CHRISTIANE ROUSSEAU

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Personal and Educational Data:
1954 born in Versailles, France;
1977 Ph.D. Université de Montréal, 1977;
1977-79 Postdoc, Mc Gill University.

Employment :
1979-   Professor, Université de Montréal (Full Professor since 1991)

Research interests:
Dynamical systems: analytic dynamics, Hilbert's 16th problem

Awards:
- Abel-Gauthier Prize 1999 and 2013from AMQ (association mathématique du Québec.
- Teaching prize, Université de Montréal for the best academic book, with Yvan Saint-Aubin, 2009.
- Adrien-Pouliot Prize from AMQ (association mathématique du Québec), 2009.
- Fellow of the American Mathematical Society
- George Polya Award 2014 from Mathematical Associatio of America

Selected lectures:
- Panelist at ICM 2010 and ICM 2014
- MAA Invited Lecture at Joint Mathematics Meeting 2015

Selected Academic Service and Functions:
- Chair of Maths and Stat Dept, Université de Montréal, 1993-97.
- Vice-president of Canadian Mathematical Society, 1995-97.
- President of Canadian Mathematical Society, 2002-2004.
- Member of the Canadian Delegation to the General Assembly of the IMU, 2002, 2006, 2010.
- Co-organizer of a Canada School Mathematics Forum, Montreal, 2003.
- Chair of the CNC-IMU Committee, Canada, 2006-2008.
- Interim CRM Director: 2008-09.
- Organizer of the Canadian bids for ICM 2014 and ICM 2010 in Montreal.
- Co-organization of thematic semesters at CRM, 2008, 2013
- International coordinator of the thematic year "Mathematics of Planet Earth 2013" www.mpe2013.org endorsed by UNESCO
- Member of the Klein project team, a joint IMU-ICMI initiative, since 2009.
- Vice-President of the International Mathematical Union, 2011-2014

Some recent papers:
- The moduli space of germs of generic families of analytic diffeomorphisms unfolding a parabolic fixed point, with Colin Christopher, IMRN 2014, (2014), 2494-2558.
- Moduli space of unfolded differential linear systems with an irregular singularity of Poincaré rank 1, with Caroline Lambert, Moscow Mathematical Journal, 13 (2013), no. 3, 529-550.

- Analytic moduli for unfoldings of germs of generic analytic diffeomorphims with a codimension k parabolic point, Ergodic Theory and Dynamical Systems, published on line 2013.
- Analytical moduli for unfoldings of saddle-node vector-fields, with Loïc Teyssier, Moscow Mathematical Journal, 8, (2008), 547-614.
- Modulus of analytic classification for unfoldings of generic parabolic diffeomorphisms. With P. Mardesic and R. Roussarie, Moscow Mathematical Journal, 4, (2004), 455-498.

Books
- "Mathematics and technology" with Yvan Saint-Aubin, Springer Undergraduate Texts in Mathematics and Technology, Springer, New York, 2008. English, French and German versions.
- "Mathematics of Planet Earth", with Hans Kaper, to be published by SIAM.

Other realizations:
- Interest in popularization of mathematics: poster campaign in Montreal metro for WMY2000, organization of public lectures.
- Lectures in schools, involvement in math camps.
- Mathematical articles in the magazine Accromath for school teachers or students.
- Regular lecture at ICME 11, Monterrey, 2008.

STATEMENT AND DESCRIPTION OF ACTIVITIES

I am willing to commit myself to the IMU Executive Committee (EC) for a second mandate for the period 2015-2018. During my first mandate I was responsible on the side of the EC for the content of the IMU-Newsletter. I was also involved in all activities with the International Council of Science (ICSU). In particular, I represented IMU at the ICSU General Assembly in Rome in 2011 and made contact with other unions there. Through these contacts IMU could co-organize the educational capacity building Summer School "Climate Change, Related Hazards and Risks", jointly with the International Union of Theoretical Mechanics (IUTAM) and the International Union of Geodesy and Geophysics (IUGG) and targeting the region of Latin America. I also organize the "Mathematics of Planet Earth Day" hosted by IMU at UNESCO on March 5 2013.

In my career, I have managed to combine my teaching, research and training activities with educational and outreach activities: popularization of mathematics with the public, involvement in preservice teacher education, lectures in schools and mathematical camps. In Canada, I have been actively involved in bringing the Canadian community together (learned societies, institutes, MITACS) for the organization of joint activities: joint meetings including Canada-France congresses, Canada Mathematics Education Fora, Canadian bids for ICM 2010 and 2014. I was the international coordinator or the international year *Mathematics of Planet Earth 2013,* (MPE2013), which has now moved into Mathematics of Planet Earth (www.mathofplanetearth.org). MPE2013 built a model on how we can join forces to achieve significant goals, even with nearly no budget. Indeed the level of cooperation has been extraordinary at the level of the planet, and the spirit of collaboration will continue in the next years.

I have always enjoyed bringing communities to work together and I believe that mathematics should make more links with the other disciplines. Inside IMU, I pushed collaborations with other scientific unions and I am willing to continue in this direction. As for promotion of mathematics, there are a lot of benefits in joining forces together at the international level, and I look forward working with IMU on this aspect.

 I am also keen of increasing my collaboration great collaboration with ICMI on mathematics education and outreach matters.