Abstract: In a contest in which heterogeneous solvers make effort to develop solutions, existing theories predict different outcomes about how solvers will change their effort levels as more participants compete for a prize. Specifically, one theory prescribes that when solvers are heterogeneous in their initial expertise, every solver will reduce effort with more participants due to a lower probability of winning the contest. In contrast, another theory prescribes that when solvers are heterogeneous in their costs of exerting effort, high-ability solvers raise their effort with more participants, while low-ability solvers reduce their effort; but it does not provide an explanation for such a prescription. Yet, a recent empirical study corroborates the prescription of the second theory. This paper presents a unifying model that encompasses both types of heterogeneity in solvers, and offers a precise explanation of how increased competition in a contest affects solvers’ incentives. We then discuss the impact of solvers’ incentives on a contest organizer’s decision regarding whether to restrict entry to contests or to conduct open contests. Our result justifies the increased popularity of open innovation initiatives in various industries. If time allows, the speaker plans to discuss his other work on innovation contests.