Contribution ID: **170** Type: **Oral Presentation**

Projection operators in the theory of open quantum systems

Wednesday, 1 July 2015 14:40 (20 minutes)

Abstract content
   (Max 300 words)
Formatting &
Special chars

We study different forms of projection operators and their application to open quantum systems. In particular, we show that applying a special class of projection operators to open systems may lead to non-linear dynamical equations, while other projection operators always lead to linear equations. We discuss general features of linear and non-linear dynamical equations and connections between them. All the features of different projectors are illustrated by examples of a qubit in a thermal bath and two interacting qubits in a common environment.

Apply to be
 considered for a student
   award (Yes / No)?

No

Level for award
 (Hons, MSc,
   PhD, N/A)?

N/A

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

Yes

Please indicate whether
this abstract may be
published online
(Yes / No)

Yes

Primary author: Dr SEMIN, Vitalii (Quantum Research Group, School of Chemistry and Physics, University of Kwazulu-Natal)

Co-author: Prof. PETRUCCIONE, Francesco (UKZN)

Presenter: Dr SEMIN, Vitalii (Quantum Research Group, School of Chemistry and Physics, University of Kwazulu-Natal)

Session Classification: TCP

Track Classification: Track G - Theoretical and Computational Physics