Tracing the mass flow in clustered star forming regions

Most stars in our galaxy do not form in isolation. Instead, stars are born in groups and clusters embedded within dense filaments and clumps in molecular clouds. Many clustered star-forming regions share similar morphologies, where the greatest star formation rates are found within a central 'hub' of dense molecular gas, that is connected to streams or filaments of additional material. To understand how stars form in clusters, we need to understand how these filaments accrete mass from the surrounding environment, funnel mass to star-forming 'hubs', and fragment to form dense star-forming cores. I will present observational evidence of ongoing accretion of material onto dense filaments in nearby clusters, with derived mass accretion rates that are sufficient to trigger additional fragmentation and gravitational collapse. In particular, I will show how an understanding of the dynamic chemistry in star forming regions can be used to answer these questions.