NUMTA 2023 Special Session on

Advances in DC programming and DC Learning

Special Session Organizers:

- LE THI Hoai An – University of Lorraine, France, and Academic Institute of France (IUF)
  email: hoai-an.le-thi (at) univ-lorraine.fr

- PHAM DINH Tao – National Institute of Applied Science, France
  email: pham (at) insa-rouen.fr

DC (Difference of Convex functions) Programming and DCA (DC Algorithms) constitute the backbone of Nonconvex Programming and Global Optimization. They are a natural and logical extension of convex programming, broad enough to cover most real-world non-convex programs, but not too broad to use the powerful arsenal of modern convex analysis and convex optimization. These theoretical and algorithmic tools have been introduced for about 35 years and intensively/extensively developed to become now classic and increasingly popular. It is remarkable that DCA permit to recover all algorithms in convex programming, and existing algorithms in nonsmooth nonconvex programming are nothing but variants of DCA! DC programming and DCA have been successfully applied worldwide by researchers and practitioners to model and solve their nonconvex programs in different fields of Applied Sciences. This session is dedicated to recent advances in the development of these tools to meet the growing need for non-convex programming and global optimization in the era of Big data.