

# BIOMAT 2013



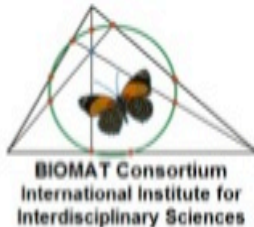
The Fields Institute for Research in Mathematical Sciences

Toronto, Canada, November, 4 – 8, 2013

## 13<sup>TH</sup> BIOMAT INTERNATIONAL SYMPOSIUM ON MATHEMATICAL AND COMPUTATIONAL BIOLOGY



<http://www.biomat.org>



Director of the Fields Institute – Prof. Walter Craig  
Deputy Director of the Fields Institute - Prof. Matheus Grasselli  
President of the BIOMAT Consortium – Prof. Rubem P. Mondaini  
Co-Chair of the BIOMAT 2013 Symposium – Prof. Jianhong Wu  
Co-Chair of the BIOMAT 2013 Symposium – Prof. Eduardo Massad

Time	Nov 04	Nov 05	Nov 06	Nov 07	Nov 08
8:30 - 9:00	Opening / MRC / REG	MRC	MRC	MRC	MRC
9:00 - 10:00	PT <sub>1</sub> / PTT <sub>1</sub> Wallace	PT <sub>4</sub> / PTT <sub>2</sub> Brauer	PT <sub>7</sub> Jianhong Wu	PT <sub>10</sub> Moghadas	PT <sub>13</sub> Coutinho
10:00 - 10:30	OS <sub>1</sub> Satari	OS <sub>8</sub> Espindola	OS <sub>15</sub> Pal	OS <sub>22</sub> Sanches	OS <sub>29</sub> Conci
10:30 - 11:00	OS <sub>2</sub> Chen	OS <sub>9</sub> Loch	OS <sub>16</sub> Encinas	OS <sub>23</sub> Catrina	OS <sub>30</sub> Rahman
11:00 - 11:30	Coffee Break / PS				
11:30 - 12:30	PT <sub>2</sub> Lenhart	PT <sub>5</sub> Marco Jose	PT <sub>8</sub> Tyson	PT <sub>11</sub> Massad	PT <sub>14</sub> Huaiping Zhu
12:30 - 01:00	OS <sub>3</sub> Pal	OS <sub>10</sub> Sanches	OS <sub>17</sub> Almanza- Vasquez	OS <sub>24</sub> Röst	OS <sub>31</sub> Cardoso
01:00 - 02:00	Lunch				
02:00 - 02:30	PT <sub>3</sub> Tuszynski	PT <sub>6</sub> Schnell	PT <sub>9</sub> Gumel	PT <sub>12</sub> Sivaloganathan	OS <sub>32</sub> Lopez
02:30 - 03:00					OS <sub>33</sub> Cardoso
03:00 - 03:30	OS <sub>4</sub> Mondaini	OS <sub>11</sub> Shimozako	OS <sub>18</sub> Hyun Mo Yang	OS <sub>25</sub> Kazeem Oare	OS <sub>34</sub> Kouakep
03:30 - 04:00	Coffee Break / PS				
04:00 - 04:30	OS <sub>5</sub> Conci	OS <sub>12</sub> De Falco	OS <sub>19</sub> Knipl	OS <sub>26</sub> Erazo	OS <sub>35</sub> Hidirova
04:30 - 05:00	OS <sub>6</sub> Moualeu	OS <sub>13</sub> Korvasova	OS <sub>20</sub> Carels	OS <sub>27</sub> Ximenes	OS <sub>36</sub> Demasse
05:00 - 05:30	OS <sub>7</sub> Al-Darabsah	OS <sub>14</sub> Cordovez	OS <sub>21</sub> Martinez	OS <sub>28</sub> Arino	OS <sub>37</sub> Tamen
06:00 - 07:00	Reception Cocktail/PS	PS	PS	BIOMAT CGA	Closing Session
19:30 - 21:00			Conference Dinner		

MRC = Morning Reception Coffee, PT = Plenary Talk, PTT = Plenary Talk (Tutorial), OS= Oral Session, REG = Registration, PS = Poster Session, RC = Reception Cocktail, CGA = Consortium General Assembly

# **BIOMAT 2013 – 13th International Symposium on Mathematical and Computational Biology**

**The Fields Institute for Research in Mathematical Sciences, Toronto, Ontario, Canada, November 04-08, 2013**

**Director of the Fields Institute – Prof. Walter Craig  
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Co-chair of the BIOMAT 2013 Symposium – Prof. Jianhong Wu  
Co-chair of the BIOMAT 2013 Symposium – Prof. Eduardo Massad**

**Nov 04, Monday, 09:00 am – 11:00 am – 1<sup>st</sup> Oral Session**

**09:00 am – 10:00 am - PT1, PTT1 - DOROTHY WALLACE – Dartmouth College, USA**

**“THE SURVIVAL OF COMPETING SPECIES” – D. I. Wallace, Dartmouth College, USA**

**10:00 am - 10:30 am - OS1 – MAHDIEH SATTARI – University of Eastern Finland, Joensuu, Finland**

**“A NEW NUMERICAL APPROACH OF PATTERN FORMATION MODELS ON STATIONARY AND GROWING SURFACES” - M. Satari, J. Tuomela, University of Eastern Finland, Joensuu, Finland**

**10:30 am – 11:00 am- OS2 – MICHELLE CHEN – Dartmouth College, Hanover, USA -**

**“A SIMULATION OF THE U.S. INFLUENZA OUTBREAK IN 2009-2010 USING A PATCH SIR MODEL BASED ON AIRPORT TRANSPORTATION DATA” - D.I. Wallace, M. Chen, Dartmouth College, Hanover, USA**

**Chair: Jianhong Wu**

**Nov 04, Monday, 11:30 am – 01:00 pm - 2<sup>nd</sup> Oral Session**

**11:30 am – 12:30 pm - PT2 - SUZANNE LENHART – University of Tennessee, USA**

**“OPTIMAL CONTROL OF RESOURCE COEFFICIENT IN A PARABOLIC POPULATION MODEL”- J. Bintz, H. Flinotti, S. Lenhart, University of Tennessee, USA.**

**12:30 pm – 01:00 pm - OS3 - SAMARES PAL – University of Kalyani, India**

**“EFFECTS OF INVASION OF LIONFISH ON CORAL-MACROALGAL COMPETITION FOR SPACE” – S. Pal, J. Bhattacharyya – University of Kalyani, India**

**Chair: Dorothy Wallace**

Nov 04, Monday, 02:00 pm – 03:30 pm - 3<sup>rd</sup> Oral Session

**02:00 pm – 03:00 pm - PT3 - JACEK TUSZYNSKI - University of Alberta, Canada**

**“COMPLEXITY OF MOLECULAR SIGNALING NETWORKS FOR VARIOUS TYPES OF CANCER AND NEUROLOGICAL DISEASES CORRELATES WITH PATIENT SURVIVABILITY”- D. Breltkreutz, E.A. Rietman, P. Hinow, M. Healey, J.A. Tuszynski – University of Alberta, Canada, Tufts University, USA, University of Wisconsin, USA.**

**03:00 pm – 03:30 pm – OS4 – R.P. MONDAINI - Federal University of Rio de Janeiro, RJ, Brazil**

**“THE JENSEN-SHANNON DISTANCE OF THE PROTEIN DOMAINS” – R. P. Mondaini, C. F. Mondaini, Federal University of Rio de Janeiro, Brazil; N. Carels, Oswaldo Cruz Institute, Brazil.**

**Chair: Marco Jose**

Nov 04, Monday, 04:00 pm – 05:30 pm - 4<sup>th</sup> Oral Session

**04:00 pm – 04:30 pm – OS5 – AURA CONCI – Federal Fluminense University – Brazil**

**“A SUPPORT SYSTEM FOR DIAGNOSIS OF DEMENTIA, ALZHEIMER OR MILD COGNITIVE IMPAIRMENT” – F.L. Seixas, A. Conci, D.C. Muchaluat Saade, Federal Fluminense University, B. Zadrony, IBM research Brazil, J. Laks, Federal Univeraity of Rio de Janeiro, Brazil.**

**04:30 pm – 05:00 pm – OS6 – D. P. MOUALEU – Zuse Institute Berlin, Germany**

**“ PARAMETER ESTIMATION OF A TUBERCULOSIS MODEL IN A PATCHY ENVIRONMENT: CASE OF CAMEROON” - D. P. Moualeu, J. Kürts, Zuse Institute Berlin, Potsdam Institute for Climate Impact Research, Germany, S. Bowong, University of Douala, University of Yaounde 1, Cameroon.**

**05:00 pm – 05:30 pm – OS7 – ISAM AL-DARABSAH – Memorial University of Newfoundland, Canada**

**“DYNAMICS ON A GENERAL STAGE STRUCTURED N PARALLEL FOOD CHAINS “– I. Al-Darabsah, Y. Yuan – Memorial University of Neefoundland, Canada**

**Chair: Seyed Moghadas**

Nov 05, Tuesday, 09:00 am – 10:00 am - 5<sup>th</sup> Oral Session

**9:00 am – 10:00 am – PT4 – PTT2 - FRED BRAUER – University of British Columbia, Vancouver, Canada**

**“SOME EXTENSIONS OF THE CLASSICAL EPIDEMIC MODELS”**

**10:00 am – 10:30 am – OS8 – AQUINO S. ESPINDOLA – Fluminense Federal University, Brazil**

**“AN AGENT-BASED MODELLING FRAMEWORK FOR TUBERCULOSIS INFECTION WITH DRUG-RESISTANCE” – A. L. Espindola. A. S. Martinez, S. M. Moghadas – Federal Fluminense Universsity, University of S. Paulo, Brazil, York University, Canada.**

**10:30 am – 11:00 am – OS9 – Guilherme Galina Loch – University of S. Paulo, Brazil**

**“STIFF SYSTEMS ASSOCIATED WITH THE RADIOISOTOPES PRODUCTION”- G.G. Loch, Joyce S. Bevilacqua, University of S. Paulo, O. Rodrigues Jr., G. Hiromoto – IPEN. S. Paulo, Brazil.**

**Chair: Eduardo Massad**

**Nov 05, Tuesday, 11:30 am – 01:00 pm – 6<sup>th</sup> Oral Session**

**11:30 – 12:30 - PT5 – MARCO V. JOSE - Universidad Autonoma de Mexico**

**“PROBABILITY DISTRIBUTIONS OF GC CONTENT REFLECT THE EVOLUTION OF PRIMATE SPECIES”- Marco V. Jose, Qi Liu, Juan R. Bobadilla, UNAM, Ciudad de Mexico, UAEM, Cuernavaca, Morelos, Mexico.**

**12:30 pm – 01:00 pm – OS10 – ROSANGELA P. SANCHES – University of S. Paulo, Brazil**

**“ANALYSIS OF THE FORCE OF INFECTION FOR LYME DISEASE: INFLUENCE OF RANDOM AND PERIODIC OAK-MASTING”- R.P. Sanches, F. Azevedo, H.J. Shimozako, R. Ximenes, University of S. Paulo, Brazil; Hsun-YI Hsieh, University of Michigan, USA**

**Chair: Santiago Schnell**

**Nov 05, Tuesday, 02:00 pm - 03:30 pm – 7<sup>th</sup> Oral Session**

**02:00 pm – 03:00 pm – PT6 – SANTIAGO SCHNELL – University of Michigan, USA**

**“MODELING DOMINANT PROTEIN INTERACTIONS THAT INFLUENCE THE PATHOGENESIS OF PROTEIN FOLDING DISEASES” – S. Schnell, University of Michigan, USA.**

**03:00 pm – 03:30 pm - OS11 - HELIO SHIMOZAKO – University of S. Paulo, Brazil**

**“OPTIMIZATION MODEL FOR VISCERAL LEISHMANIASIS: CONCOMITANT EVALUATION OF FIVE CONTROL STRATEGIES” – H. J. Shimozako, C.V. Abud, E. Massad, Univerity of S. Paulo, Brazil.**

**Chair: Leonardo Mondaini**

**Nov 05, Tuesday, 04:00 pm - 05:30 pm – 8<sup>th</sup> Oral Session**

**04:00 pm – 04:30 pm – OS12 – ANNA DE FALCO – Pontifical Catholic University of Rio de Janeiro**

**“STUDY OF merA GENE IN GRAM-NEGATIVE BACTERIA FROM BRAZILIAN AQUATIC SYSTEMS A FIRST STEP TO SELECT MICROORGANISMS TO BIOREMEDIATE MERCURY POLLUTION” – A. De Falco, S.S. Duque, P.R.G. Barrocas, J. C. Moreira - Pontifical Catholic University of Rio de Janeiro, Oswaldo Cruz Foundation, Rio de Janeiro, Brazil.**

**04:30 pm – 05:00 pm - OS13 - KAROLINA KORVASOVA – Czech Technical University in Prague, Czech Republic**

**“THE INFLUENCE OF AN INTERACTING SUBSTRATE ON TURING INSTABILITY CONDITIONS”- K. Korvasova, V. Klika, Czech Technical University in Prague, Czrch Republic, Phillip Maini, University of Oxford, United Kingdom.**

**05:00 pm – 05:30 pm – OS14 – JUAN MANOEL CORDOVEZ – Universidad de los Andes, Colombia**

**“IS THERE AN OPTIMAL STRATEGY FOR THE REPRODUCING MALE TUNGARA?” – P.C. Chaparro, C.D. Cadena, J. M. Cordovez – Universidad de los Andes, Colombia.**

**Chair: Suzanne Lenhart**

**Nov 06, Wednesday, 09:00 am – 11:00 am – 9<sup>th</sup> Oral Session**

**09:00 am – 10:00 am - PT7 – JIANHONG WU – York Univerity, Canada**

**“COMPLEX DATA CLUSTERING: FROM NEURAL NETWORK ARCHITECTURE TO THEORY AND APPLICATIONS OF NONLINEAR DYNAMICS OF PATTERN RECOGNITION” – Guojun Gan, Jialun Yin, Yulia Wang, Jianhong Wu – Research and Development, Global Variable Annuity Hedging; National University of Defense Technology; York University, Canada.**

**10:00 am – 10:30 am – OS15 – SAMARES PAL – University of Kayani, India**

**“PLANKTON NUTRIENT INTERACTION MODEL WITH HARVESTING UNDER CONSTANT ENVIRONMENT”- S. Pal, A. Chatterjee, India.**

**10:30 am – 11:00 am – OS16 – FERNANDO ENCINAS – Oswaldo Cruz Institute, Brazil**  
**“MINING THE CONSTRAINTS OF PROTEIN EVOLUTION” – Fernando Encinas, A. B. de Miranda, Oswaldo Cruz Institute, Brazil.**

**Chair: Fred Brauer**

**Nov 06, Wednesday, 11:30 am – 01:00 pm – 10<sup>th</sup> Oral Session**

**11:30 – 12:30 - PT8 – REBECCA TYSON - University of British Columbia, Okanagan, Canada**

**“THE PRINCESS AND THE PEA: THE UNEXPECTED IMPORTANCE OF MOVEMENT ALGORITHMS”- Rebecca Tyson, University of British Columbia, Okanagan, Canada.**

**12:30 pm – 01:00 pm – OS17 – EDILBER ALMANZA-VASQUEZ - Universidad de Cartagena, Colombia**

**“SEVERE DENGUE FEVER FOR ETERNITY. MATHEMATICAL MODEL WITH BIOLOGICAL CONTROL”- E. Almanza-Vasquez, E. Puello-Mendoza, Universidad de Cartagena, Colombia, E. Gonzalez-Olivares, Pontifical Catholic University of Valparaiso, Chile.**

**Chair: Gergely Röst**

**Nov 06, Wednesday, 02:00 pm - 3:30 pm – 11<sup>th</sup> Oral Session**

**02:00 pm – 03:00 pm - PT9 – ABBA GUMEL – University of Manitoba, Canada**

**“MATHEMATICS OF ANTI-HPV VACCINES” – A. Gumel, University of Manitoba, Canada.**

**03:00 pm – 03:30 pm – OS18 – HYUN MO YANG- State University of Campinas, Brazil**

**“MODELING DIRECTLY TRANSMITTED INFECTIONS CONSIDERING AGE-STRUCTURED CONTACT RATE AND VACCINATION”- H.M. Yang, C.H. Dezotti - State University of Campinas, Brazil.**

**Chair: R. P. Mondaini**

**Nov 06, Wednesday, 04:00 pm – 05:30 pm – 12<sup>th</sup> Oral Session**

**04:00 pm – 04:30 pm - OS19 – DIANA KNIPL – University of Szeged, Hungary**

**“ANTI-GRAVITY MODELS FOR EPIDEMIC SPREAD OF INFECTIOUS DISEASES ON LONG DISTANCE TRAVEL NETWORKS”- D. H. KnipI – Univerity of Szeged, Hungary.**

**04:30 pm – 05:00 pm – OS20 – NICOLAS CARELS – Oswaldo Cruz Foundation, Brazil**

**“THE CONTRIBUTION OF STOP CODON FREQUENCY AND PURINE BIAS TO THE CLASSIFICATION OF CODING SEQUENCES” – R.P. Mondaini, N. Carels – Federal University of Rio de Janeiro, Oswaldo Cruz Foundation, Brazil.**

**05:00 pm – 05:30 pm – OS21 – AYMARA MARTINEZ ARAGON – University of S. Paulo, Brazil**

**“A MODEL DESCRIBING THE ORIENTATION SCRAMBLING OF ATM TOWARD UNREPAIRED DNA DAMAGED SITES BY EXOGENOUS ELECTRIC FIELDS” – A. Martinez A., J.D.T. Arruda Neto – University of S. Paulo, Brazil**

**Chair: Jack Tuszynski**

**Nov 07, Thursday, 09:00 am – 11:00 am – 13<sup>th</sup> Oral Session**

**09:00 am – 10:00 am - PT10 – SEYED MOGHADAS - York University, Canada**

**“A GENERAL FRAMEWORK FOR AGENT-BASED MODELLING WITH APPLICATIONS TO INFECTIOUS DISEASE DYNAMICS” – M. Laskowski, S. Moghadas – York University, Canada**

**10:00 am – 10:30 am - OS22 – ROSANGELA P. SANCHES - University of S. Paulo, Brazil**

**“ANALYSIS OF THE BASIC REPRODUCTION NUMBER FROM THE INITIAL GROWTH PHASE OF THE OUTBREAK IN DISEASES CAUSED BY VECTORS” – R. P. Sanches, E. P. Massad - University of S. Paulo, Brazil.**

**10:30 am – 11:00 am – OS23 – FLORIN CATRINA – St. John’s University, USA**

**“TRAVELING WAVE SOLUTIONS FOR A CHEMOTAXIS SYSTEM” – F. Catrina, St. John’s University, Queens, New York, USA; V. M. Reyes, Cuny Graduate Center, New York, USA.**

**Chair: Rebecca Tyson**

**Nov 07, Thursday, 11:30 am – 01:00 pm – 14<sup>th</sup> Oral Session**

**11:30 am – 12:30 pm – PT11 – EDUARDO MASSAD - University of S. Paulo, Brazil**

**“THE MATHEMATICS OF LIVER TRANSPLANTATION” – F. B. Coutinho, E. Chaib, M. Amaku, M. N. Burattini, E. Massad – University of S. Paulo, Brazil**

**12:30 pm – 01:00 pm – OS24 – GERGELY RÖST – Bolyai Institute, University of Szeged, Hungary**

**“MODELLING MALARIA DYNAMICS IN TEMPERATE REGIONS WITH LONG TERM INCUBATION PERIOD” – Kyeongah Nah, Gergely Röst, Yongkuk Kim, University of Szeged, Hungary; Kyungpook National University, Republic of Korea**

**Chair: Aura Conci**

**Nov 07, Thursday, 02:00 pm - 3:30 pm – 15<sup>th</sup> Oral Session**

**02:00 pm – 03:00 pm – PT12 – SIV SIVALOGANATHAN - Fields Institute, Canada**

**“MODELING OF POROUS ELASTIC AND VISCOELASTIC MEDIA AND ITS APPLICATIONS TO THE BRAIN” – R. Begg, J. Murley, M. Kohandel, University of Waterloo, Canada; S. Sivaloganathan, Centre for Mathematical Medicine, Fields Institute, Canada.**

**03:00 pm – 03:30 pm – OS25 – OKOSUN KAZEEM OARE – Vaal University of Technology, South Africa**

**“DYNAMICS OF A VARROA-INFESTED HONEYBEE COLONIES MODEL” – K. O. OKOSUN, Vaal University of Technology, South Africa.**

**Chair: Eduardo Massad**

**Nov 07, Thursday, 04:00 pm – 05:30 pm – 16<sup>th</sup> Oral Session**

**04:00 pm – 04:30 pm – OS26 – DIANA CAROLINA ERAZO – Universidad de los Andes, Colombia**

**“IMPLEMENTATION OF AN AGENT-BASED MODEL TO EVALUATE THE ROLE OF RISK FACTORS RELATED TO INSECT MIGRATION IN THE RISK OF HUMAN INFECTION WITH CHAGAS DISEASE”- D. C. Erazo, J. M. Cordovez, Universidad de los Andes, Colombia.**

**04:30 pm – 05:00 pm – OS27 – RAPHAEL XIMENES – University of S. Paulo, Brazil**

**“STUDY OF RISK OF DENGUE FOR TOURISTS IN BRAZIL DURING FIFA CONFEDERATIONS CUP BRAZIL 2013, USING MATHEMATICAL MODELING” – R. Ximenes, E. Massad, University of S. Paulo, Brazil.**

**05:00 pm – 05:30 pm – OS28 – JULIEN ARINO – University of Manitoba, Canada**

**“USING MODELS TO LINK SURVEILLANCE AND GLOBAL AIR TRANSPORTATION DATA” – J. Arino, University of Manitoba, Canada.**

**Chair: Huaiping Zhu**

Nov 08, Friday, 09:00 am – 11:00 am – 17<sup>th</sup> Oral Session

09:00 am – 10:00 am - PT13 – FRANCISCO A. B. COUTINHO - University of S. Paulo, Brazil

“MAXIMUM THEORETICAL PREVALENCE OF VECTOR-BORNE INFECTIONS IN HUMANS” – M. Amaku, F. A. B. Coutinho, E. Massad, University of S. Paulo, Brazil.

10:00 am – 10:30 am – OS29 – AURA CONCI – Federal Fluminense University, Brazil

“ON THE USE OF HAUSDORFF DISTANCE ON EVALUATION OF BREAST IMAGE SEGMENTATION” – R. S. Marques, A. Conci, Federal Fluminense University; T. Machenry, York University, Canada.

10:30 am – 11:00 am – OS30 – KAZI A. RAHMAN – University of Guelph, Canada

“MATHEMATICAL MODEL FOR SPATIALLY STRUCTURED DUAL SPECIES POPULATION WITH NUMERICAL TREATMENT” – K. A. Rahman, H. J. Eberl, University of Guelph, ON, Canada.

Chair: Hyun Mo Yang

Nov 08, Friday, 11:30 am – 01:00 pm – 18<sup>th</sup> Oral Session

11:30 am – 12:30 pm – PT14 – HUAIPING ZHU – York University, Canada

“MODELING AND DYNAMICS OF WEST NILE VIRUS WITH WEATHER CONDITIONS” – H. Zhu, York University, ON, Canada.

12:30 pm – 01:00 pm – OS31 – RODRIGO CARDOSO – Federal Centre for Technological Education of Minas Gerais, Brazil

“COSTS OPTIMIZATION OF A COMBINED POLICY USING CHEMICAL AND BIOLOGICAL CONTROL OF *Aedes Aegypti* VIA OPTIMAL TIME WINDOWS” – G. A. Xavier, D. A. P. Lima, E. O. Dias, E. F. Wanner, R. T. N. Cardoso, Federal Centre for Technological Education of Minas Gerais, Brazil.

Chair: Siv Sivaloganathan

Nov 08, Friday, 02:00 pm - 3:30 pm – 19<sup>th</sup> Oral Session

02:00 pm – 02:30 pm – OS32 – LUIS FERNANDES LOPEZ – University of S. Paulo, Brazil

“A STOCHASTIC MODEL FOR ASSESSING THE RISK OF INFECTIONS FOR TRAVELERS TO ENDEMIC AREAS” – E. Massad, M. Amaku, L. F. Lopez, M. N. Burattini, F. A. B. Coutinho, University of S. Paulo, Brazil.

02:30 pm – 03:00 pm – OS33 – RODRIGO CARDOSO – Federal Centre for Technological Education of Minas Gerais, Brazil

“A MODEL FOR THE EFFECT OF TEMPERATURE AND RAINFALL ON THE POPULATION DYNAMICS AND THE EFFICIENCY OF CONTROL OF *Aedes aegypti* MOSQUITO” – F. S. Cordeiro, L. B. Barsante, B. S. Carvalho, R. T. N. Cardoso, A. E. Eiras, J. L. Acebal, Federal Centre for Technological Education of Minas Gerais, Brazil.

03:00 pm – 03:30 pm – OS34 – T. Y. KOUAKEP – University of Ngaoundere, Cameroon

“A MODEL FOR HEPATITIS B WITH CHRONOLOGICAL AND INFECTION AGES” – A. Ducrot, Université Bordeaux Segalen, France; T. Y. Kouakep, University of Ngaoundere, Cameroon.

Chair: Francisco Coutinho



**Nov 08, Friday, 04:00 pm - 05:30 pm – 20<sup>th</sup> Oral Session**

**04:00 pm – 04:30 pm – OS35 – HIDIROVA MOHINISO BAHROMOVNA – Tashkent University of Informational Technologies, Uzbekistan**

**“QUESTIONS ON MODELING AND CONTROL CARDIAC ACTIVITY AT ANOMALIES” – H. M. Bahromovna, Tashkent University of Informational Technologies, Uzbekistan.**

**04:30 pm – 05:00 pm – OS36 – R. DJIDJOU DEMASSE – University of Yaounde 1, Cameroon**

**“AN AGE-STRUCTURED MODEL FOR THE TRANSMISSION OF HEPATITIS B, WITH DIFFERENTIAL INFECTIVITY” – R. D. Demasse, J. J. Tewa, University of Yaounde 1, Cameroon; S. Bowong, University of Douala, Cameroon.**

**05:00 pm – 05:30 pm – OS37 – A. TCHUINTÉ TAMEN – University of Yaounde 1, Cameroon**

**“PREDATOR-PREY MODEL WITH SELECTIVE HARVESTING INCORPORATING TIME DELAY AND SIS DISEASE IN THE PREY POPULATION” – A. T. Tamen, University of Yaounde 1, Cameroon; J. J. Tewa, National Advanced School of Engineering, Cameroon; S. Bowong, University of Douala, Cameroon.**

**Chair: R. P. Mondaini**

**PT - Poster Sessions - 11:00 am – 11:30 am, 03:30 pm - 04:00 pm - Monday to Friday  
06:00 pm – 07:00 pm – Monday to Wednesday**

**1. Mariela J. Berrocal T., Raul F. Carita M. – National University of S. Marcos, Peru  
“A RECONSTRUCTION ALGORITHM FOR CT IMAGE WITH HIGH LEVEL NOISE IN THE MEASUREMENT”**

**2. Silvia Martorano Raimundo, Eduardo Massad, Hyun Mo Yang – University of S. Paulo, State University of Campinas, Brazil  
“MODELLING CONGENITAL TRANSMISSION OF CHAGAS DISEASE”**

**3. Yuriria Cortes Poza, Pablo Padilha Longoria – Universidad Autonoma de Mexico, Mexico  
“SPATIAL DYNAMICS OF FLOWER ORGAN INFORMATION”**

**4. Leonardo Mondaini – Federal University of Rio de Janeiro State, Brazil  
“FIELD THEORY APPROACH TO TOPOLOGICAL CONDUCTIVITY IN POLYMERS”**

**5. Juan Carlos Alvarez Londoño, Lina Maria Ocampo – University of Quindio, Colombia  
“POPULATION DYNAMICS OF *Ceroxylon quindluense* (H. KARST.) H. WENDL. (ARECACEAE) FROM LESLIE MATRIX AS A CONSERVATION TOOL, SALENTO, COLOMBIA**

**Chair: Dorothy Wallace**

**Each poster presenter will be assigned to a core poster board. Each core has 91 cm X 107 cm or 36 inches X 42 inches approximately. Poster mounting supplies will be provided at the conference venue.**