

Publications (Nicolas Macris, January 2018)

1. *Time dependent correlations of a one component plasma in a uniform magnetic field*, JOURNAL OF STATISTICAL PHYSICS, VOL 47, PP. 229-256 (1987); B. Jancovici, N. Macris and P. A. Martin
2. *Diamagnetic currents*, COMMUNICATIONS IN MATHEMATICAL PHYSICS, VOL 117 PP. 215-241 (1988); N. Macris, P. A. Martin and J. V. Pulé
3. *A statistical mechanical model for equilibrium ionization*, HELVETICA PHYSICA ACTA, VOL 63 PP. 705-754 (1990); N. Macris, P. A. Martin and J. V. Pulé
4. *Ionization equilibrium in the electron-proton gas*, JOURNAL OF STATISTICAL PHYSICS, VOL 60 PP. 619-637 (1990); N. Macris and P. A. Martin
5. *Atomic versus ionized states in many particles systems and the spectra of reduced density matrices: a model study*, JOURNAL OF STATISTICAL PHYSICS, VOL 67 PP. 909-956 (1992); J. L. Lebowitz, N. Macris and P. A. Martin
6. *Density of states of random Schrödinger operators with a uniform magnetic field*, LETTERS IN MATHEMATICAL PHYSICS, VOL 24 PP. 307-321 (1992); N. Macris and J. V. Pulé
7. *Pressure induced ionisation and the spectra of reduced density matrices*, STRONGLY COUPLED PLASMAS, UNIVERSITY OF ROCHESTER PRESS, eds H. M. Van Horn, S. Ichimaru (1993); N. Macris
8. *Ground state and low temperature behavior of the one dimensional Falicov-Kimball model*, EUROPHYSICS LETTERS, VOL 21 PP. 389-394 (1993); C. Gruber, J. L. Lebowitz and N. Macris
9. *Atoms at finite temperature and density and the spectrum of reduced density matrices*, MATHEMATICAL RESULTS IN QUANTUM MECHANICS IN OPERATOR THEORY: ADVANCES AND APPLICATIONS, VOL 70 PP. 191-206, (1994) ed Gohberg, Birkhauser-Verlag Basel; N. Macris and Ph. A. Martin
10. *Ground state configurations of the Falicov-Kimball model*, PHYSICAL REVIEW B, VOL 48 PP. 4312-4324 (1993); C. Gruber, J. L. Lebowitz and N. Macris
11. *Long range order in a simple model of interacting fermions*, LETTERS IN MATHEMATICAL PHYSICS, VOL 28 PP. 295-305 (1993); P. Lemberger and N. Macris
12. *A remark on the decay of correlations in one and two dimensional Hubbard model*, JOURNAL OF STATISTICAL PHYSICS, VOL 75 PP. 1179-1184 (1994); N. Macris and J. Ruiz
13. *Long range order in the Falicov-Kimball model near the symmetry point: extension of Kennedy-Lieb theorem*, REVIEWS IN MATHEMATICAL PHYSICS, VOL 6 PP. 927-946 (1994) SPECIAL ISSUE IN HONOR OF ELLIOTT LIEB AND ALSO REPRINTED IN THE STATE OF MATTER: A VOLUME DEDICATED TO ELLIOTT LIEB, eds M. Aizenman, H. Araki; J. L. Lebowitz and N. Macris
14. *Low temperature phases of itinerant fermions interacting with classical phonons: the static Holstein model*, JOURNAL OF STATISTICAL PHYSICS, VOL 76 PP. 91-123 (1994); J. L. Lebowitz and N. Macris
15. *Localization in a single band approximation to random Schroedinger operators in a magnetic field*, HELVETICA PHYSICA ACTA, VOL 68 PP. 329-364 (1995) ; T. C. Dorlas, N. Macris and J. V. Pulé
16. *An alternative formula for the number of Euler trails for a class of digraphs*, DISCRETE MATHEMATICS, VOL 154 PP. 301-305 (1996); N. Macris and J. V. Pulé
17. *Phase separation in the binary-alloy problem: The one dimensional spinless Falicov-Kimball model*, PHYSICAL REVIEW B, VOL 53 PP. 16189-16196 (1996); J. K. Freericks, C. Gruber and N. Macris)
18. *Localisation in single Landau bands*, JOURNAL OF MATHEMATICAL PHYSICS, VOL 37 PP. 1574-1595 (1996); T. C. Dorlas, N. Macris and J. V. Pulé
19. *On the flux phase conjecture at half filling: an improved proof*, JOURNAL OF STATISTICAL PHYSICS, VOL 85 PP. 745-761 (1996); N. Macris and B. Nachtergaele
20. *Periodic ground states in simple models of itinerant fermions interacting with classical fields*, PHYSICA A, VOL 232 PP. 648-656 (1996); N. Macris

21. *The Falicov-Kimball model: a review of exact results and extensions*, HELVETICA PHYSICA ACTA, VOL 69 PP. 850-907 (1996) SPECIAL ISSUE IN HONOR OF K. HEPP AND W. HUNZIKER; C. Gruber and N. Macris
22. *The Peierls instability and the flux phase problem*, IN LECTURE NOTES IN PHYSICS, VOL 477 eds Z. Petru et al, Springer-Verlag (1997); N. Macris
23. *Quantum Hall effect without divergence of the localisation length*, MATHEMATICAL RESULTS IN STATISTICAL MECHANICS PP. 239-248, eds Miracle-Solé et al, World Scientific (1998) ; T. C. Dorlas, N. Macris and J. V. Pulé
24. *Large volume asymptotics of brownian integrals and orbital magnetism*, ANNALES DE L'INSTITUT HENRI POINCARÉ, VOL 66 PP. 147-183 (1997); N. Macris, P. A. Martin and J. V. Pulé
25. *Ground states and flux configurations of the two dimensional Falicov-Kimball model*, JOURNAL OF STATISTICAL PHYSICS, VOL 86, PP. 57-108 (1997); C. Gruber, A. Messenger, N. Macris and D. Ueltschi
26. *The nature of the spectrum for a Landau hamiltonian with delta impurities*, JOURNAL OF STATISTICAL PHYSICS, VOL 87 PP. 847-875 (1997); T. C. Dorlas, N. Macris and J. V. Pulé
27. *Ground states and low temperature phases of itinerant electrons interacting with classical fields: a review of rigorous results*, JOURNAL OF MATHEMATICAL PHYSICS, VOL 38 PP. 2084-2103 (1997) SPECIAL ISSUE ON CONDENSED MATTER PHYSICS; J. L. Lebowitz and N. Macris
28. *Coexistence of long range order for two observables at finite temperatures*, JOURNAL OF PHYSICS A: MATHEMATICAL AND GENERAL, VOL 32 PP. 749-755 (1999); N. Macris and C. A. Piguet
29. *On edge states in semi-infinite quantum Hall systems*, JOURNAL OF PHYSICS A: MATHEMATICAL GENERAL, VOL 32 PP. 1985-1996 (1999); N. Macris, P. A. Martin and J. V. Pulé
30. *Phase separation and the segregation principle in the infinite-U spinless Falicov-Kimball model*, PHYSICAL REVIEW B, VOL 60 PP. 1617-1626 (1999); J. K. Freericks, C. Gruber and N. Macris
31. *Characterization of the spectrum of the Landau Hamiltonian with delta impurities*, COMMUNICATIONS IN MATHEMATICAL PHYSICS, VOL 204 PP. 367-396 (1999); T. C. Dorlas, N. Macris and J. V. Pulé
32. *Charge density wave and quantum fluctuations in a molecular crystal*, PHYSICAL REVIEW B, VOL 60 PP. 13484-13491 (1999); N. Macris, C. A. Piguet
33. *On kink states of ferromagnetic chains*, PHYSICA A, VOL 279 PP. 386-397 (2000) SPECIAL ISSUE IN HONOR OF JOEL LEBOWITZ; Ky-Thuan Bach and N. Macris
34. *Long range orders in models of itinerant electrons interacting with heavy quantum fields*, JOURNAL OF STATISTICAL PHYSICS, VOL 105 PP. 909-935 (2001); N. Macris and C. A. Piguet
35. *Higher period ordered phases on the Bethe lattice*, PHYSICAL REVIEW B, VOL 63 PP. 165111:1-11 (2001); C. Gruber, N. Macris, Ph. Royer and J. K. Freericks
36. *Intermixture of energy levels of extended edge and localized bulk states in macroscopic Hall samples*, JOURNAL OF PHYSICS A: MATHEMATICAL AND GENERAL, VOL 35 PP. 6339-6358 (2002); C. Ferrari and N. Macris
37. *Projection on higher Landau levels and non-commutative geometry*, JOURNAL OF PHYSICS A: MATHEMATICAL AND GENERAL, VOL 35 PP. 4477-4484 (2002) CORRIGENDUM VOL 35 PP 8883 (2002); N. Macris and S. Ouvry
38. *Bargmann representation for Landau levels in two dimensions*, JOURNAL OF PHYSICS A: MATHEMATICAL AND GENERAL, VOL 36 PP. 4173-4190 (2003); N. Rohringer, N. Macris and J. Burgdorfer
39. *Spectral flow and level spacing of edge states for quantum Hall hamiltonians*, JOURNAL OF PHYSICS A : MATHEMATICAL AND GENERAL, VOL 36 PP. 1565-1581 (2003); N. Macris
40. *Edge states in finite macroscopic quantum Hall samples*, JOURNAL OF MATHEMATICAL PHYSICS, VOL 44 PP. 3734-3751 (2003); C. Ferrari and N. Macris
41. *Spectral properties of finite quantum Hall systems*, OPERATOR ALGEBRAS AND MATHEMATICAL PHYSICS ed. J. M. Combes et al, Theta Foundation (2003); C. Ferrari, N. Macris

42. *Correlation inequalities: a useful tool in the theory of LDPC codes*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 2369-2373, Adelaide, September 2005; N. Macris
43. *Percolation in the signal to interference ratio graph*, 44TH ALLERTON CONFERENCE ON COMMUNICATION, CONTROL AND COMPUTING, Monticello, Illinois, September 2005; O. Dousse, M. Franceschetti, N. Macris, R. Meester and P. Thiran
44. *Sharp bounds for MAP decoding of general irregular LDPC codes*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 2259-2263, Seattle, July 2006; S. Kudekar and N. Macris
45. *Exact solution of a p -spin model and its relationship to error correcting codes*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 2264-2268, Seattle, July 2006; S. Korada, N. Macris
46. *On the relation between MAP and BP GEXIT functions of low density parity check codes*, INFORMATION THEORY WORKSHOP PP. 312-316, Uruguay, March 2006; N. Macris
47. *Percolation in the signal to interference ratio graph*, JOURNAL OF APPLIED PROBABILITY, VOL 43 PP. 552-562 (2006); O. Dousse, M. Franceschetti, N. Macris, R. Meester and P. Thiran
48. *Applications of correlation inequalities to low density graphical codes*, EUROPEAN JOURNAL OF PHYSICS B, VOL 50 PP. 51-55 (2006); arXiv:cs/0509098; N. Macris
49. *Griffiths-Kelly-Sherman correlation inequalities: a useful tool in the theory of error correcting codes*, IEEE TRANSACTIONS ON INFORMATION THEORY, VOL 53 PP. 664-683 (2007); N. Macris
50. *Sharp bounds on generalized EXIT functions*, IEEE TRANSACTIONS ON INFORMATION THEORY, VOL 53 PP. 2365-2375 (2007); arXiv:0807.3065; N. Macris
51. *Exact solution for the conditional entropy of Poissonian LDPC codes over the Binary Erasure Channel*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 1016-1021 Nice, June 2007; S. Korada, S. Kudekar and N. Macris
52. *On the concentration of the capacity for a code division multiple access system*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 2081-2086 Nice, June 2007; S. Korada, N. Macris
53. *On the capacity of a Code Division Multiple Access System*, 45TH ALLERTON CONFERENCE ON COMMUNICATION, CONTROL AND COMPUTING, Monticello, Illinois, September 2007; S. Korada and N. Macris
54. *Proof of replica formulas in the high noise regime for communication using LDGM codes*, INFORMATION THEORY WORKSHOP, PP. 416-4120, Porto, May 2008; S. Kudekar, N. Macris
55. *Concentration of magnetization for linear block codes*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 1433-1437, Toronto, July 2008; S. Korada, S. Kudekar and N. Macris
56. *Decay of correlations: an application to low density parity check codes*, 5TH INTERNATIONAL SYMPOSIUM ON TURBO CODES AND RELATED TOPICS, PP 13 - 18, Lausanne, September 2008; S. Kudekar and N. Macris
57. *Decay of correlations in low density parity check codes: low noise regime*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 2654-2658, Seoul, July 2009; arXiv:0901.3630; S. Kudekar and N. Macris
58. *Exact solution of a p -spin model with gauge symmetry*, JOURNAL OF STATISTICAL PHYSICS, VOL 136 PP. 205-230 (2009); S. Korada and N. Macris
59. *Sharp bounds for optimal decoding of Low-Density-Parity-Check codes*, IEEE TRANSACTIONS IN INFORMATION THEORY, VOL 55 PP. 4635-4650 (2009); S. Kudekar and N. Macris
60. *Coupled graphical models and their thresholds*, INFORMATION THEORY WORKSHOP, PP. 1-5, Dublin, September 2010; arXiv:1105.0785; S. H. Hassani, N. Macris and R. Urbanke
61. *Tight bounds on the capacity of binary input random CDMA systems*, IEEE TRANSACTIONS IN INFORMATION THEORY, VOL 56 PP. 5590-5613 (2010) ; arXiv:0803.1454; S. Korada and N. Macris
62. *Decay of correlations for sparse graph error correcting codes*, SIAM JOURNAL ON DISCRETE MATHEMATICS, VOL 25, PP. 956-988 (2011) SPECIAL ISSUE ON CONSTRAINT SATISFACTION PROBLEMS AND MESSAGE PASSING ALGORITHMS; arXiv:0903.1842; S. Kudekar and N. Macris

63. *Near concavity of the growth rate for coupled LDPC chains*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 356-360 St Petersburg, August 2011; arXiv:1104.0599; S. H. Hassani, N. Macris, R. Mori
64. *Chains of mean field models*, JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT, P02011, PP. 1-29 (2012); arXiv:1105.0807; S. H. Hassani, N. Macris and R. Urbanke
65. *On the convergence of loop expansions with an application to cycle codes*, INTERNATIONAL ZURICH SEMINAR ON COMMUNICATIONS (IZS), PP. 79-82 February 29-March 2, 2012; arXiv:1202.2778; <http://dx.doi.org/10.3929/ethz-a-007023900>; N. Macris and M. Vuffray
66. *Lossy source coding via spatially coupled LDGM ensembles*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 373-377 Boston, July 2012; arXiv:1202.4959; V. Aref, N. Macris, M. Vuffray and R. Urbanke
67. *How to prove the Maxwell conjecture via spatial coupling - A proof of concept*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 458-462 Boston, July 2012; A. Giurgiu, N. Macris and R. Urbanke
68. *Beyond the Bethe free energy of LDPC codes via polymer expansions*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PP. 2331-2335 Boston, July 2012; arXiv:1202.2774; N. Macris and M. Vuffray
69. *A proof of threshold saturation for spatially-coupled LDPC codes on BMS channels*, 50TH ALLERTON CONFERENCE ON COMMUNICATION, CONTROL AND COMPUTING, PP 1-9 Monticello, Illinois, September 2012; arXiv:1301.6111; S. Kumar, A. J. Young, N. Macris, and H. D. Pfister
70. *And Now to Something Completely Different: Spatial Coupling as a Proof Technique* INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 2443-2447 Istanbul, July 2013; A. Giurgiu, N. Macris and R. Urbanke
71. *Approaching the Rate-Distortion Limit by spatial Coupling with Belief Propagation and Decimation* INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 1177-1181 Istanbul, July 2013; V. Aref, N. Macris and M. Vuffray
72. *The Space of Solutions of Coupled XORSAT Formulae* INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 2453-2457 Istanbul, July 2013; PREPRINT ARXIV:1303.0540 (2013); H. Hassani, N. Macris and R. Urbanke
73. *Displacement Convexity – A Useful Framework for the Study of Spatially Coupled Codes* INFORMATION THEORY WORKSHOP, PP. 1-5 Sevilla, September 2013; arXiv:1304.6026 R. El-Khatib, N. Macris and R. Urbanke
74. *Thresholds of coupled constraint satisfaction models*, JOURNAL OF STATISTICAL PHYSICS, VOL 150 PP. 807 - 850 (2013); arXiv:1112.6320; S. H. Hassani, N. Macris and R. Urbanke
75. *Analysis of Coupled Scalar Recursions by Displacement Convexity* INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 2321-2325 Hawai, July 2014; arXiv:1701.03767; R. El-Khatib, N. Macris, Tom Richardson and R. Urbanke
76. *Threshold Saturation for Spatially-Coupled LDPC and LDGM Codes on BMS Channels*, IEEE TRANSACTIONS ON INFORMATION THEORY VOL 60, NO 12, PP. 7389-7415 (2014); arXiv:1309.7543; S. Kumar, A. J. Young, N. Macris, H. D. Pfister
77. *Approaching the rate-distortion limit with spatial coupling, belief propagation and decimation*, IEEE TRANSACTIONS ON INFORMATION THEORY VOL 61, NO 7, PP. 3954-3979 (2015); arXiv:1307.5210; V. Aref, N. Macris and M. Vuffray
78. *New Bounds for Random Constraint Satisfaction Problems via Spatial Coupling*, IN PROCEEDINGS 27TH ACM-SIAM SYMPOSIUM ON DISCRETE ALGORITHMS (SODA) 2016, PP 469-479; D. Achlioptas, H. Hassani, N. Macris and R. Urbanke
79. *Spatial Coupling as a Proof Technique and Three Applications*, IEEE TRANSACTIONS ON INFORMATION THEORY VOL 62, NO 10, PP. 5281-5295 (2016); arXiv:1301.5676; A. Giurgiu, N. Macris and R. Urbanke
80. *The Bethe Free Energy Allows to Compute the Conditional Entropy of Graphical Code Instances: A Proof from the Polymer Expansion*, IEEE TRANSACTIONS ON INFORMATION THEORY VOL 62, NO 7, PP. 4003 - 4023 (2016) ; arXiv:1310.1294; N. Macris and M. Vuffray

81. *Proof of Threshold Saturation for Spatially Coupled Sparse Superposition Codes*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 1173-1177 Barcelona, July 2016; arXiv:1603.01817; J. Barbier, M. Dia, N. Macris
82. *The velocity of the decoding wave for spatially coupled codes on BMS channels*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP. 2119-2123 Barcelona, July 2016; arXiv:1701.03764; R. El-Khatib and N. Macris
83. *Threshold Saturation of Spatially Coupled Sparse Superposition Codes for All Memoryless Channels*, INFORMATION THEORY WORKSHOP, PP. 76-80 Cambridge, September 2016; arXiv:1603.01817; J. Barbier, M. Dia, N. Macris
84. *The velocity of the decoding wave for general coupled scalar systems*, INFORMATION THEORY WORKSHOP, PP. 246-250 Cambridge, September 2016; arXiv:1701.03759; R. El-Khatib and N. Macris
85. *The Mutual Information in Random Linear Estimation*, 54TH ANNUAL ALLERTON CONFERENCE ON COMMUNICATION, CONTROL, AND COMPUTING, PP. 625-632 Allerton 2016; arXiv:1607.02335; J. Barbier, M. Dia, N. Macris, F. Krzakala
86. *Mutual information for symmetric rank-one matrix estimation: A proof of the replica formula*, 30TH CONFERENCE ON NEURAL INFORMATION PROCESSING SYSTEMS (NIPS 2016), PP. 1-9, Barcelona 2016; arXiv:1606.04142; J. Barbier, M. Dia, N. Macris, F. Krzakala, T. Lesieur, L. Zdeborova
87. *I-MMSE relations in random linear estimation and a sub-extensive interpolation method*, INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, PP 1-5, Aachen, June 2017; arXiv:1704.04158; J. Barbier, N. Macris
88. *The Velocity of the Propagating Wave for Spatially Coupled Systems with Applications to LDPC Codes*, SUBMITTED TRANSACTIONS ON INFORMATION THEORY (2017) PP. 1-33; arXiv:1701.04318; R. El-Khatib, N. Macris
89. *The Layered Structure of Tensor Estimation and its Mutual Information*, 55TH ANNUAL ALLERTON CONFERENCE ON COMMUNICATION, CONTROL, AND COMPUTING Allerton 2017; arXiv:1709.10368; J. Barbier, N. Macris, L. Miolane
90. *Stability threshold and phase transition of generalized censored block models*, INFORMATION THEORY WORKSHOP, Taiwan November 2017; Chun Lam Chan, Nicolas Macris
91. *Displacement Convexity in Spatially Coupled Scalar Recursions*, SUBMITTED TRANSACTIONS ON INFORMATION THEORY (2017) PP. 1-33; arXiv:1701.04651; R. El-Khatib, N. Macris, T. Richardson, R. Urbanke
92. *Mutual Information and Optimality of Approximate Message-Passing in Random Linear Estimation* SUBMITTED TRANSACTIONS ON INFORMATION THEORY (2017) PP. 1-36; arXiv:1701.05823; J. Barbier, N. Macris, M. Dia, F. Krzakala
93. *The stochastic interpolation method: A simple scheme to prove replica formulas in Bayesian inference* SUBMITTED PROBABILITY THEORY AND RELATED FIELDS (2017) PP. 1-26; arXiv:1705.02780; J. Barbier, N. Macris
94. *Universal Sparse Superposition Codes with Spatial Coupling and GAMP Decoding* SUBMITTED TRANSACTIONS ON INFORMATION THEORY (2017) PP. 1-29; arXiv:1707.04203; J. Barbier, M. Dia, N. Macris
95. *Phase Transitions, Optimal errors and Optimality of Message-Passing in generalized Linear Models*; arXiv:1708.03395 pp. 1-59; J. Barbier, F. Krzakala, N. Macris, L. Miolane, L. Zdeborova

Unpublished technical reports and lecture notes

- *New Bounds for Random Constraint Satisfaction Problems via Spatial Coupling*, LONG VERSION OF PUBLICATION NO 78; (Available on <http://people.epfl.ch/macris>) D. Achlioptas, H. Hassani, N. Macris and R. Urbanke
- *Localisation in the presence of magnetic fields*, PAPER PRESENTED AT IAMP SATELLITE CONFERENCE ON DISORDERED SYSTEMS PARIS 1994; T. C. Dorlas, N. Macris and J. V. Pulé

- *On the equality of edge and bulk conductance in the integer Hall effect*, PREPRINT ETHZ (2003). (Available on <http://people.epfl.ch/macris/>); N. Macris
- *Exact solution for the conditional entropy of Low-Density-Parity-Check codes by the interpolation method*, PREPRINT EPFL (2009); S. Korada, S. Kudekar, N. Macris
- *Introduction à la théorie algébrique des codes correcteurs d'erreurs*, COURS DE FORMATION CONTINUE, COMMISSION ROMANDE DE MATHÉMATIQUES (2007). N. Macris
- *N - Body Methods in Condensed Matter*, LECTURE NOTES OF THE TROISIÈME CYCLE DE LA PHYSIQUE EN SUISSE ROMANDE, 160 PAGES, FIRST VERSION 2002, SECOND REVISED VERSION 2009. Available on <http://physique.cuso.ch/cours/archives/notes-de-cours-2008/>; D. Baeriswyl and N. Macris