Biomath. Biometry, Neuherberg, D
Christina GOLDSCHMIDT	Univ. Cambridge, UK
Jean-Baptiste GOUÉRÉ	Univ. Claude Bernard, Lyon, F
Mathieu GOURCY	Univ. Blaise Pascal, Clermont-Ferrand, F
Priscilla GREENWOOD	Arizona State Univ., Tempe, USA
Bénédicte HAAS	Univ. Oxford, UK
Christopher HOWITT	Univ. Oxford, UK
Jérémie JAKUBOWICZ	ENS Cachan, F
Aldéric JOULIN	Univ. La Rochelle, F
Pawel KISOWSKI	Univ. Wroclaw, Poland
Nathalie KRELL	Univ. Pierre et Marie Curie, Paris, F
Aline KURTZMANN	Univ. Neuchâtel, Switzerland
Krzysztof LATUSZYŃSKI	Warsaw School Economics, Poland
Liangzhen LEI	Univ. Blaise Pascal, Clermont-Ferrand, F
Christophe LEURIDAN	Univ. J. Fourier, Grenoble, F
Stéphane LOISEL	Univ. Claude Bernard, Lyon, F
Jose Alfredo LOPEZ MIMBELA	CIMAT, Guanajuato, Mexico
Mike LUDKOVSKI	Princeton Univ., USA
Yutao MA	Univ. La Rochelle, F
Philippe MARCHAL	ENS Paris, F
James MARTIN	Univ. Paris 7, F
Marie-Amélie MORLAIS	Univ. Rennes 1, F
Jan OBLÓJ	Univ. Pierre et Marie Curie, Paris, F
Cyril ODASSO	Univ. Rennes 1, F
Juan Carlos PARDO MILLAN	Univ. Pierre et Marie Curie, Paris, F
Robert PHILIPPOWSKI	Univ. Bonn, D
Jean PICARD	Univ. Blaise Pascal, Clermont-Ferrand, F
Victor RIVERO MERCADO	Univ. Paris 10, F
Erwan SAINT LOUBERT BIÉ	Univ. Blaise Pascal, Clermont-Ferrand, F
Catherine SAVONA	Univ. Blaise Pascal, Clermont-Ferrand, F
François SIMENHAUS	Univ. Pierre et Marie Curie, Paris, F
Tommi SOTTINEN	Univ. Helsinki, Finland

I. TORRECILLA-TARANTINO	Univ. Barcelona, Spain
Gerónimo URIBE	Univ. Mexico
Vincent VIGON	Univ. Strasbourg, F
Matthias WINKEL	Univ. Oxford, UK
Marcus WUNSCH	Univ. Wien, Austria

List of Short Lectures

Larbi Alili	On some functional transformations and an application to the boundary crossing problem for a Brownian motion
Fabrice Baudoin	Stochastic differential equations and differential operators
Hermine Biermé	Random fields: self-similarity, anisotropy and directional analysis
François Bolley	Approximation of some diffusion PDE by some interacting particle system
Francesco Caravenna	A renewal theory approach to periodically inhomogeneous polymer models
Loïc Chaumont	On positive self-similar Markov processes
Charles Cuthbertson	Multiple selective sweeps and multi-type branching
Jérôme Demange	Porous media equation and Sobolev inequalities
Anne Eyraud-Loisel	Backward and forward-backward stochastic differential equations with enlarged filtration
Neil Farricker	Spectrally negative Lévy processes
Uwe Franz	A probabilistic model for biological clocks

Christina Goldschmidt	Random recursive trees and the Bolthausen–Sznitman coalescent
Cindy Greenwood	Some problem areas which invite probabilists
Bénédicte Haas	Equilibrium for fragmentation with immigration
Chris Howitt	Sticky particles and sticky flows
Aldéric Joulin	On maximal inequalities for α -stable integrals: the case α close to two
Nathalie Krell	On the rates of decay of fragments in homogeneous fragmentations
Aline Kurtzmann	About reinforced diffusions
Krzysztof Łatuszyński	Ergodicity of adaptive Monte Carlo
Christophe Leuridan	Constructive Markov chains indexed by \mathbb{Z}
Stéphane Loisel	Differentiation of some functionals of risk processes and optimal reserve allocation
Yutao Ma	Convex concentration inequalities and forward-backward stochastic calculus
José Alfredo López-Mimbela	Finite time blowup of semilinear PDE's with symmetric α -stable generators
Mike Ludkovski	Optimal switching with applications to finance
Philippe Marchal	Concentration inequalities for infinitely divisible laws
James Martin	Stationary distributions of multi-type exclusion processes
Marie-Amélie Morlais	An application of the theory of backward stochastic differential equations in finance
Jan Oblój	On local martingales which are functions of ... and their applications
Cyril Odasso	Exponential mixing for stochastic PDEs: the non-additive case
Juan Carlos Pardo-Millan	Asymptotic results for positive self-similar Markov processes

Robert Philipowski	Propagation du chaos pour l'équation des milieux poreux
Tommi Sottinen	On the equivalence of multiparameter Gaussian processes
Gerónimo Uribe	Markov bridges, backward times, and a Brownian fragmentation
Vincent Vigon	Certains comportements des processus de Lévy sont décriptables par la factorisation de Wiener-Hopf
Matthias Winkel	Coupling construction of Lévy trees
Marcus Wunsch	A stability result for drift-diffusion-Poisson systems

Lecture Notes in Mathematics

For information about earlier volumes
please contact your bookseller or Springer
LNM Online archive: springerlink.com

- Vol. 1711: W. Ricker, Operator Algebras Generated by Commuting Projections: A Vector Measure Approach (1999)
- Vol. 1712: N. Schwartz, J. J. Madden, Semi-algebraic Function Rings and Reflectors of Partially Ordered Rings (1999)
- Vol. 1713: F. Bethuel, G. Huisken, S. Müller, K. Steffen, Calculus of Variations and Geometric Evolution Problems, Cetraro, 1996. Editors: S. Hildebrandt, M. Struwe (1999)
- Vol. 1714: O. Diekmann, R. Durrett, K. P. Hadeler, P. K. Maini, H. L. Smith, Mathematics Inspired by Biology, Martina Franca, 1997. Editors: V. Capasso, O. Diekmann (1999)
- Vol. 1715: N. V. Krylov, M. Röckner, J. Zabczyk, Stochastic PDE's and Kolmogorov Equations in Infinite Dimensions, Cetraro, 1998. Editor: G. Da Prato (1999)
- Vol. 1716: J. Coates, R. Greenberg, K. A. Ribet, K. Rubin, Arithmetic Theory of Elliptic Curves, Cetraro, 1997. Editor: C. Viola (1999)
- Vol. 1717: J. Bertoin, F. Martinelli, Y. Peres, Lectures on Probability Theory and Statistics, Saint-Flour, 1997. Editor: P. Bernard (1999)
- Vol. 1718: A. Eberle, Uniqueness and Non-Uniqueness of Semigroups Generated by Singular Diffusion Operators (1999)
- Vol. 1719: K. R. Meyer, Periodic Solutions of the N-Body Problem (1999)
- Vol. 1720: D. Elworthy, Y. Le Jan, X-M. Li, On the Geometry of Diffusion Operators and Stochastic Flows (1999)
- Vol. 1721: A. Iarrobino, V. Kanev, Power Sums, Gorenstein Algebras, and Determinantal Loci (1999)
- Vol. 1722: R. McCutcheon, Elementary Methods in Ergodic Ramsey Theory (1999)
- Vol. 1723: J. P. Croisille, C. Lebeau, Diffraction by an Immersed Elastic Wedge (1999)
- Vol. 1724: V. N. Kolokoltsov, Semiclassical Analysis for Diffusions and Stochastic Processes (2000)
- Vol. 1725: D. A. Wolf-Gladrow, Lattice-Gas Cellular Automata and Lattice Boltzmann Models (2000)
- Vol. 1726: V. Marić, Regular Variation and Differential Equations (2000)
- Vol. 1727: P. Kravanja, M. Van Barel, Computing the Zeros of Analytic Functions (2000)
- Vol. 1728: K. Gatermann, Computer Algebra Methods for Equivariant Dynamical Systems (2000)
- Vol. 1729: J. Azéma, M. Émery, M. Ledoux, M. Yor (Eds.), Séminaire de Probabilités XXXIV (2000)
- Vol. 1730: S. Graf, H. Luschgy, Foundations of Quantization for Probability Distributions (2000)
- Vol. 1731: T. Hsu, Quilts: Central Extensions, Braid Actions, and Finite Groups (2000)
- Vol. 1732: K. Keller, Invariant Factors, Julia Equivalences and the (Abstract) Mandelbrot Set (2000)
- Vol. 1733: K. Ritter, Average-Case Analysis of Numerical Problems (2000)
- Vol. 1734: M. Espedal, A. Fasano, A. Mikelić, Filtration in Porous Media and Industrial Applications, Cetraro 1998. Editor: A. Fasano. 2000.
- Vol. 1735: D. Yafaev, Scattering Theory: Some Old and New Problems (2000)
- Vol. 1736: B. O. Turesson, Nonlinear Potential Theory and Weighted Sobolev Spaces (2000)
- Vol. 1737: S. Wakabayashi, Classical Microlocal Analysis in the Space of Hyperfunctions (2000)
- Vol. 1738: M. Émery, A. Nemirovski, D. Voiculescu, Lectures on Probability Theory and Statistics (2000)
- Vol. 1739: R. Burkard, P. Deufhard, A. Jameson, J.-L. Lions, G. Strang, Computational Mathematics Driven by Industrial Problems, Martina Franca, 1999. Editors: V. Capasso, H. Engl, J. Periaux (2000)
- Vol. 1740: B. Kawohl, O. Pironneau, L. Tartar, J.-P. Zolesio, Optimal Shape Design, Tróia, Portugal 1999, Editors: A. Cellina, A. Ornelas (2000)
- Vol. 1741: E. Lombardi, Oscillatory Integrals and Phenomena Beyond all Algebraic Orders (2000)
- Vol. 1742: A. Unterberger, Quantization and Non-holomorphic Modular Forms (2000)
- Vol. 1743: L. Habermann, Riemannian Metrics of Constant Mass and Moduli Spaces of Conformal Structures (2000)
- Vol. 1744: M. Kunze, Non-Smooth Dynamical Systems (2000)
- Vol. 1745: V. D. Milman, G. Schechtman (Eds.), Geometric Aspects of Functional Analysis. Israel Seminar 1999-2000 (2000)
- Vol. 1746: A. Degtyarev, I. Itenberg, V. Kharlamov, Real Enriques Surfaces (2000)
- Vol. 1747: L. W. Christensen, Gorenstein Dimensions (2000)
- Vol. 1748: M. Ruzicka, Electrorheological Fluids: Modeling and Mathematical Theory (2001)
- Vol. 1749: M. Fuchs, G. Seregin, Variational Methods for Problems from Plasticity Theory and for Generalized Newtonian Fluids (2001)
- Vol. 1750: B. Conrad, Grothendieck Duality and Base Change (2001)
- Vol. 1751: N. J. Cutland, Loeb Measures in Practice: Recent Advances (2001)
- Vol. 1752: Y. V. Nesterenko, P. Philippon, Introduction to Algebraic Independence Theory (2001)
- Vol. 1753: A. I. Bobenko, U. Eitner, Painlevé Equations in the Differential Geometry of Surfaces (2001)
- Vol. 1754: W. Bertram, The Geometry of Jordan and Lie Structures (2001)
- Vol. 1755: J. Azéma, M. Émery, M. Ledoux, M. Yor (Eds.), Séminaire de Probabilités XXXV (2001)
- Vol. 1756: P. E. Zhidkov, Korteweg de Vries and Nonlinear Schrödinger Equations: Qualitative Theory (2001)

- Vol. 1757: R. R. Phelps, Lectures on Choquet's Theorem (2001)
- Vol. 1758: N. Monod, Continuous Bounded Cohomology of Locally Compact Groups (2001)
- Vol. 1759: Y. Abe, K. Kopfermann, Toroidal Groups (2001)
- Vol. 1760: D. Filipović, Consistency Problems for Heath-Jarrow-Morton Interest Rate Models (2001)
- Vol. 1761: C. Adelmann, The Decomposition of Primes in Torsion Point Fields (2001)
- Vol. 1762: S. Cerrai, Second Order PDE's in Finite and Infinite Dimension (2001)
- Vol. 1763: J.-L. Loday, A. Frabetti, F. Chapoton, F. Goichot, Dialgebras and Related Operads (2001)
- Vol. 1764: A. Cannas da Silva, Lectures on Symplectic Geometry (2001)
- Vol. 1765: T. Kerler, V. V. Lyubashenko, Non-Semisimple Topological Quantum Field Theories for 3-Manifolds with Corners (2001)
- Vol. 1766: H. Hennion, L. Hervé, Limit Theorems for Markov Chains and Stochastic Properties of Dynamical Systems by Quasi-Compactness (2001)
- Vol. 1767: J. Xiao, Holomorphic Q Classes (2001)
- Vol. 1768: M. J. Pflaum, Analytic and Geometric Study of Stratified Spaces (2001)
- Vol. 1769: M. Alberich-Carramiñana, Geometry of the Plane Cremona Maps (2002)
- Vol. 1770: H. Gluesing-Luerssen, Linear Delay-Differential Systems with Commensurate Delays: An Algebraic Approach (2002)
- Vol. 1771: M. Émery, M. Yor (Eds.), Séminaire de Probabilités 1967-1980. A Selection in Martingale Theory (2002)
- Vol. 1772: F. Burstall, D. Ferus, K. Leschke, F. Pedit, U. Pinkall, Conformal Geometry of Surfaces in S^4 (2002)
- Vol. 1773: Z. Arad, M. Muzychuk, Standard Integral Table Algebras Generated by a Non-real Element of Small Degree (2002)
- Vol. 1774: V. Runde, Lectures on Amenability (2002)
- Vol. 1775: W. H. Meeks, A. Ros, H. Rosenberg, The Global Theory of Minimal Surfaces in Flat Spaces. Martina Franca 1999. Editor: G. P. Pirola (2002)
- Vol. 1776: K. Behrend, C. Gomez, V. Tarasov, G. Tian, Quantum Cohomology. Cetraro 1997. Editors: P. de Bartolomeis, B. Dubrovin, C. Reina (2002)
- Vol. 1777: E. García-Río, D. N. Kupeli, R. Vázquez-Lorenzo, Osserman Manifolds in Semi-Riemannian Geometry (2002)
- Vol. 1778: H. Kiechle, Theory of K-Loops (2002)
- Vol. 1779: I. Chueshov, Monotone Random Systems (2002)
- Vol. 1780: J. H. Bruinier, Borcherds Products on $O(2,1)$ and Chern Classes of Heegner Divisors (2002)
- Vol. 1781: E. Bolthausen, E. Perkins, A. van der Vaart, Lectures on Probability Theory and Statistics. Ecole d'Été de Probabilités de Saint-Flour XXIX-1999. Editor: P. Bernard (2002)
- Vol. 1782: C.-H. Chu, A. T.-M. Lau, Harmonic Functions on Groups and Fourier Algebras (2002)
- Vol. 1783: L. Grüne, Asymptotic Behavior of Dynamical and Control Systems under Perturbation and Discretization (2002)
- Vol. 1784: L. H. Eliasson, S. B. Kuksin, S. Marmi, J.-C. Yoccoz, Dynamical Systems and Small Divisors. Cetraro, Italy 1998. Editors: S. Marmi, J.-C. Yoccoz (2002)
- Vol. 1785: J. Arias de Reyna, Pointwise Convergence of Fourier Series (2002)
- Vol. 1786: S. D. Cutkosky, Monomialization of Morphisms from 3-Folds to Surfaces (2002)
- Vol. 1787: S. Caenepeel, G. Militaru, S. Zhu, Frobenius and Separable Functors for Generalized Module Categories and Nonlinear Equations (2002)
- Vol. 1788: A. Vasil'ev, Moduli of Families of Curves for Conformal and Quasiconformal Mappings (2002)
- Vol. 1789: Y. Sommerhäuser, Yetter-Drinfel'd Hopf algebras over groups of prime order (2002)
- Vol. 1790: X. Zhan, Matrix Inequalities (2002)
- Vol. 1791: M. Knebusch, D. Zhang, Manis Valuations and Prüfer Extensions I: A new Chapter in Commutative Algebra (2002)
- Vol. 1792: D. D. Ang, R. Gorenflo, V. K. Le, D. D. Trong, Moment Theory and Some Inverse Problems in Potential Theory and Heat Conduction (2002)
- Vol. 1793: J. Cortés Monforte, Geometric, Control and Numerical Aspects of Nonholonomic Systems (2002)
- Vol. 1794: N. Pytheas Fogg, Substitution in Dynamics, Arithmetics and Combinatorics. Editors: V. Berthé, S. Ferenczi, C. Mauduit, A. Siegel (2002)
- Vol. 1795: H. Li, Filtered-Graded Transfer in Using Non-commutative Gröbner Bases (2002)
- Vol. 1796: J.M. Melenk, hp-Finite Element Methods for Singular Perturbations (2002)
- Vol. 1797: B. Schmidt, Characters and Cyclotomic Fields in Finite Geometry (2002)
- Vol. 1798: W.M. Oliva, Geometric Mechanics (2002)
- Vol. 1799: H. Pajot, Analytic Capacity, Rectifiability, Menger Curvature and the Cauchy Integral (2002)
- Vol. 1800: O. Gabber, L. Ramero, Almost Ring Theory (2003)
- Vol. 1801: J. Azéma, M. Émery, M. Ledoux, M. Yor (Eds.), Séminaire de Probabilités XXXVI (2003)
- Vol. 1802: V. Capasso, E. Merzbach, B. G. Ivanoff, M. Dozzi, R. Dalang, T. Mountford, Topics in Spatial Stochastic Processes. Martina Franca, Italy 2001. Editor: E. Merzbach (2003)
- Vol. 1803: G. Dolzmann, Variational Methods for Crystalline Microstructure – Analysis and Computation (2003)
- Vol. 1804: I. Cherednik, Ya. Markov, R. Howe, G. Lusztig, Iwahori-Hecke Algebras and their Representation Theory. Martina Franca, Italy 1999. Editors: V. Baldoni, D. Barbasch (2003)
- Vol. 1805: F. Cao, Geometric Curve Evolution and Image Processing (2003)
- Vol. 1806: H. Broer, I. Hoveijn, G. Lunther, G. Vegter, Bifurcations in Hamiltonian Systems. Computing Singularities by Gröbner Bases (2003)
- Vol. 1807: V. D. Milman, G. Schechtman (Eds.), Geometric Aspects of Functional Analysis. Israel Seminar 2000-2002 (2003)
- Vol. 1808: W. Schindler, Measures with Symmetry Properties (2003)
- Vol. 1809: O. Steinbach, Stability Estimates for Hybrid Coupled Domain Decomposition Methods (2003)
- Vol. 1810: J. Wengenroth, Derived Functors in Functional Analysis (2003)
- Vol. 1811: J. Stevens, Deformations of Singularities (2003)
- Vol. 1812: L. Ambrosio, K. Deckelnick, G. Dziuk, M. Mimura, V. A. Solonnikov, H. M. Sonner, Mathematical Aspects of Evolving Interfaces. Madeira, Funchal, Portugal 2000. Editors: P. Colli, J. F. Rodrigues (2003)
- Vol. 1813: L. Ambrosio, L. A. Caffarelli, Y. Brenier, G. Buttazzo, C. Villani, Optimal Transportation and its

- Applications. Martina Franca, Italy 2001. Editors: L. A. Caffarelli, S. Salsa (2003)
- Vol. 1814: P. Bank, F. Baudoin, H. Föllmer, L.C.G. Rogers, M. Soner, N. Touzi, Paris-Princeton Lectures on Mathematical Finance 2002 (2003)
- Vol. 1815: A. M. Vershik (Ed.), Asymptotic Combinatorics with Applications to Mathematical Physics. St. Petersburg, Russia 2001 (2003)
- Vol. 1816: S. Albeverio, W. Schachermayer, M. Tala-grand, Lectures on Probability Theory and Statistics. Ecole d'Été de Probabilités de Saint-Flour XXX-2000. Editor: P. Bernard (2003)
- Vol. 1817: E. Koelink, W. Van Assche (Eds.), Orthogonal Polynomials and Special Functions. Leuven 2002 (2003)
- Vol. 1818: M. Bildhauer, Convex Variational Problems with Linear, nearly Linear and/or Anisotropic Growth Conditions (2003)
- Vol. 1819: D. Masser, Yu. V. Nesterenko, H. P. Schlickewei, W. M. Schmidt, M. Waldschmidt, Diophantine Approximation. Cetraro, Italy 2000. Editors: F. Amoroso, U. Zannier (2003)
- Vol. 1820: F. Hiai, H. Kosaki, Means of Hilbert Space Operators (2003)
- Vol. 1821: S. Teufel, Adiabatic Perturbation Theory in Quantum Dynamics (2003)
- Vol. 1822: S.-N. Chow, R. Conti, R. Johnson, J. Mallet-Paret, R. Nussbaum, Dynamical Systems. Cetraro, Italy 2000. Editors: J. W. Macki, P. Zecca (2003)
- Vol. 1823: A. M. Anile, W. Allegretto, C. Ringhofer, Mathematical Problems in Semiconductor Physics. Cetraro, Italy 1998. Editor: A. M. Anile (2003)
- Vol. 1824: J. A. Navarro González, J. B. Sancho de Salas, \mathcal{C}^∞ - Differentiable Spaces (2003)
- Vol. 1825: J. H. Bramble, A. Cohen, W. Dahmen, Multiscale Problems and Methods in Numerical Simulations, Martina Franca, Italy 2001. Editor: C. Canuto (2003)
- Vol. 1826: K. Dohmen, Improved Bonferroni Inequalities via Abstract Tubes. Inequalities and Identities of Inclusion-Exclusion Type. VIII, 113 p, 2003.
- Vol. 1827: K. M. Pilgrim, Combinations of Complex Dynamical Systems. IX, 118 p, 2003.
- Vol. 1828: D. J. Green, Gröbner Bases and the Computation of Group Cohomology. XII, 138 p, 2003.
- Vol. 1829: E. Altman, B. Gaujal, A. Hordijk, Discrete-Event Control of Stochastic Networks: Multimodularity and Regularity. XIV, 313 p, 2003.
- Vol. 1830: M. I. Gil', Operator Functions and Localization of Spectra. XIV, 256 p, 2003.
- Vol. 1831: A. Connes, J. Cuntz, E. Guentner, N. Higson, J. E. Kaminker, Noncommutative Geometry, Martina Franca, Italy 2002. Editors: S. Doplicher, L. Longo (2004)
- Vol. 1832: J. Azéma, M. Émery, M. Ledoux, M. Yor (Eds.), Séminaire de Probabilités XXXVII (2003)
- Vol. 1833: D.-Q. Jiang, M. Qian, M.-P. Qian, Mathematical Theory of Nonequilibrium Steady States. On the Frontier of Probability and Dynamical Systems. IX, 280 p, 2004.
- Vol. 1834: Yo. Yomdin, G. Comte, Tame Geometry with Application in Smooth Analysis. VIII, 186 p, 2004.
- Vol. 1835: O.T. Izhboldin, B. Kahn, N.A. Karpenko, A. Vishik, Geometric Methods in the Algebraic Theory of Quadratic Forms. Summer School, Lens, 2000. Editor: J.-P. Tignol (2004)
- Vol. 1836: C. Năstăsescu, F. Van Oystaeyen, Methods of Graded Rings. XIII, 304 p, 2004.
- Vol. 1837: S. Tavaré, O. Zeitouni, Lectures on Probability Theory and Statistics. Ecole d'Été de Probabilités de Saint-Flour XXXI-2001. Editor: J. Picard (2004)
- Vol. 1838: A.J. Ganesh, N.W. O'Connell, D.J. Wischik, Big Queues. XII, 254 p, 2004.
- Vol. 1839: R. Gohm, Noncommutative Stationary Processes. VIII, 170 p, 2004.
- Vol. 1840: B. Tsirelson, W. Werner, Lectures on Probability Theory and Statistics. Ecole d'Été de Probabilités de Saint-Flour XXXII-2002. Editor: J. Picard (2004)
- Vol. 1841: W. Reichel, Uniqueness Theorems for Variational Problems by the Method of Transformation Groups (2004)
- Vol. 1842: T. Johnsen, A. L. Knutsen, K_3 Projective Models in Scrolls (2004)
- Vol. 1843: B. Jefferies, Spectral Properties of Noncommuting Operators (2004)
- Vol. 1844: K.F. Siburg, The Principle of Least Action in Geometry and Dynamics (2004)
- Vol. 1845: Min Ho Lee, Mixed Automorphic Forms, Torus Bundles, and Jacobi Forms (2004)
- Vol. 1846: H. Ammari, H. Kang, Reconstruction of Small Inhomogeneities from Boundary Measurements (2004)
- Vol. 1847: T.R. Bielecki, T. Björk, M. Jeanblanc, M. Rutkowski, J.A. Scheinkman, W. Xiong, Paris-Princeton Lectures on Mathematical Finance 2003 (2004)
- Vol. 1848: M. Abate, J. E. Fornæss, X. Huang, J. P. Rosay, A. Tumanov, Real Methods in Complex and CR Geometry, Martina Franca, Italy 2002. Editors: D. Zaitsev, G. Zampieri (2004)
- Vol. 1849: Martin L. Brown, Heegner Modules and Elliptic Curves (2004)
- Vol. 1850: V. D. Milman, G. Schechtman (Eds.), Geometric Aspects of Functional Analysis. Israel Seminar 2002-2003 (2004)
- Vol. 1851: O. Catoni, Statistical Learning Theory and Stochastic Optimization (2004)
- Vol. 1852: A.S. Kechris, B.D. Miller, Topics in Orbit Equivalence (2004)
- Vol. 1853: Ch. Favre, M. Jonsson, The Valuation Tree (2004)
- Vol. 1854: O. Saeki, Topology of Singular Fibers of Differential Maps (2004)
- Vol. 1855: G. Da Prato, P.C. Kunstmann, I. Lasiecka, A. Lunardi, R. Schnaubelt, L. Weis, Functional Analytic Methods for Evolution Equations. Editors: M. Iannelli, R. Nagel, S. Piazzera (2004)
- Vol. 1856: K. Back, T.R. Bielecki, C. Hipp, S. Peng, W. Schachermayer, Stochastic Methods in Finance, Bressanone/Brixen, Italy, 2003. Editors: M. Frittelli, W. Runggaldier (2004)
- Vol. 1857: M. Émery, M. Ledoux, M. Yor (Eds.), Séminaire de Probabilités XXXVIII (2005)
- Vol. 1858: A.S. Cherny, H.-J. Engelbert, Singular Stochastic Differential Equations (2005)
- Vol. 1859: E. Letellier, Fourier Transforms of Invariant Functions on Finite Reductive Lie Algebras (2005)
- Vol. 1860: A. Borisyuk, G.B. Ermentrout, A. Friedman, D. Terman, Tutorials in Mathematical Biosciences I. Mathematical Neurosciences (2005)
- Vol. 1861: G. Benettin, J. Henrard, S. Kuksin, Hamiltonian Dynamics - Theory and Applications, Cetraro, Italy, 1999. Editor: A. Giorgilli (2005)
- Vol. 1862: B. Helffer, F. Nier, Hypocoelliptic Estimates and Spectral Theory for Fokker-Planck Operators and Witten Laplacians (2005)

- Vol. 1863: H. Führ, Abstract Harmonic Analysis of Continuous Wavelet Transforms (2005)
- Vol. 1864: K. Efsthathiou, Metamorphoses of Hamiltonian Systems with Symmetries (2005)
- Vol. 1865: D. Applebaum, B.V. R. Bhat, J. Kustermans, J. M. Lindsay, Quantum Independent Increment Processes I. From Classical Probability to Quantum Stochastic Calculus. Editors: M. Schürmann, U. Franz (2005)
- Vol. 1866: O.E. Barndorff-Nielsen, U. Franz, R. Gohm, B. Kümmerer, S. Thorbjørnsen, Quantum Independent Increment Processes II. Structure of Quantum Lévy Processes, Classical Probability, and Physics. Editors: M. Schürmann, U. Franz, (2005)
- Vol. 1867: J. Sneyd (Ed.), Tutorials in Mathematical Biosciences II. Mathematical Modeling of Calcium Dynamics and Signal Transduction. (2005)
- Vol. 1868: J. Jorgenson, S. Lang, $\text{Pos}_n(\mathbb{R})$ and Eisenstein Series. (2005)
- Vol. 1869: A. Dembo, T. Funaki, Lectures on Probability Theory and Statistics. Ecole d'Été de Probabilités de Saint-Flour XXXIII-2003. Editor: J. Picard (2005)
- Vol. 1870: V.I. Gurariy, W. Lusky, Geometry of Müntz Spaces and Related Questions. (2005)
- Vol. 1871: P. Constantin, G. Gallavotti, A.V. Kazhikhov, Y. Meyer, S. Ukai, Mathematical Foundation of Turbulent Viscous Flows, Martina Franca, Italy, 2003. Editors: M. Cannone, T. Miyakawa (2006)
- Vol. 1872: A. Friedman (Ed.), Tutorials in Mathematical Biosciences III. Cell Cycle, Proliferation, and Cancer (2006)
- Vol. 1873: R. Mansuy, M. Yor, Random Times and Enlargements of Filtrations in a Brownian Setting (2006)
- Vol. 1874: M. Yor, M. Émery (Eds.), In Memoriam Paul-André Meyer - Séminaire de probabilités XXXIX (2006)
- Vol. 1875: J. Pitman, Combinatorial Stochastic Processes. Ecole d'Été de Probabilités de Saint-Flour XXXII-2002. Editor: J. Picard (2006)
- Vol. 1876: H. Herrlich, Axiom of Choice (2006)
- Vol. 1877: J. Steuding, Value Distributions of L -Functions (2007)
- Vol. 1878: R. Cerf, The Wulff Crystal in Ising and Percolation Models, Ecole d'Été de Probabilités de Saint-Flour XXXIV-2004. Editor: Jean Picard (2006)
- Vol. 1879: G. Slade, The Lace Expansion and its Applications, Ecole d'Été de Probabilités de Saint-Flour XXXIV-2004. Editor: Jean Picard (2006)
- Vol. 1880: S. Attal, A. Joye, C.-A. Pillet, Open Quantum Systems I, The Hamiltonian Approach (2006)
- Vol. 1881: S. Attal, A. Joye, C.-A. Pillet, Open Quantum Systems II, The Markovian Approach (2006)
- Vol. 1882: S. Attal, A. Joye, C.-A. Pillet, Open Quantum Systems III, Recent Developments (2006)
- Vol. 1883: W. Van Assche, F. Marcellán (Eds.), Orthogonal Polynomials and Special Functions, Computation and Application (2006)
- Vol. 1884: N. Hayashi, E.I. Kaikina, P.I. Naumkin, I.A. Shishmarev, Asymptotics for Dissipative Nonlinear Equations (2006)
- Vol. 1885: A. Telcs, The Art of Random Walks (2006)
- Vol. 1886: S. Takamura, Splitting Deformations of Degenerations of Complex Curves (2006)
- Vol. 1887: K. Habermann, L. Habermann, Introduction to Symplectic Dirac Operators (2006)
- Vol. 1888: J. van der Hoeven, Transseries and Real Differential Algebra (2006)
- Vol. 1889: G. Osipenko, Dynamical Systems, Graphs, and Algorithms (2006)
- Vol. 1890: M. Bunge, J. Funk, Singular Coverings of Toposes (2006)
- Vol. 1891: J.B. Friedlander, D.R. Heath-Brown, H. Iwaniec, J. Kaczorowski, Analytic Number Theory, Cetraro, Italy, 2002. Editors: A. Perelli, C. Viola (2006)
- Vol. 1892: A. Baddeley, I. Bárány, R. Schneider, W. Weil, Stochastic Geometry, Martina Franca, Italy, 2004. Editor: W. Weil (2007)
- Vol. 1893: H. Hanßmann, Local and Semi-Local Bifurcations in Hamiltonian Dynamical Systems, Results and Examples (2007)
- Vol. 1894: C.W. Groetsch, Stable Approximate Evaluation of Unbounded Operators (2007)
- Vol. 1895: L. Molnár, Selected Preserver Problems on Algebraic Structures of Linear Operators and on Function Spaces (2007)
- Vol. 1896: P. Massart, Concentration Inequalities and Model Selection, Ecole d'Été de Probabilités de Saint-Flour XXXIII-2003. Editor: J. Picard (2007)
- Vol. 1897: R.A. Doney, Fluctuation Theory for Lévy Processes, Ecole d'Été de Probabilités de Saint-Flour XXXV-2005. Editor: J. Picard (2007)
- Vol. 1898: H.R. Beyer, Beyond Partial Differential Equations, On linear and Quasi-Linear Abstract Hyperbolic Evolution Equations (2007)
- Vol. 1899: Séminaire de Probabilités XL. Editors: C. Donati-Martin, M. Émery, A. Rouault, C. Stricker (2007)
- Vol. 1900: E. Bolthausen, A. Bovier (Eds.), Spin Glasses (2007)
- Vol. 1901: O. Wittenberg, Intersections de deux quadriques et pinceaux de courbes de genre 1, Intersections of Two Quadrics and Pencils of Curves of Genus 1 (2007)
- Vol. 1902: A. Isaev, Lectures on the Automorphism Groups of Kobayashi-Hyperbolic Manifolds (2007)
- Vol. 1903: G. Kresin, V. Maz'ya, Sharp Real-Part Theorems (2007)

Recent Reprints and New Editions

- Vol. 1618: G. Pisier, Similarity Problems and Completely Bounded Maps. 1995 – 2nd exp. edition (2001)
- Vol. 1629: J.D. Moore, Lectures on Seiberg-Witten Invariants. 1997 – 2nd edition (2001)
- Vol. 1638: P. Vanhaecke, Integrable Systems in the realm of Algebraic Geometry. 1996 – 2nd edition (2001)
- Vol. 1702: J. Ma, J. Yong, Forward-Backward Stochastic Differential Equations and their Applications. 1999 – Corr. 3rd printing (2005)
- Vol. 830: J.A. Green, Polynomial Representations of GL_n , with an Appendix on Schensted Correspondence and Littelmann Paths by K. Erdmann, J.A. Green and M. Schocker 1980 – 2nd corr. and augmented edition (2007)