

Turing meets synthetic biology

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Engineering biology

Engineering mantras

- Abstraction
- Modularity
- Interoperability
- Public availability
 - BioBricks foundation: RFC's and *datasheets*
 - BioBricks repository: <http://partsregistry.org/>



Browse devices by type

We're in the process of developing new support for the specification of devices in the Registry. For the time being, please see the existing tables below.

 **Protein generators (?)**:

 **Reporters (?)**:

 **Inverters (?)**:

 **Receivers and senders (?)**:

 **Measurement devices (?)**:

Browse parts and devices by function

*This section replaces the previous **Featured parts** pages.*



Biosynthesis: Parts involved in the production or degradation of chemicals and metabolites are listed here.



Cell-cell signaling and quorum sensing: Parts involved in intercellular signaling and quorum sensing between bacteria.



Cell death: Parts involved in killing cells.

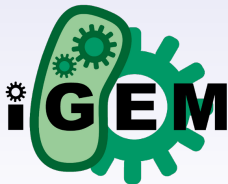


Coliroid: Parts involved in taking a bacterial photograph.

Who creates biobricks ?

iGEM: international Genetically Engineered Machine competition

- Yearly international competition to build BioBricks
- 1 out of 112 projects for our presentation: Mexico
- Each project has extensive detail on modelling and experiments
- Each project contributes new biobricks when finished
- Real "wetware" is archived by biobrick-aware synthetic biology companies

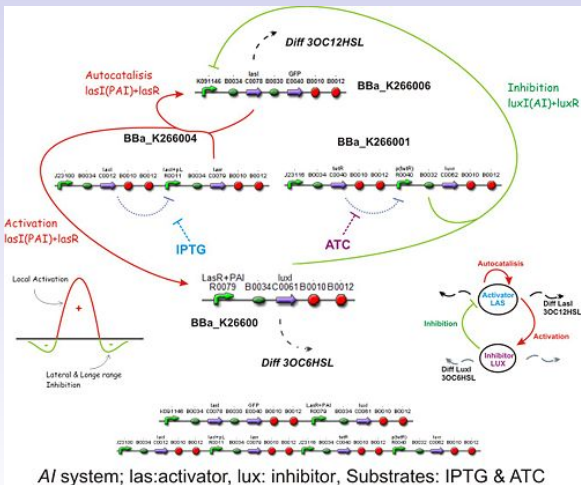


 ginkgo**bioworks**

- **Introduction: Developing an Activator-Inhibitor network**
 - Designing a synthetic network with the qualitative properties of an activator-inhibitor system.
- **Classical model with estimated diffusion constant**
- **Activator-Inhibitor dynamics on a single cell**
 - The Activator, Inhibitory, Activator-Inhibitor interaction and The regulatory modules
 - The integrated system
- **Spatial model**
- **Results and Final Conclusions**

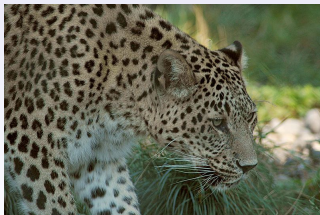
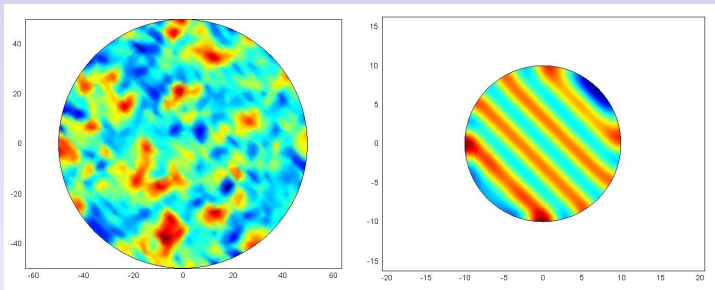
Turing meets synthetic biology

Result



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Result



- <http://2009.igem.org/Team:IPN-UNAM-Mexico/Modeling>
- **Softwares used in modeling**
 - Comsol Multipysics <http://www.comsol.com/>
 - Cell Designer <http://www.celldesigner.org/>
 - Grapher: a software program bundled with Mac OS X since version 10.4