**Abstract Submission Form**

**Australian Marine Science Conference 2017**

**Connections through shallow seas**

**Sunday, 2nd July - Thursday, 6th July**

**Darwin, NT, DoubleTree by Hilton Esplanade & Darwin Entertainment Centre**

**Abstract must not exceed 350 words (excluding ‘title’)**

**Title (max 115 characters):**

An analysis of current trends in connectivity modelling and where to next

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**Nominated session (symposium or general session): Choice 1 –**

G1: Marine Fundamentals

**Nominated session (symposium or general session): Choice 2 –**

S19: Systems science perspectives

**Abstract (350 words)**

Biophysical connectivity modelling has consistently used by marine researchers over the past twenty years for estimating connectivity patterns. The outputs of these models have been used for everything from assessing population dynamics to aiding the design and testing the effectiveness of marine protected areas. However, the evolution of biological models has not kept pace with the physical models. Physical models have been progressively improving through utilising higher resolution satellite data and enhanced algorithms. The advancement of the biological models has been slower, with many studies that investigate the connectivity of pelagic marine larvae still implementing the larvae without behavioural traits. We reviewed the current literature (2010-2016) on connectivity driven biophysical models to compare how the implemented biology affects the output. In addition, we discuss how modelling different movement behaviours of pelagic ichthyoplankton influences connectivity patterns based on the results of a recent theoretical study we undertook. These outcomes allow us to understand both the behaviours to prioritise in the implementation of biophysical models for future connectivity modelling studies, and where to focus our efforts in finding unknown information about biological traits of the modelled marine larva.