

Playing Nice Together: Dynamical Sharing of Limited Resources by Cells

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Living cells are usually faced with situations in which they must share a common pool of limited resources. A standard way of solving this problem is by partitioning the resources among all players. In this talk I will discuss an alternative solution that relies on taking turns in time when utilizing the available resources. I will describe results that show, using a combination of time-lapse microscopy, microfluidics, and mathematical modeling, how bacteria use this time-sharing strategy at the levels of molecules, cells, and cellular populations.