

# PREPRINTS - INTERNAL REPORTS

## 0.1 By the Members in Benin

1. J. Ben Geloun, J. Govaerts and M. N. Hounkonnou *A  $(p,q)$ -deformed Landau problem in a spherical harmonic well: spectrum and noncommuting coordinates*, ICMPA-MPA/2006/20; CP3-06-12; (Preprint ICMPA, Preprint CP3, 2006); e-print arXiv:hep-th/0609120 submitted to Mod. Phys. Lett. A
2. J. Ben Geloun, J. Govaerts and M. N. Hounkonnou  *$(p,q)$ -deformations and  $(p,q)$ -vector coherent states of the Jaynes-Cummings model in the rotating wave approximation*, ICMPA-MPA/2006/21; CP3-06-13; (Preprint ICMPA, Preprint CP3, 2006); e-print arXiv:quant-ph/0610192, to appear in J. Math. Phys.
3. J. Ben Geloun and M. N. Hounkonnou *Bosonic quasisdeterminant and eigenvalue problem for generalized Jaynes-Cummings operator*, ICMPA-MPA/06/36; (Preprint ICMPA, 2006)
4. J. Ben Geloun and M. N. Hounkonnou *A generalized Landau operator: spectrum, dynamical deformed symmetry, noncommuting coordinates*, ICMPA-MPA/2006/40; (Preprint ICMPA, 2006)
5. M. N. Hounkonnou and E. B. Ngompe Nkouankam *Generalized Heisenberg algebra: application to the harmonic oscillator*, ICMPA-MPA/2006/24 (Preprint ICMPA 2006)
6. M. N. Hounkonnou and E. B. Ngompe Nkouankam *Von Neumann quantization of the Landau operator on a disc: scattering, spectral and resonance properties*, ICMPA-MPA/2006/41, (Preprint ICMPA 2006)
7. M. N. Hounkonnou and E. B. Ngompe Nkouankam *Friedrichs quantization of the Landau operator on a disc: scattering, spectral and resonance properties*, ICMPA-MPA/2006/44, (Preprint ICMPA 2006)
8. M. N. Hounkonnou and M. M. Kabir *Lie group symmetry reduction of a Boussinesq system: classification of the invariance subalgebras and exact solutions*, ICMPA-MPA/2006/21, (Preprint ICMPA 2006)
9. M. N. Hounkonnou and M. M. Kabir *Nonlocal symmetry reduction and exact solutions of a Boussinesq system*, ICMPA MPA/2006/42, (Preprint ICMPA 2006)
10. M. N. Hounkonnou and M. M. Kabir *Diffusion equation modelling brain cancer treatment: Lie and direct reductions*, ICMPA MPA/2006/43, (Preprint ICMPA 2006)
11. A. Anjorin, M. N. Hounkonnou and A. Ronveaux *Some properties of solutions to Confluent, Doubleconfluent, Biconfluent and Triconfluent Heun differential equations*, ICMPA MPA/2006/43 (Preprint ICMPA 2006)
12. Ezinvi Baloïtcha and Michèle Desouter-Lecomte *A hybrid quantum/classical molecular dynamics approach: Application to proton transfer in a dissipative bath*, ICMPA/2006/47 (Preprint ICMPA 2006)

13. A. Anjorin, M. N. Hounkonnou *Factorization of confluent, doubleconfluent, biconfluent and triconfluent Heun's differential operators and associated solvable potentials*, ICMPA MPA/2006/46 (Preprint ICMPA 2006)

## 0.2 By the Members in Africa

1. B.R. Malonda-Boungou, B. M'Passi-Mabiala, S. Meza-Aguilar, C. Demangeat, *The magnetic map of MnNi alloy thin films on Co(001) and Co(111)*, ICTP preprint, IC/2005/022.
2. B. M'Passi-Mabiala, B.R. Malonda-Boungou, L. Mouketo and C. Demangeat, *The magnetic structure of FeMn layers across Cu spacer in the (001) and (111) crystallographic faces*, ICTP preprint, in press.

## 0.3 By the Members outside Africa

1. J-P. Antoine, C. Trapani and F. Tschinke, *Biweights and \*-homomorphisms of partial \*-algebras*, Int. J. Math. and Math. Sci., (to appear)
2. L. Jacques and J-P. Antoine, *Multiselective pyramidal decompositions of images: wavelets with adaptive angular selectivity*, Int. J. Wavelets, Multires. and Inform. Proc. (to appear)
3. J-P. Antoine, C. Trapani and F. Tschinke, *Continuous \*-homomorphisms of Banach partial \*-algebras*, Mediterranean J. Math. (to appear)
4. J-P. Antoine and P. Vandergheynst, *Wavelets on the two-sphere and other conic sections*, J. of Fourier Analysis and Appl. 13 (to appear)
5. P. Balazs and J-P. Antoine, *Weighted and controlled frames*, Applied Comput. Harmon. Anal. (2007) (submitted)
6. J. Ben Geloun, J. Govaerts and M. N. Hounkonnou, *A  $(p,q)$ -Deformed Landau Problem in a Spherical Harmonic Well: Spectrum and Noncommuting Coordinates*, preprint ICMPA-MAP/2006/22, CP3-06-12, e-print arXiv:hep-th/0609120, submitted for publication in Modern Physics Letters A
7. J. Ben Geloun, J. Govaerts and M. N. Hounkonnou,  *$(p,q)$ -Deformations and  $(p,q)$ -Vector Coherent States of the Jaynes-Cummings Model in the Rotating Wave Approximation*, preprint ICMP-MAP/2006/20, CP3-06-13, e-print arXiv:quant-ph/0610192, submitted for publication in the Journal of Mathematical Physics.
8. D. Lauvergnat, S. Blasco, X. Chapuisat and A. Nauts, *A simple and efficient evolution operator of time-dependant Hamiltonian: the Taylor expansion*, J. Chem. Phys. (Submitted).
9. Zhifan Chen and A. Z. Msezane, *Random Phase Approximation with Exchange for Inner-Shell Electron Transitions II*, Phys. Rev. A (Submitted, 2006).

10. D. Sokolovski, Z. Felfli, S.Yu. Ovchinnikov, J.H. Macek and A.Z. Msezane, *Regge Oscillations in Electron-Atom Elastic Cross-Sections?*, Phys. Rev. A, (Submitted, 2006)