OpLaDyn Kickoff Meeting

Buenos Aires, August 25th -29th

Program of the first part

Time	Participant	Subject
Friday 25th		
10:00h – 10:15h	J.I. Alvarez-Hamelin - L.Hernández	Introduction/organization of the meeting
10:15h - 11:15h	L. Hernández	**Two approaches to opinion dynamics modeling**: i) Data based studies of opinion formation: the case of local elections. ii) Modeling opinion and cultural dynamics from disciplinary based information.
11:15h – 11:30	Coffee break	
11:30h – 12:30h	M. E. Quilici-Gonzalez	**Autonomy and the use of Big Data to predict** We are going to discuss problems related to ethical consequences of the influence of Big Data in human social habits. Three main topics are going to guide our investigation: (i) Big Data, autonomous action, and privacy; (ii) The handling, for commercial and political purposes, of digital traces left by users of social networks; (iii) Big Data and social habits formation: the problem of polarization Firstly, the nature and quality of the information available in Big Data will be investigated in order to identify problems related to privacy during the data collection stage. We will then discuss the possibility of identifying patterns of information used for commercial and political purposes. This information, in turn, will be used to test hypotheses concerning the process of social habits formation, meaning generation, human (individual and collective) autonomous action, and the problem of polarization.
12:30h – 14:00h	Lunch	
14:00h – 15:00h	J. I. Alvarez-Hamelin/M.Beiro	Graph theory for the study of complex systems
15:00h – 16:00h	B. Fagard	I will present a series of papers (Feltgen et al. 2014, 2017, forthcoming) in which we tried to model a specific phenomenon of language change, namely grammaticalization, i.e. when a lexical word (a verb like *to go*, a noun like *the back*, for instance) becomes grammatical (as in *I'm gonna write him back*: *go* becomes an auxiliary, *back* a particle or 'satellite'). The point of our model is not only to see if it is possible to sort out the main factors in such phenomena, but also to map resulting dynamics against 'real-life' instances. This was done based on a series of corpus analyses in a large (mainly literary) dataset.
16:00h – 16:30h	Coffee break	
16:30h - 17:30h	Dimitris Kotzinos	I will present two points of previous and current work: (i) Analysis of personal networks of users in social media (formation of personal networks, evolution over time) (ii) Evolution of discussions in social media (formation of discussion clusters, evolution in space and time)
Saturday 26th		

10:00h – 11:00h	L. Ermann	*From Google Matrix to Quantum and Classical Chaos* I will present the PageRank algorithm used for centrality measure in complex networks. Google matrix will be described and analyzed using tools coming from quantum and classical chaos. The network sources can be real networks coming from WWW, code of Linux, the world trade network, etc.
11:00h – 11:30h	Coffee break	
11:30h – 12:30h	Mariana C. Broens	**Ethical problems related to the usage of Big Data: Generalized surveillance and mutual trust** In this work we are going to discuss, from the complex systems perspective, ethical implications of the usage of Big Data in the emergence of an ubiquitous computing panopticon. A panopticon is a structure that allows unnoticed surveillance (Bentham, 2011), which could generalize mind-over-mind control. The hypothesis we are going to investigate is that the ubiquitous computing panopticon could affect the dynamics of self-organized human social actions based on mutual trust.
12:30h – 14:00h	Lunch	