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We have come to the end of 2013, with one more edition of the Journal of Mathematical Modelling and Application – the 8th edition. Although the number of submitted papers has increased significantly, we still prefer not to publish a lot of papers, since we assume that a limited quantity of papers allows interested readers to learn more from the texts. Thus, in this issue, we have seven papers published, from which five present research reports on Modelling for Education and two reports on Mathematical models applied to natural phenomena that may serve as examples to be adapted to classroom use.

The five papers on Modelling for Education present some math models that may be taken as examples by Basic and Higher Education teachers to be used in their classroom practice. Besides, the authors of the five papers show how some groups of teachers understand modelling. These understandings can result in different conceptions and tendencies of modelling as a teaching method in Education. The two papers on Mathematical Modelling present, respectively, applied research on condensate and feed water system, and on energy consumed by a semiconductors manufacturing industry. Both studies use computational programs to simulate and optimize results. In what follows, we present a brief summary of the papers:

1. In Experiencing Mathematical Modelling in an amusement park, the authors Stefano Alberghi, Lorenza Resta and Sandra Gaudenzi from Liceo Torricelli Faenza, Italy, present "a teaching experience of modelling carried out in Italy with high school students in an amusement park", a place that provided them with many ideas on curves that are part of the Math program, such as parabolas, clothoids, straight lines.

2. In Pre service Elementary Teachers' Mathematical Content Knowledge from an Integrated STEM Modelling Activity, the authors Micah S. Stohlmann, Tamara J. Moore and Kathleen Cramer from the University of Nevada and the University of Minnesota, the United States, report an empirical study whose data were "undertaken with one class of pre service elementary teachers to demonstrate the conceptual subject matter content knowledge that can be displayed in a well-structured integrated STEM (Science, Technology, Engineering, & Mathematics). The pre service teachers in this study demonstrated conceptual content knowledge on an integrated STEM modeling activity". After those activities all elementary teachers improved their understanding in symbolic, realistic, language, and concrete representations as well as realizing "the benefits of learning mathematics through different representations".

3. The authors Arlindo José de Souza Júnior, Deive Barbosa Alves and Éliton Meireles de Moura from the Federal University of Uberlândia and the Federal Institute of Education, Science and Technology, Brazil, in the paper entitled *Mathematics Education in a Digital Culture* present how modelling with a digital process can help students of a Teacher Education Course to improve their understanding on Math. The students learn modeling from some mathematical model on some theme, and use Information Technology and Communication (ICT) to simulate the data obtained by an experiment. The authors concluded that "in a digital culture, the concept of mathematical modeling is actually a simulation environment in which interaction is simulated in four dimensions: Dialogical, diverse, dated and dynamic".

4. In *The Mathematics of the Curves on the Wall of the Colégio Arquidiocesano and its Mathematical Models: a Case for Ethnomodeling*, the authors Daniel Clark Orey and Milton Rosa from the Federal University of Ouro Preto, Brazil, report a theoretical study about the mathematical models of the curves of a wall built by some artists in the 19^{th} century in the historical city of Ouro Preto. They conclude by saying that: "Any study of mathematical modeling represents a powerful means for validating contextualized mathematical situations.

This perspective forms the basis for significant contributions of a Freirean-based mathematical perspective in re-conceiving the discipline of mathematics in a pedagogical practice."

5. In *Modeling, Mathematical Modeling and Transdisciplinarity*, the authors Lênio Fernandes Levy and Adílson Oliveira do Espírito Santo from the Federal University of Pará, Brazil, report a practice of modeling carried out during the course "Mathematical Modeling in Teaching" by students of the graduation in Education in Science and Mathematics. The study aimed at providing students, in this case, Math teachers, with understanding on math and application of math on a social theme (mass transit), thus, allowing them to know how to teach math through modelling.

6. The paper *Simulation modelling of condensate and feed water system in national thermal power plant*, written by Sanjay Kajal and P.C Tewari from Kurukshetra University, Kurukshetra (Haryana), presents a mathematical model on Condensate and Feed Water System, whose data comes from simulation modelling. According to the authors, "The model would certainly assist the maintenance team to decide the maintenance strategy for critical components so that the system operates with the utmost efficiency".

7. The study entitled *Mathematical Model to Optimize the Energy Consumed by a Semiconductors Manufacturing Industry – An Application*, conducted by Mayra Méndez-Piñero and Melitza Colón-Vázquez from the University of Puerto Rico, Puerto Rico, presents a mathematical model created to optimize energy cost using the software Lingo 12.0. In the authors' words, this mathematical model to solve the energy cost shows "the different recommendations analyzed and their impact in energy cost reduction depending on the alternatives they chose", and allows "manufacturing industries to be cost competitive".

The editor