Calibrated Mechanism Design

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We study optimal mechanism design in settings where a designer has private information and interacts repeatedly with strategic agents. Motivated by applications like ad auctions, we introduce calibrated mechanism design, in which mechanisms must be robust to the information agents learn over time through participation. We formalize this via calibrated information structures, capturing what players infer from repeated interaction. We characterize implementable outcomes under this constraint, provide a decomposition result in single-agent environments, and show that learning endogenous to the mechanism's operation can fundamentally limit the designer's ability to exploit private information.