

Unit Name

Biological Complexity Unit

Students Supervised:

- Cure Samuel Cyrus

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Takahashi, T.; Aoyanagi, H.; Pigolotti, S.; Toyabe, S.
Blocking Uncertain Mispriming Errors of PCR. *Biophysical Journal* 2024, 123.
2. Pigolotti, S.
Martingales for Physicists: A Treatise on Stochastic Thermodynamics and Beyond. *Advances in Physics* 2024, 72.
3. Pigolotti, S.
Genome Replication in Asynchronously Growing Microbial Populations. *PLOS Computational Biology* 2024, 20, e1011753.
4. Pigolotti, S.; Lu (路桥), Q.
Target Search in the CRISPR/Cas9 System: Facilitated Diffusion with Target Cues. *New Journal of Physics* 2024, 26.

Presentation at Conference

1. Pigolotti, S.
Exponential Growth in Biology: From Microbial Cultures to Human Epidemics
OIST-KEIO SHOWCASE TALK Series 7- Science meets Society: Frontiers in Interdisciplinary Approaches to Life Sciences, Tokyo, JAPAN 2025.
2. Pigolotti, S.
Genome Replication in Asynchronously Growing Microbial Populations
The 12th 3R+3C International Symposium, Fukuoka, JAPAN 2024.
3. Pigolotti, S.
Statistical Physics of Proliferating Systems
Frontiers in Non-equilibrium Physics 2024, Kyoto, JAPAN.
4. Pigolotti, S.
Dynamics of Genome Replication
Dissipative processes in molecular systems, Padua, SPAIN 2024.

Seminars

1. Pigolotti, S.

Statistical physics of Growing Systems. London, UK 2025.

Scholarly Contributions (For Unit Members Only)

Name of Unit Member (Author-Presenter)	Type	Title	Outlet	Year Pub
Debsuvra Ghosh	Poster Presentation at Conference	Modelling Proliferating Nematic Cell Colonies in Confining Geometries	Soft and Liquid Matter Physics: Past, Present and Future	2025
Robert Ross	Seminars	Frontiers in Nonequilibrium physics 2024	KYODAI	2024
Robert Ross	Seminars	Disordered packing on a growing surface	RIKEN	2024
Robert Ross	Seminars	Chromatophore patterns, packing, and scaling on a growing squid	TODAI	2024