



**Figure 3 - Relationship between single cluster FDR and observed  $\text{ISI}_v$ .** (A) Dependence of  $\text{ISI}_v$  on total firing rate given varying FDRs and contaminant neuron counts. Lines correspond to analytical predictions; dots correspond to simulation results. Plotted data applies to both primary and gold axes. (B) Dependence of  $\text{ISI}_v$  on FDR given varying firing rates and contaminant neuron counts. Conventions as in (A). (C) Prediction of FDR from observed  $\text{ISI}_v$  with temporally inhomogeneous firing rates using either the homogeneous model (Eq. 8) or the inhomogeneous model (Eq. 9). (D) Prediction of FDR from observed  $\text{ISI}_v$  across a range of physiologically relevant underlying neuronal characteristics (see *Materials and Methods*) for 100 total simulated clusters.