

October 2018 : AAAI Symposium : Artificial Intelligence for Synthetic Biology

Synthetic Biology Terms and Definitions, and Conferences

Terms and Definitions:

Term	Definition
Promoter	Region of DNA that initiates the transcription of a particular DNA sequence.
DNA	Deoxyribonucleic acid -- stores biological information as a sequence of nucleotides (A, C,T, G)
RNA	DNA like molecule that transfer the information from the DNA to the rest of the cell for building proteins
Protein	Molecules in the cell performing various functions.
Amino acid	Building block of proteins, there are a total of 20 unique amino acids.
Transcription	The process of copying part of the DNA into RNA
Translation	The process of reading the information in the RNA to assemble the protein encoded in the RNA
Ribosome	Part of the cell that does the translation
Terminator	DNA region signals stop of the transcription
activator	

repressor	
inducer	
Ribosome binding site	
Metabolic engineering	
CRISPR	
DNA synthesis	
Sequencing	

Conferences

Conference	Description	Website
International Workshop on Bio-Design Automation (IWBD A)	Brings together synthetic biology, systems biology, and design automation communities to discuss concepts, methodologies and software tools for the computational analysis and synthesis of biological systems	http://www.iwbdaconf.org/
Synthetic Biology: Engineering, Evolution & Design (SEED)	Focused on advances in science, technology, applications, and related investments in the field of synthetic biology.	http://synbioconference.org/
Mammalian Synthetic Biology Workshop	This workshop will explore the latest trends and advances in the field, including recent foundational accomplishments and applications in addressing challenges to human health and beyond.	http://mammalian-synbio.org

<p>International Genetically Engineered Machine Competition (iGEM)</p>	<p>Multidisciplinary teams work all summer long to build genetically engineered systems using standard biological parts</p>	<p>http://igem.org/Competition</p>
<p>Gordon Conference - Biological Modeling, Directed Evolution and Complexity from Design to Application</p>	<p>This Gordon Research Conference on Synthetic Biology, and accompanying Gordon Research Seminar, will provide a multidisciplinary forum to discuss biology as an optimization engine, the latest analysis and design tools for the assembly of viable biological systems at all levels and, the application of biology.</p>	<p>https://www.grc.org/synthetic-biology-conference/2019/</p>