

BEGOÑA VITORIANO ACTIVITY REPORT ON COOPERATION FOR DEVELOPMENT 2015

Begoña Vitoriano is president of the Commission for Development and Cooperation of the CE-MAT (Spanish Committee of Mathematics). The activity of the CDC of CE-MAT is very related with CIMPA, since Spain (through the Ministerio of Economía y Competitividad) is one of its supporters and the different Spanish mathematical societies are members of CIMPA (CE-MAT is a committee representing all of them).

It is in this framework that four of the schools approved by CIMPA for 2015 had a Spanish responsible person (not local): Peru, Nuria Corral, "Transformation groups and dynamical systems"; Panama, Cándido Martín, "Noncommutative algebra"; Argentina, Jorge Marzo, "Cantor-Salta 2015: Dynamics on Cantor sets"; Turkey, Gonzalo Aranda, "Leavitt path algebras and graph C^* -algebras".

Other activities of Begoña Vitoriano in 2015 are the following.

1. Central America

The Regional PhD programme on Mathematics: it began in 2014 in Panama. However, it looks that it is not working properly; many difficulties must be solved because of the different regulations of PhD studies in the different countries, and different ambitions. Begoña Vitoriano is in contact with El Salvador (see below). More information is required but until now, she has not reached it.

Red GIRA: network of universities from Madrid and some countries of Central America and Caribe based on existing projects. Universities from El Salvador (Universidad de El Salvador), Nicaragua (Universidad de León), Honduras (Universidad de San Pedro Usula), Guatemala (Universidad de San Carlos), Costa Rica (Universidad de Costa Rica), Madrid (Universidad Complutense, Universidad de Alcalá)... The network is not specific for mathematics, but this is one of the main topics developed until now. Begoña Vitoriano is in contact with the responsible persons in Madrid.

2. Ecuador

Master Programme in Teacher Training (of secondary and high school), taught in 2015 for the first time (two places, Quito and Cuenca). It is an agreement between Complutense University of Madrid and the Government of Ecuador. It includes some courses in Mathematics (Begoña Vitoriano was a substitute in one of these courses, "Calculus, Probability and Statistics", but finally she did not teach it). Until now, Begoña Vitoriano does not have any news about if it is going to be repeated in 2016.

3. El Salvador

Master Programme in Statistics in Universidad de El Salvador: Begoña Vitoriano travelled in November for advising and juries of the fifth edition. No more editions have begun this year (five editions were taught until 2014).

Master Programme in Pure Mathematics (Algebra and Geometry) in Universidad de El Salvador: courses taught in 2014 and 2015 by Spanish and Italian lecturers. Responsible person: Javier Gallego of Complutense University, probably he will be replaced by Marco Castrillón (Begoña Vitoriano is in contact with both of them).

Currently, the Universidad de El Salvador is preparing and promoting a Master Programme in Applied Mathematics and another one in Didactics of the Mathematics. Begoña Vitoriano is in contact to support the Master on Applied Mathematics, but the main supporter in this case is a Honduran lecturer.

4. Mozambique

Master Programme in Statistics in Universidade Pedagógica: two editions have been taught (2012/13, 2014/15), supported by Complutense University, CIMPA, the Spanish Cooperation Agency (only first year) and Universidade Pedagógica; lecturers are mainly Spanish. A new edition has begun in 2016. Begoña Vitoriano is the academic coordinator and lecturer as well.

C-DATA Institute for Data Processing and Analysis of Universidade Pedagógica: Begoña Vitoriano is associate member of this Institute.

5. Egypt

Begoña Vitoriano has participated in the preparatory meeting (04/06/15) and M. Teresa Ortuño (of the research team of Begoña Vitoriano) in the launching meeting (10/11/15), both in Cairo, of the LASCRN initiative "Climate Risk Nexus Initiative: addressing food security, water scarcity and social vulnerability to build resilience in the Arab region". In the launching meeting was signed an agreement between the Arab Water Council (AWC), the United Nations for Development Program (UNDP), the United Nations Office for Disaster Risk Reduction (UNISDR) and the World Food Programme (WFP). The research team HUMLOG (Mathematical Models for Logistics and Disaster Management), led by Begoña Vitoriano, is part of the Technical Committee of this LASCRN Initiative, for the development of future projects.

6. El Salvador, Mozambique, Turkey and Egypt

In 2015, Begoña Vitoriano leads a project proposal for H2020 related to Information and Decision Models and Systems for Disaster Management abroad EU. In this proposal were included entities from El Salvador (Universidad de El Salvador, Ministry of Environment and Natural Resources), Mozambique (Institute C-DATA of Universidade Pedagógica), Turkey (Ozyegin University) and Egypt (Arab Water Council), among others. Unfortunately, it was not successfully, but it allowed strengthening ties and increasing future joint plans.