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Clustering in a model of yeast cell cycle

Autonomous oscillation and clustering of cell cycle in yeast cultures attracted recently a significant interest. The Response/Signaling feedback models have been proposed to explain this phenomenon [2]. We apply a non-linear physiologically-structured PDE model of cell population to describe clustering in yeast cultures. The linear stability of stationary states will be discussed. We will present some results about clustering have been proven. In particular, in some cases the solutions of PDEc converge to traveling delta measures [1].

References

- [1] Radosław Wieczorek, *PDE model of cell cycle dynamics and clustering in yeast*, submitted.
- [2] Todd R. Young, Bastien Fernandez, Richard Buckalew, Gregory Moses, and Erik M. Boczko, *Clustering in cell cycle dynamics with general response/signaling feedback*, J. Theoret. Biol. **292** (2012), 103–115.