Resource Management using PACORA

- Each process receives a **vector of basic dedicated resources**
  - e.g., fractions of cores, cache slices, memory pages, bandwidth
- Allocate minimum for QoS requirements
- Allocate remaining to meet some system-level objective
  - e.g., best performance, lowest energy, best user experience

Continuously Minimize
(subject to restrictions on the total amount of resources)

**Penalty Function**
Reflects the app’s importance

**Resource Utility Function**
(Performance as a function of resources)

- $P_a(R_a)$
- $P_b(R_b)$
- $R_a = RU_a(r_{0,a}, r_{1,a}, \ldots, r_{n-1,a})$
- $R_b = RU_b(r_{0,b}, r_{1,b}, \ldots, r_{n-1,b})$

Convex Surface