De: **Guillermo Martinez-Zalce** martinez@crm.umontreal.ca
Objet: SÉMINAIRE PHYSNUM (25/07/2017, Bourama Toni) CHANGEMENT D'HORAIRE (10:30-11:30)
Date: 17 juillet 2017 11:42
À: Activités CRM activites@CRM.UMontreal.CA

GM

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SÉMINAIRE PHYSNUM

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DATE :
Le mardi 25 juillet 2017 / Tuesday, July 25, 2017

HEURE / TIME :
10 h 30 - 11 h 30 / 10:30 a.m. - 11:30 a.m.

CONFERENCIER(S) / SPEAKER(S) :
Bourama Toni (Virginia State and Brown University)

TITRE / TITLE :
Nash Limit Cycles in the dynamics of America socio-cultural evolution: A game-theoretical approach

LIEU / PLACE :
CRM, UdeM, Pav. André-Aisenstadt, 2920, ch. de la Tour, salle 5340

RESUME / ABSTRACT :
We analyze the dynamics of socio-cultural evolution based on the ten core values of America in a 1-person game.
We first consider the probability distribution of these values in American continuous interactions (vectors of probabilities as population states).
We then adapt some evolutionary game theory models to uncover all possible dynamic games to include Nash and eventually Nash Equilibria, Nash Limit Cycles (states of self-sustained oscillations in decision-making) and Nash Isochrons (states where individual preferences evolve with the same constant phase). We also determine other game scenarios for America social dynamic stability in terms of the co-existence of a national Nash Equilibrium asymptotically semi-stable and multiple local/community Nash Equilibria with changing basins of attraction in the interior of a 9-simplex, convex compact subset of the 10-dimensional Euclidean space given by these American ten core values.
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Responsable(s) :
Jean-Marc Lina (jmlina@ele.etsmtl.ca)
Jun Li (jun.li.2@umontreal.ca)
Fahima Nekka (fahima.nekka@umontreal.ca)
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