Matthew Burlick

Dave Breen

If that fails, Frank Lee

Jeremy Johnson

June 12th to June 16th

Keep the email short (attach title and abstract). Copy Santi in each and send them each as individual emails. Only send to Matthew/David first.

Letter language:

 I received your name from Santiago Ontañon (CC'd) as a potential candidate for participating in the Master's Thesis defense of my work, titled "Video Game Strategy Inference Given Partial Observability using Probability Density Functions" (working title). It would occur at your convenience any time the week of June 12th to June 16th. Would you happen to have any availability that week and an interest in participating? I've copied the abstract below for more information, but please don't hesitate to email me with further questions, and thank you for your time in considering this matter.

                                        -Mike Kozak

Abstract:

This paper presents an examination of the application of probability density functions to strategy identification in partially observable game spaces. Specifically, we focus on the design, implementation, and evaluation of the Intent Recognition Engine (IRE) for NOVA, an autonomous agent designed to participate in the StarCraft AI competition. StarCraft is a video game in the “real time strategy” subgenre that pits humans and AI against each other in real-time combat simulations where each player controls a virtual economy and an army and uses these to defeat the opponent. We describe the challenge of determining enemy strategy with only a partial view of their total forces, of mapping strategies to a coordinate space, and of performing localization in that space. In addition, we present the results from evaluation of both win rates against enemy AI as well as prediction accuracy given post-game ground truth. Finally, we conclude with a discussion of remaining challenges and opportunities for further development.