ASCC 2026 Best Student Paper Award Application Form

I. Applicant Information

1. Name of student: Truptimayee Nayk
2. Present affiliation: National Institute of Technology, Rourkela, India
3. Degree program (and the expected date of the degree): Ph.D. (May 2029)
4. Paper title: LQ Performance of Multi-agent Quantum System
5. Paper number: 558
6. Coauthors of the paper: Jatin Kumar Pradhan. Rajiv Kumar Mishra
7. Date of application: 18-06-2026

II. Justification for Application

This paper presents an important contribution to the field of distributed quantum control by proposing the SDRE-based optimal consensus framework for multi-agent quantum systems. This work rigorously establishes the asymptotic convergence conditions in the framework of Lyapunov stability theory and provides a systematic way for the interconnection of quantum networks to realize the synchronization and LQ performance. Simulation results on spin-$\frac{1}{2}$ quantum agents demonstrate effective alignment of the Bloch states and consensus, highlighting the potential of the proposed framework for future quantum communication, sensing and distributed quantum computing applications.

III. Advisor Information

1. Name of advisor: Dr Jatin Kumar Pradhan
2. Email address: jatinpradhan@gmail.com
3. Advisor's affiliation: National Institute of Technology, Rourkela, India
4. "I certify that the applicant above is the principal author of the paper and she is a student on the date of submission."

Signature: _____