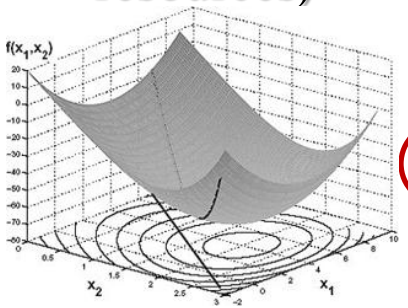
Resource Management using PACORA

- 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

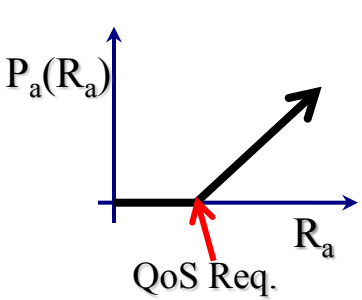
Continuously Minimize
(subject to restrictions on the total amount of resources)

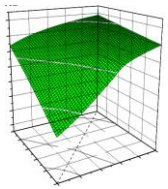


Convex Surface

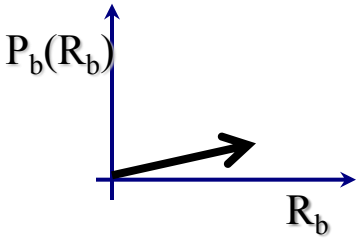
Penalty Function
Reflects the app's importance

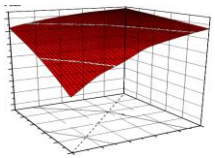
Resource Utility Function
(Performance as a function of resources





$R_a = RU_a(r_{(0,a)}, r_{(1,a)}, \ldots, r_{(n-1,a)})$





$R_b = RU_b(r_{(0,b)}, r_{(1,b)}, \ldots, r_{(n-1,b)})$