

# 2006 SEMINARS GIVEN

## 0.1 By Members in Benin

1. M. N. Hounkonnou, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 16, Jan. 2006, *Noncommutativity in Physics*
2. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 10, Jan. 2006, *Quasideterminants: a new approach for eigenvalue problems*
3. M. N. Hounkonnou, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 16, Fev. 2006, *Basic properties of non commutative orthogonal polynomials*
4. A. Anjorin, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, Fev. 2006, *Noncommutative orthogonal polynomials*
5. M. K. Mahaman, Seminar of PDE, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 12, Fev. 2006, *A first look at group analysis of differential equations*
6. F. Massamba Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 15, Mar. 2006, *2-Dimensional Noncommutative Field Theory on the Light Cone*
7. E Baloïtcha, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 14, Apr. 2006, *Hybrid quantum/classical molecular dynamics for a proton transfer reaction coupled to a dissipative bath* (Hammes-Shiffer et al. JCP 124, 2244102(2006))
8. M. N. Hounkonnou Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 16, Apr. 2006, *Factorization of Some Confluent Heun's Differential Equations*
9. A. Anjorin Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, Apr. 2006, *Some properties of solutions to confluent Heun's differential equations (Part I)*
10. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 10, Apr. 2006, *The Landau operator (part I): a  $q$ -deformed model*

11. A. Anjorin, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, Apr. 2006, *Some properties of solutions to confluent Heun's differential equations (Part II)*
12. M. K. Mahaman, Seminar of PDE, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 12, May. 2006, *Group analysis of differential equations: Application to a Boussinesq system*
13. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 10, May. 2006, *The Landau operator (part II): a  $(p,q)$ -defomed model*
14. A. Anjorin, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, May. 2006, *Some properties of solutions to confluent Heun's differential equations (Part III)*
15. E Baloïtcha Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 14, Jun. 2006, *Dynamics of complex molecular systems with numerical kinetic energy operators in generalized coordinates*
16. A. Anjorin, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, Jun. 2006, *Heun's equation reduction to hypergeometric form*
17. M. K. Mahaman, Seminar of PDE, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 12, Jun 2006, *Nonlocal symmetry of a Boussinesq system*
18. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 10, Jul. 2006, *Jaynes-Cummings Model (part I):  $q$ -deformations and solvable models*
19. A. Anjorin, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, Jul. 2006, *Biconfluent Heun's equation reduction to hypergeometric form*
20. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 10, Jul. 2006, *Jaynes-Cummings Model (part II):  $(p,q)$ -deformations and solvable models*

21. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 10, Sept. 2006, *Quasideterminants and spin-orbit interactions models*
22. M. N. Hounkonnou, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 16, Sept. 2006, *On  $(p, q)$  deformations of the Heisenberg algebra*
23. E. B. Ngompe Nkouankam, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 13, Sept. 2006, *Generalization of the Heisenberg algebra: application to the harmonic oscillator*
24. M. K. Mahaman, Seminar of PDE, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 12, Oct. 2006, *Classical and nonclassical symmetries of a model of brain cancer treatment*
25. M. N. Hounkonnou, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 16, Oct. 2006, *Von Neumann self-adjoint extensions of linear symmetric operators in Hilbert spaces*
26. E. B. Ngompe Nkouankam, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 13, Oct. 2006, *Von Neumann quantization of Landau operator on a disc: scattering, spectral and resonance properties .*
27. A. Anjorin, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 11, Nov. 2006, *Factorization of confluent, doubleconfluent, biconfluent and triconfluent Heun's differential operators and associated solvable potentials*
28. M. K. Mahaman, Seminar of PDE, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminars code 12, Nov. 2006, *Group classification of a model of brain cancer treatment*
29. M. N. Hounkonnou, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 16, Dec. 2006, *Friedrichs extension of linear operators in Hilbert spaces*
30. E. B. Ngompe Nkouankam, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 13, Dec. 2006, *Friedrichs quantization of Landau operator on a disc: scattering, spectral and resonance properties*

31. J. Ben Geloun, Seminar of Mathematical Physics, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 10, Dec. 2006, *A generalized Landau operator: deformed symmetries and noncommuting coordinates*
32. M. N. Hounkonnou, Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 16, Dec. 2006, *On supersymmetric Sturm-Liouville problem*

## 0.2 By the Members in Africa

1. U. N. Bassey (Ibadan University, Nigeria), Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 05, Jun. 2006, *Numerical range theory for compact elements of locally convex inductive limit (-) algebras (Part I)*
2. U. N. Bassey (Ibadan University, Nigeria), Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 05, Nov. 2006, *Numerical range theory for compact elements of locally convex inductive limit (-) algebras (part II)*
3. K. Kangni (University of Cocody, Ivory Cost), Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 06, Nov. 2006, *On Harmonic analysis (Part II)*
4. K. Kangni (University of Cocody, Ivory Cost), Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 06, Nov. 2006, *Representation theory and harmonic analysis (Part I)*
5. K. Kangni (University of Cocody, Ivory Cost), Seminar of Functional Analysis and Operator Theory, 1st Seminar Room of the International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 06, Dec. 2006, *Representation theory and harmonic analysis (Part II)*
6. U. N. Bassey (Ibadan University, Nigeria), Seminar of Functional Analysis and Operator Theory, 1st Seminar d'Abomey-Calavi, ICMPA Seminar code 05, Dec. 2006, *Lamé operator and transformed variants*

## 0.3 By the Members outside Africa

1. J. Govaerts,  
Center for Particle Physics and Phenomenology, Catholic University of Louvain, Louvain-

la-Neuve (Belgium), July 12th, 2006

*A Deformation of Quantum Mechanics through the Coherent State Path Integral*

2. J. Govaerts,  
Department of Physics, Norwegian University of Science and Technology (NTNU) Trondheim (Norway), August 21st , 2006  
*A Deformation of Quantum Mechanics through the Coherent State Path Integral*
3. J. Govaerts,  
Department of Theoretical Physics, School of Physics, The University of New South Wales (UNSW), Sydney (Australia), September 26th, 2006  
*Superconductivity and Electric Fields: A Relativistic Extension to BCS Superconductivity*
4. J. Govaerts,  
The Theoretical Physics Institute, School of Mathematics and Physics University of Tasmania, Hobart (Australia) *Superconductivity and Electric Fields: A Relativistic Extension to BCS Superconductivity* December 4th, 2006
5. S. T. Ali,  
Seminar of Mathematical Physics,  
International Chair in Mathematical Physics and Applications, University of Abomey-Calavi, December 11<sup>th</sup> - December 16<sup>th</sup>, 2006,  
*Lectures on Quantization Techniques: Mathematical and Physical Aspects*
6. S. T. Ali,  
Seminar of Mathematical Physics,  
Institut de Mathématiques et de Sciences Physiques (IMSP), December 20<sup>th</sup>, 2006,  
*Vector coherent states: a quick overview*
7. S. T. Ali,  
Seminar of Mathematical Physics,  
Institut de Mathématiques et de Sciences Physiques (IMSP), December 21<sup>st</sup>, 2006,  
*On time dependent orthogonal polynomials*
8. Jean-Pierre Antoine,  
Université de Provence, LATP, CMI, Marseille, January 12<sup>th</sup>, 2006  
*Ondelettes et repères d'ondelettes sur la sphère*
9. Jean-Pierre Antoine,  
Université de Kinshasa, RDC, February 6<sup>th</sup> - February 17<sup>th</sup>, 2006  
*Lecture on quantum theory field (30h)*
10. Jean-Pierre Antoine,  
E.Schrödinger Institute, Vienna, November 20<sup>th</sup>, 2006  
*Partial inner product spaces with application to Gabor/wavelet analysis*
11. Jean-Pierre Antoine,  
Austrian Acad. Sciences, Acoustical Institute, Vienna, November 27<sup>th</sup>, 2006,  
*Wavelet analysis, from the line to the two-sphere*

12. Jean-Pierre Antoine,  
Fukuoka University, Dept of Applied Mathematics (Japan), March 20<sup>th</sup>, 2006,  
*Banach partial \*-algebras : a review*
13. Elisabeth Moyer (Harvard University, USA), Seminar of Functional Analysis and Operator Theory, 1st Room of Seminar of International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 07, Mar. 2006,  
*Environmental Science (Part I): The global climate change*
14. Elisabeth Moyer (Harvard University, USA), Seminar of Functional Analysis and Operator Theory, 1st Room of Seminar of International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 08, Mar. 2006,  
*Environmental Science (Part II): Mathematical model for a reasonable representation of current climate*
15. Elisabeth Moyer (Harvard University, USA), Seminar of Functional Analysis and Operator Theory, 1st Room of Seminar of International Chair in Mathematical Physics and Applications, Université d'Abomey-Calavi, ICMPA Seminar code 08(bis), Mar. 2006,  
*Environmental Science (Part III): A model for the current state of Atmosphere*
16. D. Lauvergnat and A. Nauts, *Expression en développement de Taylor de l'opérateur évolution pour un Hamiltonien dépendant du temps. Application : interaction d'une impulsion laser avec le fluoroproprene.*  
Laboratoire de Structure et Dynamique des Systèmes Moléculaires et Solides, 6 Juillet 2006, Montpellier.
17. D. Lauvergnat *Spectroscopie de molécules déformables : Apport des méthodes ab-initio*, Laboratoire Analyse et Modélisation pour la Biologie et l'Environnement, 26 janvier 2006, Evry.