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AGCO Seminar

Speaker: Alexander Kozachinskyi, IMC, UC, Pontificia Universidad Católica de Chile

Title**:** Constant-depth sorting networks.

Abstract: Assume that you want to sort n integers, and you have many copies of a device that can sort k integers. At one step, you can partition n integers into sets of size at most k by putting them into your devices. How many such steps do you need to sort your initial array?

When k = 2, this problem is just a problem of constructing a sorting network. It can be solved in O(log n) steps, though the construction is complicated and impractical. We consider a reversed setting. Namely, we fix a number of steps and seek for the minimal k such that our problem is solvable within this number of steps with this k. We determine the minimal k for 2,3, and 4 steps.

Joint work with Natalia Dobrokhotova-Maikova and Vladimir Podolski.

When**:** November 9, **15:00 hrs.**

Where**:** Sala de Seminario John Von Neuman, CMM, Beauchef 851, Torre Norte, Piso 7.