

2007 Andrei Borisovich Vistelius Research Award

Raimon Tolosana-Delgado



The youngest member of the Compositional Data Group in Girona, **Raimon Tolosana-Delgado**, has been awarded this year's most prestigious distinction of the International Association for Mathematical Geology for young and promising scientists, the Andrei Borisovich Vistelius Research Award. Competing with several outstanding young scientists from all over the world, Raimon was elected to be the winner.

Talking to his parents, one realises that Raimon was attracted to the sciences, and particularly geological sciences and mathematics, from early childhood. Born in Barcelona, Spain,

on August 19th, 1976, Raimon was fascinated early on by stones and strata; as young as five or six years old, while walking along a railway, his interest was not the train itself, but the way the railway was built, the stones that made up the structure, the strata underneath. Looking at illustrated books on geologic disasters in the library of his primary school, watching TV programs on the evolution of the Earth, he decided to become a geologist. Shortly before entering university in 1994, during a casual conversation with a geologist who was a former student of his mother, he heard about the existence of a new career. The Technical University of Catalonia (UPC) and the University of Barcelona jointly offered a degree in Engineering Geology. For a brilliant student, interested both in geological sciences and mathematics, the combination was tempting.

During his university studies, being a timid student, he was always convinced that nobody was paying attention to his performance among many other students in class. But he was and still is a surprise for his teachers. He is fascinated by languages and speaks several: he learned Catalan and Spanish at home, English at school, Arab and German at university, and he understands French and Italian easily. When asked why not study one of these languages more intensively, he commented "I can already read Matheron in French, why stop there when there are languages as interesting as Nahuatl around?" Through his friends, mainly historians and philologists, he has learned to be sensitive to the many problems around the world, and to appreciate languages, cultures, traditions (including culinary traditions), and religions. An open minded person, he is shy, but very sociable. On the scientific side, Raimon has shown an amazingly clear and straightforward way of thinking, absorbing new approaches, developing his own theories without fear, accepting errors as something inherent to the process of research. During his studies at the UPC, he was one of the Engineering Geology students most motivated by subjects related to quantitative thinking in the geosciences, always going beyond standard requirements. He attended all the courses he could on math and statistics, especially multivariate statistics and geostatistics, his favourites. This proved to be to his advantage; he was well-prepared in the fundamental issues for a true mathematical geologist: he understands the geological problems, and knows where to find the tools to solve them. His PhD thesis on the geostatistical analysis of

geochemical compositions combines mathematical progress and geological application perfectly. However, it remains a simplification of the more general understanding he generated during the writing. As always, he focused on who will read his work and what the reader will understand.

Nonetheless, one does not achieve recognition such as this award simply by being a good student and for writing an excellent thesis. Raimon receives this award for advancing this whole discipline with his new and promising ideas. During the four years of his doctoral studies, he was involved in the creation or implementation of several new approaches: he defined coordinate invariant cokriging of compositions; he was involved in starting statistics and geostatistics of multivariate positive data; he conceptualised compositional approaches to geostatistics of distributions and risk; he worked on multiway compositions and on the analysis of compositional processes during weathering. He worked with people from around the world; found coworkers by himself, applied for and received three grants; wrote 12 peer-reviewed articles (some are still in press), two chapters in books, co-authored a book, presented or participated in 35 contributions to meetings, 10 of them as posters (for which he has a special talent). He is co-author of the R package Compositions, which is the most elaborated package for advanced compositional analysis these days. At two IAMG conferences, he was among those giving short courses.

Raimon obtained his degree in Engineering Geology in 2001, a joint degree of the Technical University of Catalonia and the University of Barcelona (Spain). He got his PhD from the University of Girona (Spain) in 2005, and during that period worked for five months in Greifswald (Germany, October 2004 – March 2005). Since January 2007 he has worked in Göttingen (Germany) with Prof. Hilmar von Eynatten, the winner of the 2007 Felix Chayes Prize for Excellence in Research in Mathematical Petrology. We believe this is not just a nice coincidence, it is also powerful encouragement and promotion of a young and promising field of research.

Raimon is not only a good researcher, full of new ideas and a good understanding of both sides of mathematical geology, and a natural teacher, but also a gifted organiser and knitter of the scientific network. His reviews are full of wisdom, showing the author a way to go. We are thus convinced that he will be one of the future leaders of the subject and that we can expect great things from him. Working with Raimon is always a pleasure, a scientific adventure and a good social experience.

We are thus very pleased that Raimon was awarded this well deserved honour of the Andrei Borisovich Vistelius Research Award and can only congratulate him emphatically.

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