

## **Ben's biography:**

Ben Chouchaoui [shoe/sha/we] is a Canadian citizen applying for immigration to the USA under the EB1A program for aliens of extraordinary abilities. He is a graduate of the École Polytechnique de Montréal or the Polytechnic School of Montreal and the University of Waterloo in Canada. Ben's expertise is in materials and computer based simulations (CAE computer-aided engineering: FEA and CFD, finite element analysis and computational fluid dynamics).

Ben worked for German, Canadian, and American Automotive Tier One suppliers for six years (upon completing his PhD in 1994), in R&D, on composites sealing systems (rubbers and plastics). He then started WIDL or the Windsor Industrial Development Laboratory in 2000, offering cost-effective services in material and process/product simulation and testing, to aid in product design and manufacturing. Ben also started in 2006 the WIDL' Seminars, to bring people of various technical backgrounds up-to-speed in 1- Materials and 2- Product development through simulation and 3- Testing with acceleration using Time-Temperature Superposition (TTS), and the 4- Correlation of numerical predictions to the "real world". These are monthly accelerated training sessions, modular (for increased flexibility), for those involved with polymers, plastics, elastomeric (thermosets and TPEs).

Ben particularly helped all levels of the supply chain of the Rubber Industry (ingredient makers, rubber suppliers, compounders, tool and mold makers, machine builders, rubber manufacturers, rubber part users, OEMs) develop compounds, characterize materials, design and optimize products, device tools and orchestrate manufacturing processes, produce and test prototypes, run production. He also helped technology companies improve (computer-based) simulation tools at various levels (geometry representations and meshing, material modeling, application of loads and boundary conditions, and running nonlinear analyses).

Besides, Ben continues to work on novel machinery to characterize polymers for computer modeling along with software to post-process collected data into material models. He has lately submitted several patents on his developments of compact, efficient, and complete machinery to 1. Test polymers for FEA and CFD, 2. Define design parameters, and 3. Correlate simulations to product testing. He is now looking to close the loop in the product development process in terms of recycling polymeric products and making with recycled materials new engineered products, and is teaming on this with international experts and manufacturing production machinery builders.

Ben belongs to various organizations in North America. He often writes in Rubber World, Rubber and Plastic News, Plastic Technology Online, in the USA, and Sealing Technology a Journal of Science Direct by Elsevier in England. He also speaks at gatherings of the SAE, the SME, the SPE, and the RD ACS (the Society of Automotive Engineers, the Society of Manufacturing Engineers, the Society of Plastics Engineers, the Rubber Division of the American Chemical Society) as well as at all Rubber Groups in North America (in their local languages). Ben also demonstrates new advancements in his field in conferences around the world, as related to materials, product development, and manufacturing, and he writes blogs and reviews reaching all professionals in the polymer field. In fact, Ben gets often interviewed by magazines on material recycling and sustainable materials and engineered products, in Canada, the USA, Europe, and the Far East. And Ben has recently been distinguished as an Ambassador of Hexagon Manufacturing Intelligence to help empower materials in products by unleashing power simulation tools on innovations. Ben offers out-of-the-box solutions to support optimization throughout product life-cycles, and guide new creators in making positive impacts to an ever evolving world.