

**Marrakesh 2006 World Conference on Differential Equations and Applications**  
**Schedule /Programme**

Thursday, June 15, 2006 (a.m.) / Jeudi 15 juin 2006 (Matin)	
8h- 8h45	<b>Registration /Inscriptions</b>
8h45 – 9h 10	<b>Opening addresses</b>
<b>Plenary lecture 1/ Conférence plénière 1</b>	
9h10 – 10h	<b>Odo Diekmann (Utrecht, The Netherlands)</b> The rythme of life : patterns of population fluctuations when individuals reproduce only once. <b>Chair: H. Hbid</b>
10h– 10h20	<b>Reception</b>
10h20 – 11h 10	<b>Hisashi Inaba (Tokyo, Japan)</b> Age structured population dynamics in mathematical epidemiology. <b>Chair: M. Khaladi</b>

Sessions Schedule/ Programme des sessions		
<b>Mathematical Epidemiology (I)</b> <b>Chair : K. Niri</b>	<b>Ordinary Differential Equations (ODE) (I)</b> <b>Chair: E. Ait Dads</b>	<b>Numerical Analysis of PDE (I)</b> <b>Chair: Z. M'Ghazli</b>
11h15- 11h45- <b>G. Sallet (Metz, France)</b> Stability analysis of some multi-compartments epidemiological models. application to Ebola.	11h15- 11h45- <b>A.Boucherif (Dahran, Saudia Arabia)</b> Multiple positive solutions of third order boundary value Problems.	11h15- 11h45- <b>R. Aboulaich (Rabat, Morocco)</b> , B. Achchab,D. Meskine and A. Souissi Parabolic inequalities with nonstandard growth in L1 and application to image processing.
11h45- 12h05- <b>R. Rosà (Trento, Italy)</b> Persistence of tick-borne infections under, different modelling assumptions.	11h45- 12h05- <b>Elvan .A. Bohner (Missouri, USA)</b> Positive decreasing solutions of quasilinear Dynamic Equations.	11h45- 12h05- <b>Y. Bentaleb (Rabat, Morocco)</b> The evaluation of the time delay and defasing of the seismic image by an adapted wavelet.
12h05- 12h25 - <b>J. Mugisha. (Kampala, Uganda)</b> Mathematical Model for the Dynamics of Tuberculosis in Density-Dependent Population: The IDPCs in Northern Uganda.	12h05- 12h25 - <b>A. Salem(Tebessa, Algerie)</b> Existence of Global Solutions to Reaction – Diffusion Systems Via A Lyapunov Functional.	12h05- 12h25 - <b>M. Maouni (Skikda, Algeria)</b> Restauration d'image par EDP et ondelettes.
12h25- 12h45 - <b>N. Bacaer (Bondy, France)</b>	12h25- 12h45 <b>A. Guezane-Lakoud (Annaba,</b>	12h25- 12h45 - <b>L. Azrar (Tanger, Morocco)</b>

Vector-borne diseases with a periodic vector population.	<b>Algeria)</b> Goursat's problem for parabolic evolution equations.	Dynamic harmonic response of viscoelastic sandwich plates by an asymptotic numerical method.
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Thursday, June 15, 2006 (p.m.) / Jeudi 15 juin 2006 (Après-midi)

**Plenary lecture 2 / Conférence plénière 2**

**15h – 15h50 - Guy Bayada (Lyon, France)**

Some aspects of multiple scale for free boundary problems in fluid mechanics.

Chair: **M. El Alaoui Talibi**

**Sessions Schedule / Programme des Sessions**

<i>Mathematical Epidemiology (II)</i> <i>Chair: G. Sallet</i>	<i>ODE (II)</i> <i>Chair: T. Benouaz</i>	<i>Numerical Analysis for PDE (II)</i> <i>Chair: G. Bayada</i>
16h- 16h30- <b>Connell McCluskey (Winnipeg , Canada)</b> Modelling latency for tuberculosis.	16h- 16h30 - <b>P. Cieutat (Versailles, France)</b> Bounded and pseudo almost Periodic solutions of a vectorial Liénard or Duffing equations.	16h- 16h30 - <b>M. Jai (Lyon, France)</b> The topological derivative of the generalized Poisson problem with respect to inclusions. Application to a lubrication problem.
16h30 – 16h50 - <b>D. Kiouach (Fès, Morocco)</b> Approximation des modèles de type SISE par des modèles déterministes.	16h30 –16h50 - <b>K. Saadi Drissi (Marrakesh, Morocco)</b> Solutions presque périodiques d'une classe d'équations différentielles de Liénard.	16h30 – 16h50 - <b>A. Chakib (Beni Mellal, Morocco)</b> , A. Nachaoui, A. Zeghal Analysis of the local stability for an inverse parabolic problem.
16h50 – 17h 10 - <b>L. Omari (Fès, Morocco)</b> Stabilité d'un modèle épidémique de type SIES.	16h50 – 17h 10 - <b>R. Khaldi (Annaba, Algeria)</b> Sturm Liouville operators and LP external polynomials.	16h50 – 17h 10 - Ch. Bernardi, F.Hecht, <b>Z. Mghazli (Kenitra, Morocco)</b> A posteriori error estimate and mesh adaptation for PDE in Porous media.
<b>17h10 – 17h30 Coffee Break / Pause Café</b>		
<i>Mathematical Epidemiology (III)</i> <i>Chair : N. Bacaer</i>	<i>ODE (III)</i> <i>Chair: K. Saadi Idrissi</i>	<i>Numerical Analysis for PDE (III)</i> <i>Chair: R. Aboulaich</i>
17h30 – 18h - <b>K. Niri (Casablanca, Morocco)</b> How a modelling with a differential equation with delay predicts the resurgence of epidemics that one believed disappeared.	17h30 – 18h - <b>S. Djebali (Alger, Algeria)</b> A Class of second Order BVPs on infinite intervals.	17h30 – 18h - F. Alcrudo, <b>F. Benkhaldoun (Paris, France)</b> , S.Sahmim Efficiency of finite volume solvers for non homogeneous systems.
18h – 18h20 - <b>S. M. Elkhomeini (Casablanca, Morocco)</b> The influence of demographic effects on the fluctuations in an epidemic model with fixed	18h – 18h20 - <b>F. Diaba (Annaba, Algeria)</b> On exponential function of the Sturm Liouville operator.	18h– 18h20 – <b>A. Salah Chibi (Annaba, Algeria)</b> A posteriori error estimates for Schwarz method for second order elliptic problems.

infective period.		
18h 20– 18h40 – <b>Ali Seibou (Neiamey, Niger)</b> and M. Khaladi. A model for infectuous diseases with mutant germ.	18h20 – 18h40 - <b>J. S. Dehesa (Granada, Spain)</b> Information – theoretic measures of hypergeometric differential equations.	18h20 – 18h40 - <b>N. Kechkar (Beirut, Lebanon)</b> Stabilized finite element solution of a generalized stokes problem.
18h40 – 19 - <b>O. D. Makinde (Sovenga, Saouth – Africa)</b> Solving SIR epidemic model with constant vaccination strategy using decomposition technique.	18h40 – 19h - <b>N.Boumaza (Tebessa, Algeria)</b> Les régions invariantes pour les systèmes de Réactions Diffusions A Matrice Pleine.	. 18h40 – 19h - <b>F. Z. Nouri (Annaba, Algeria)</b> A numerical study of an axisymmetric problem in a complex geometry.

**Friday , June 16th, 2006 (a.m.) / Vendredi 16 juin 2006 (Matin)**

**Plenary lecture 3 / Conférence plénière 3**

8h30 – 9h20 - **K.P. Hadeler (Tuebingen, Germany and Arizona USA)**

The effects of quiescence on dynamical behavior.

Chair: H. Bouslous

9h20 – 10h10 - **Mats Gyllenberg (Helsinki, Finland)**

Nonlinear structured population dynamics, delay equation and adjoint semigroups.

Chair: S. Amraoui

**10h10 – 10h30 Coffee Break /Pause Café**

**Sessions Schedule/ Programme des sessions**

<i>Mathematical Ecology(I)</i> <i>Chair: R. Bravo de La Parra</i>	<i>ODE (IV)</i> <i>Chair: E. Bohner</i>	<i>Numerical Analysis for PDE(IV)</i> <i>Chair: O. Angulo</i>
10h30 – 11h - <b>Wayne Getz ( Berkley, USA)</b> Artificial neural networks in models of specialization, guild evolution and sympatric speciation.	10h30 – 11h - <b>T. Benouaz (Tlemcen, Algeria)</b> Comparison between classical linearization and optimal derivative for a nonlinear O.D.E	10h30 – 11h - <b>Carlos Vázquez (A Coruña, Spain)</b> ,A.Bermudez, M. R. Noguieras Second order Lagrange-Galerkin methods for convection-diffusion-reaction problems.
11h – 11h20 – <b>M. E. Vazquez-Mendez (Siville, Spain)</b> Mathematical models in river fishways.	11h – 11h20 - <b>A.Chiali (Tlemcen, Algeria)</b> The chaotic waterwheel : bifurcation analysis using bifurcation package auto2000 of nonlinear Lorenz model equations.	11h – 11h20 - <b>M. El Kyal (Agadir, Morocco)</b> Asynchronous multisplitting waveform relaxation methods for nonlinear index one differential algebraic equations.
11h20 – 11h40 - <b>S. Ben Miled (Tunis, Tunisia)</b> , H. Hbid and. A. Kebir Density –dependence of the sexual inversion : The effects of the intersexual competition on the sex-ratio.	11h20 – 11h40 - <b>A.Chikhaoui (Tlemcen, Algeria)</b> Analysis of bifurcation and stability problems of nonlinear differential equations using continuation package auto2000.	11h20 – 11h40 - <b>H.Sadiky (Marrakesh, Morocco)</b> A continuation method based on a high order predictor and adaptive steplength control
12h40- 12h - <b>S.Ben Miled</b> , H. Hbid and. <b>A. Kebir(Tunis, Tunisia)</b> IBM Model for sex –ratio dynamics of grouper population.	12h40- 12h - <b>M. Derhab (Tlemcen, Algeria)</b> On the number of positive radially Symmetric Solutions for a quasilinear Dirichlet problem on a Ball. -	11h40 – 12h - <b>Igor Neelov (Leeds, UK)</b> Numerical simulation of biopolymer extension in AFM Experiments.
<b>12h – 15h Lunch / Déjeuner</b>		

Friday , June 16th, 2006 (p.m.) / Vendredi 16 juin 2006 (Après-midi)

**Plenary lecture 4 / Conférence plénière 4**

**15h – 15h50 - Martin Bohner (Missouri, USA)**

Unified transform method on time scales.

Chair: A. Boucherif

**Sessions Schedule/ Programme des sessions**

**Mathematical Ecology (II)**

**Chair ; S. Ben Miled**

16h- 16h30 - **N. Sari (La Rochelle, France)**

Periodic solution of a switched system arising in a dynamic of a population in a fluctuating environment.

16h30 – 16h50 - **Irina Tikhonova (California, USA)**

Impact of environmental stressors on population dynamics: mathematical modelling.

16h50 – 17h 10- **Ako Sauga (Tallinn, Estonia)**

Coloured-noise-induced Hopf bifurcations in predator-prey communities.

**ODE (V)**

**Chair: Ph. Cieutat**

16h- 16h30 - **M. Boucekif (Tlemcen, Algeria)**

On the existence of positive solutions for a Kirchhoff's equation involving an indefinite term.

16h30 – 16h50 - **S. Mazouzi (Annaba, Algeria)**

Nonnegative minimal solution of impulsive integrodifferential equations in Banach spaces.

16h50 – 17h 10- **E. Ait Dads , Ph. Cieutat and L. Lhachimi (Marrakesh, Morocco)**

Qualitative study of some nonlinear integral equations involving epidemic models.

**Numerical Analysis for PDE (V)**

**Chair: K. Najib**

16h- 16h30 - **O. Angulo (Valladolid, Spain)**

The dynamics of Daphnia magna population in an environment with changing food concentration and without sign conditions for the growth rate

16h30 – 16h50 – **J. ElGhordaf (Marrakesh, Morocco).**

H.Hbid and J.P.Treuil.

Presentation and computer study of a mathematical model of urban dynamics.

16h50 – 17h 10- **Sanjeev Kumar.( Khandari- Agra, India)**

A mathematical model of the oscillatory flow of blood in heated uniform cylindrical blood vessel.

**17h10- 17h 30 - Coffee Break / Pause Café**

**Mathematical Ecology (III)**

**Chair: N. Sari**

17h30 – 18h - **R.Mchich (Tanger, Morocco)**

Effects of individual behaviours with competition between prey, on the dynamics of predator-prey game models.

18h – 18h 20- **Tri Nguyen-Huu (Lyon, France)**

Effects of density-dependent dispersal on the stability of host-parasitoid associations in a chain of patches.

18h20 – 18h40 - **A. Moussaoui (Tlemcen, Algeria)**

Migration in age structured population dynamics.

**Partial Functional Diff. Equations and EV. Equations (I)**

**Chair: H. Bouzahir**

17h30 – 18h - **M. Yebdri (Tlemcen, Morocco)**

On an impulsive functional differential equation.

18h – 18h 20- **K. Ezzinbi and M. Jazar (Beirut, Lebanon)**

Blow-up results for some nonlinear delay differential equations.

18h20 – 18h40 - **R. Qesmi (Marrakesh, Morocco)** and H.

Hbid

Integral manifolds and saddle-node bifurcation for a class of periodic differential equations with delay.

**Control Theory and Applications (I)**

**Chair: Berrahmoune**

17h30 – 18h - **P. Cartigny (Montpellier, France)**

The Optimal spatial distribution of small and large fisheries in Chile.

18h – 18h 30- **J.aurelio Montero(Granada, Spain)**

Study of optimal harvesting control problem.

18h30 – 18h 50- **N. Raissi (Kenitra Morocco)**

Période optimale de repos relative à un modèle de pêche.



**Saturday June 17, 2006 (a.m) / Samedi 17 Juin 2006 (Matin)**

**Plenary lecture 5/ Conférence plénière 5**

8h30 – 9h20 **G. Nguerikata (Baltimore, USA)**

Uniform spectrum of bounded functions and applications to evolution.

Chair: K. Ezzinbi

9h20 – 10h10 - **Enrique Zuazua (Madrid, Spain)**

Propagation, dispersion, control and numerical approximation of waves.

Chair: L. Maniar

**10h10 – 10h30 - Coffee Break / Pause Café**

**Sessions Schedule/ Programme des sessions**

**Mathematical Ecology (IV)**

**Chair: M. Langlais**

**Partial Functional Diff. Equations and EV. Equations (II)**

**Chair: G. N'guerikata**

**Control Theory and Applications (II)**

**Chair: M.E. Achhab**

10h30 – 11h - **Jacques Henry (Bordeaux, France)**

Reproductive strategy for aged structured populations and least regret control.

10h30 – 11h - **María J.Garrido Atienza (Granada, Spain)**

Existence of exponentially attracting stationary solutions for delay evolution equations.

10h30 – 11h - **L. Berrahmoune (Rabat, Morocco)**

Exponential stabilization for distributed parameter systems via controllability.

11h – 11h20 - **A. Noussair (Bordeaux, France)**

Computing and control for a phytosanitary risk analysis in viticulture.

11h – 11h20 - **K. Ezzinbi and A. Ouhinou (Marrakesh, Morocco)**

Infinitesimal generator and stability for some partial functional differential equations with infinite delay.

11h – 11h20 - **R. El Ayadi (Meknes, Morocco)**

Feedback stabilization of bilinear systems.

11h40 – 12h - **Ch.Nazaret (Bordeaux, France)**

A simplified model TCA cycle.

11h40 – 12h - **M. Alia (Marrakesh, Morocco) and K. Ezzinbi**

m-accretive operators and partial functional differential equations with infinite delay.

11h40 – 12h - **A. Guesmia (Metz, France)**

Integral inequalities and applications to stabilization of nondissipative distributed systems.

11h40 – 12h - **A. Ducrot (Bordeaux, France)**

Travelling wave solutions for a singular reaction-diffusion system in biology.

11h40 – 12h - **K. Ezzinbi and Kh. Hilal (Beni Mellal, Morocco)**

Existence and regularity for some evolution equations with nonlocal conditions.

11h40 – 12h - **A. Elharfi (Marrakesh, Morocco)**

An explicit boundary feedback law to stabilize a parabolic equation.

12h – 12h20- **A. Kacha (Marrakesh, Morocco) and H. Hbid**

Stability and Hopf bifurcation analysis in a host parasite system with distributed delay.

12h – 12h20 - **A. Halanay (Bucharest, Romania)**

Stability analysis of equilibria in nonlinear models for mechano-hydraulic servomechanisms.

12h -12h20 - **L. Afifi (Casablanca, Morocco)**

Capteurs et actionneurs dans l'analyse asymptotique des systèmes distribués perturbés.



12h20 – 15h - Lunch / Déjeuner

Free afternoon / Après-midi libre

Monday June 19, 2006 (a.m.) / Lundi 19 juin 2006 (Matin)

Plenary lecture 6 / Conférence plénière 6

8h30 – 9h20 - **John Dallon (Provo -UTA, USA)**

Modelling cell-cell interactions and motion with discrete viscoelastic ellipsoids.

Chair : S. Portet

9h20 – 10h10 - **Alberto Gandolfi (Roma, Italy)**

Modelling the response of tumour cords to anticancer agents.

Chair: M. Adimy

Sessions Schedule /programme des sessions

**Cancer Models and Signaling Pathways (I)**

**Chair: J. Arino**

10h30 – 11h - **Andrzej Swierniak (Gliwice, Poland)**

Evolution of repeats in microsatellite DNA and emergency of genetic disorders.

**Partial Functional Diff. Equa. and Ev. Equa.(III)**

**Chair : M. Yebdri**

10h30 – 11h - **H. Bouzahir (Agadir, Morocco)**

Some problems about neutral partial functional differential equations with infinite delay.

**Control Theory and Application (III)**

**Chair: E. Zuazua**

10h30 – 11h - **A. Chaïra (Meknes, Morocco)**

Contrôle exact de l'équation de la chaleur.

11h- 11h20 - **Ami Radunskaya (Pomona, USA)**

Mathematical models of tumor-immune interactions: designing effective vaccine protocols.

11h- 11h20 - **K. Ezzinbi and S. Lalaoui Rhali (Taza, Morocco)**

Positivity and stability for a class of neutral partial functional differential equations.

11h- 11h20 - **H. Bourray (Meknès, Morocco)**

Regional observability for distributed hyperbolic systems.

11h20 – 11h40 - **Joanna Polanska (Gliwice, Poland)**

Change of gene expression in cells exposed to ionizing radiation analyzed using Gaussian mixture model.

11h20 – 11h40 – **A. Elazzouzi (Marrakesh, Morocco) and K. Ezzinbi**

Periodic solutions for some neutral partial functional differential equations.

11h20 – 11h40 - **N. Yousfi (Casablanca, Morocco)**

Controllability and optimal control problem for linear systems with discrete.

11h40 – 12h - **Evans Afenya (Elmurst, USA)**

Appraisal of cancer models.

11h40 – 12h - **M. Louihi (Marrakesh, Morocco) and H. Hbid**

Existence and stability for some state dependent delay differential equations.

11h40 – 12h – **A. Rachik and A. Abdelhak (Kenitra, Morocco)**

The linear quadratic minimum-time problem for discrete systems controlled by continuous inputs.

12h – 12h20 - <b>Urszula Ledzewicz (Illinois, USA)</b> A Comparison of optimal controls for mathematical models of tumor anti-angiogenesis.	12h – 12h20 - <b>S. Messaoudi (Dohran, Saudia Arabia)</b> Exponential and polynomial decay for a quasi linear viscoelastic equation.	12h – 12h20 – <b>A. Kamal (Meknès, Morocco)</b> Controllability for semi-linear distributed parabolic systems.
12h 20 – 12h40 - <b>A. Marciniak (Heidelberg, Germany)</b> Dynamics of growth and signaling along linear and surface structures in very early tumors.	12h 20 – 12h40 – <b>S. Hakkimi (Tetouan, Morocco)</b> Non existence de solutions radiales dans une couronne.	
<b>12h40 – 15h Lunch / Déjeuner</b>		

**Monday June 19, 2006 (p.m.) / Lundi 19 juin 2006 (Après-midi)**

**Plenary lecture 7/ Conférence plénière 7**

**15h – 15h50 - Jan van Casteren (Antwerpen, Belgium)**

Feynman-Kac formulas and viscosity solutions.

Chair: B. Boufoussi

<i>Mathematical Epidemiology (IV)</i> <i>Chair: F. Crauste</i>	<i>Partial Functional Diff. Equa. and Evol. Equations (IV)</i> <i>Chair: S. Lalaoui Rhali</i>	<i>Stochastic Differential Equations (I)</i> <i>Chair: Y. Ouknine</i>
16h – 16 h30 – <b>L. Pujo-Menjouet (Lyon France)</b> A mathematical analysis of the dynamics of prion proliferation.	16h – 16 h30 – <b>A. Zeghal (Beni-Mellal, Morocco)</b> A weak topological approach to fixed point theorem without requiring weak continuity.	16h – 16 h30 – <b>M. Eddahbi (Marrakesh, Morocco)</b> Fractal Stochastic partial differential equation.
16h30 – 16 h50 - <b>J. J. Tewa . (Metz, France)</b> Stability of intra-host models.	16h30 – 16 h50 - <b>A. Yechoui, (Annaba, Algeria)</b> On nonlocal semi-linear elliptic problem with an indefinite term.	16h30 – 16 h50 - <b>M. Benabdellah (Kénitra, Morocco)</b> Absolue continuité des équations différentielles stochastiques rétrogrades.
16 h 50 – 17h10 - <b>B. Kazmierczak, (Warsaw, Poland)</b> Existence of solutions in a new model of chondrogenesis during a vertebrate limb formation.	16 h 50 – 17h10 <b>M. Z. Aissaoui</b> Asymptotic behavior when t tends towards infinite of solution of a class of nonlinear parabolic equation.	16 h 50 – 17h10 - <b>K. Akdim (Marrakesh, Morocco)</b> Reflected BSDEs with quadratic growth on a random terminal time and a probabilistic approach to second order variational inequalities and applications.

**17h10 – 17h30 - Coffee Break / Pause Café**

<i>Cancer Models and Signaling Pathways (II)</i> <i>Chair: U. Ledzewicz</i>	<i>Partial Functional Diff. Equa. And Evol. Equations(V)</i> <i>Chair: A. Zeghal</i>	<i>Stochastic Differential Equations (II)</i> <i>Chair: M. Eddahbi</i>
17h30- 17h50 - <b>Jaroslav Smieja (Gliwice, Poland)</b> Ordinary differential equations in analysis of signalling pathways.	17h30- 17h50 - <b>N.E. Tatar (Dhahran, Saudia-Arabia)</b> On a differential equation which interpolates the undamped and the damped wave equation.	17h30- 17h50 – Generalized Backward doubly stochastic differential equations and SPDEs with nonlinear Neumann Boundary conditions.
17h50 – 18h10 - <b>Krzysztof Fijarewicz (Gliwice, Poland)</b> On identifiability of models of cell signaling pathways based on semi-quantitative data.	17h50 – 18h10 - <b>A. Hajjaj (Settat, Morocco)</b> Existence problem for quasilinear elliptic systems in unbounded domain.	17h50 – 18h10 - <b>S. Kadry (Beirut, Lebanon )</b> Statistical Analysis of Linear Random Differential Equation.
18h10 – 18h30 - <b>A. Swierniak and J. Polanska</b> T . B . P	18h10 – 18h30 - <b>M. Laghdir (Eljadida, Morocco)</b> Etude d'un point matériel frottant sur un plan mobile soumis à une liaison unilatérale avec choc inélastique standard.	18h10 – 18h30 - <b>M. El Otmani (Marrakesh, Morocco)</b> Schéma d'approximation rétrogrades des équations différentielles stochastiques progressives.

<b>18h30 -18h50 -Tomasz Lipniacki (Warsaw, Poland)</b> Stochastic regulation of NF-kappa B pathway in response to a low dose of TNF.	<b>18h30 -18h50 - M. M. S. Nasser (Saudia-Arabia)</b> Integral equations with the generalized Neuman kernel of the conformal mapping.	<b>18h30 – 18h50 - Raby Guerbaz (Marrakesh, Morocco)</b> moduli of continuity for local time of the multi-fractional Brownian motion.
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**Tuesday June 20, 2006 (a.m.) / Mardi 20 juin 2006 (Matin)**

**Sessions Schedule/ programme des sessions**

<b>Mathematical biology (III)</b> <b>Chair: L. Pujo-Menjouet</b>	<b>Partial Functional Diff. Equa. and Evol. Equations (VI)</b> <b>Chair: A. Hajjaj</b>	<b>Control theory and applications</b> <b>Chair: A. Rachik</b>
8h30 – 9 h - <b>Jacek Banasiak (Durban South, Africa)</b> Chaotic linear systems with applications to biological systems.	8h30 – 9h - <b>A. Zarai</b> (Tebessa, Algeria) Global existence for a class of reaction diffusion systems.	8h30 – 9h - B. Abouzaid, <b>M. E. Achhab (El Jadid, Morocco)</b> and V. Wertz Finite-dimensional Compensator Design for a class of Distributed Parameter Systems with Control Constraints.
9h – 9h30 - <b>F. Crauste (Pau, France)</b> Global asymptotic stability and Hopf bifurcation for a blood cell production model.	9h -9h20 – <b>A. Mansour (Alger, Algeria)</b> On a nonlocal mixed problem.	9h – 9h20 - <b>Bezaouia (Marrakesh, Morocco)</b> Set Invariance in Systems Control
9h30 -9h50 - <b>A. Barka (Marrakesh, Morocco)</b> , K. Ezzinbi and H. Hbid. Mathematical analysis of a coagulation – fragmentation model.	9h20 – 9h40 - <b>F. El Guezar (Agadir, Morocco)</b> On hybrid dynamical systems: examples and simulation.	9h20 – 9h40 – <b>B. Aylaj (El Jadida, Morocco)</b> , M. E. Achhab and M. Laabissi, Dynamical analysis of state trajectories for a class of tubular reactor nonlinear models.
9h40 – 10h10 - <b>A. Ayadi (Alger, Algria)</b> Pollution terms estimations in parabolic system with incomplete data.	9h40 – 10h - <b>A. Moumeni (Annaba, Algeria)</b> Asymptotic behavior of the eigenvalues of a perturbed operator.	9h40 – 10h - <b>O. El Kahlaoui (Casablanca, Morocco)</b> Controllability and optimal control problem.

**10h20 – 10h40 - Coffee Break / Pause Café**

**. Session Posters**

**Plenary lecture 8 / Conférence plénière 8**

**10h 40 – 11h30 – M. Langlais (Bordeaux, France)**  
Mathematical modelling of the transmission of the parasites between host populations distributed over distinct spatial domain  
Chair: E. Ait Dads

**Closure session / Session de clôture.**

**Posters**

**Doanh Nguyen Ngoc (Hanoi, Vietnam)**  
Competition models with fast hawk-dove game dynamics.

**Etienne Kouokam Kouokam (Yaoundé, Cameroun)**

*Global basic reproduction rate in a multi-patch SIRS model with fast migration.*

**A. Bensoudane (Marrakesh, Morocco), H. Hbid and J.P. Treuil**

An individual based model for a host-parasit system in marine area..

***Alphonse Saint Eloi Kalala Beya ( Kinshassa , RD Congo)***

*De la dynamique des trypanosomiasés en RD Congo.*

**A. Boujaoui (Marrakesh, Morocco), M. Khaladi and P. Auger**

A mathematical model for studing Fasciolia Hepatica.

**Y. El Foutayeni (Marrakesh, Morocco), M. Khaladi and C. Mulon**

Prey switching in the dynamics of marine ecosystems.

**END/FIN**