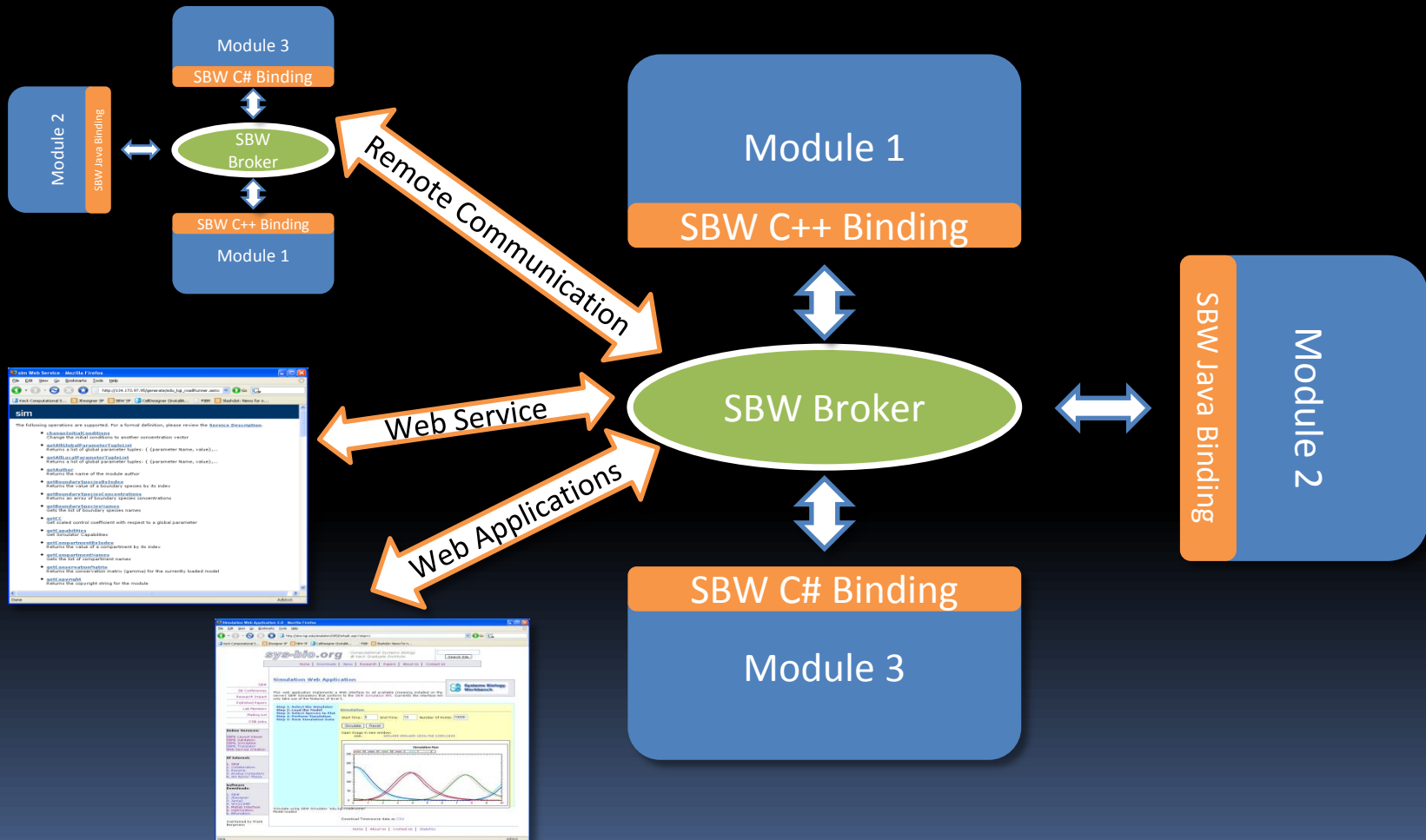


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SYSTEMS BIOLOGY WORKBENCH

Systems Biology Workbench



Web Service Interface

Keck Computational Systems Biology - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://sbw.kgi.edu/SBWWebServiceCreatorInterface/WebForm1.aspx

sys-bio.org Computational Systems Biology @ Keck Graduate Institute

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SBW Web Service Creator

running modules:

- DrawNetwork
- DrawNetwork.GUI
- edu.caltech.NOM
- edu.caltech.NOMClipboard
- edu.kgi.FORTRAN
- edu.kgi.freqGUI
- edu.kgi.frequencyAnalysis
- edu.kgi.matlabTranslator
- edu.kgi.roadRunner
- edu.kgi.roadRunner.sim Simul
- edu.kgi.SBW_CLAPACK
- edu.kgi.StructAnalysis
- edu.kgi.StructAnalysisGUI
- edu.kgi.XPPTTranslator
- Inspector
- Jarnac
- Jarnac.sim Simulation Service
- JarnacLite
- JarnacLiteConsole
- JDesigner
- metatool
- Oscill8 Core
- Oscill8 GUI

available services:

- sim

SBW Web Service creator web application ...
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sim Web Service - Mozilla Firefox

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http://134.173.97.15/generate/edu_kgi_roadR

sim

The following operations are supported. For a formal definition, please review the [Service Description](#).

- changeInitialConditions**
Change the initial conditions to another concentration vector
- getAllGlobalParameterTupleList**
Returns a list of global parameter tuples: { {parameter Name, value},...}
- getAllLocalParameterTupleList**
Returns a list of global parameter tuples: { {parameter Name, value},...}
- getAuthor**
Returns the name of the module author
- getBoundarySpeciesByIndex**
Returns the value of a boundary species by its index
- getBoundarySpeciesConcentrations**
Returns an array of boundary species concentrations
- getBoundarySpeciesNames**
Gets the list of boundary species names
- getCC**
Get scaled control coefficient with respect to a global parameter
- getSharpCode**
Returns the current generated source code
- getCapabilities**
Get Simulator Capabilities

JDesigner

Network Visual Designer [BIOMD000000012.xml] - [Drawing Canvas]

File Edit Actions View Options Analysis Viewers SBW Help

New Open Save Save As Undo Cut Copy Paste Export Analysis Viewers Stochastic Layout

Time Course

Time Course Simulation Control

Run Reset Configure

Time Start 0
Time End 10
Number of Points: 1000

Edit Output List
Default is all Species

Sliders Scan Parameters

Slider Control

Define Display

Mode Selector

Clear Display

Information: Elementary Modes

Elementary Modes

Results Computed by METATOOL (Stefan Schuster et al)

	Reaction1	Reaction2	Reaction3	Reaction4	Reaction5
0:	1	0	0	1	0
1:	0	0	0	0	0
2:	0	1	0	0	1
3:	0	1	0	0	0
4:	0	0	1	0	0
5:	0	0	1	0	0

Graphical Output

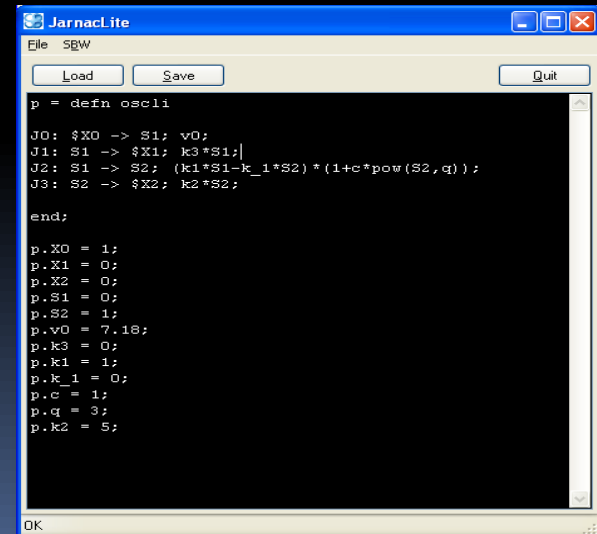
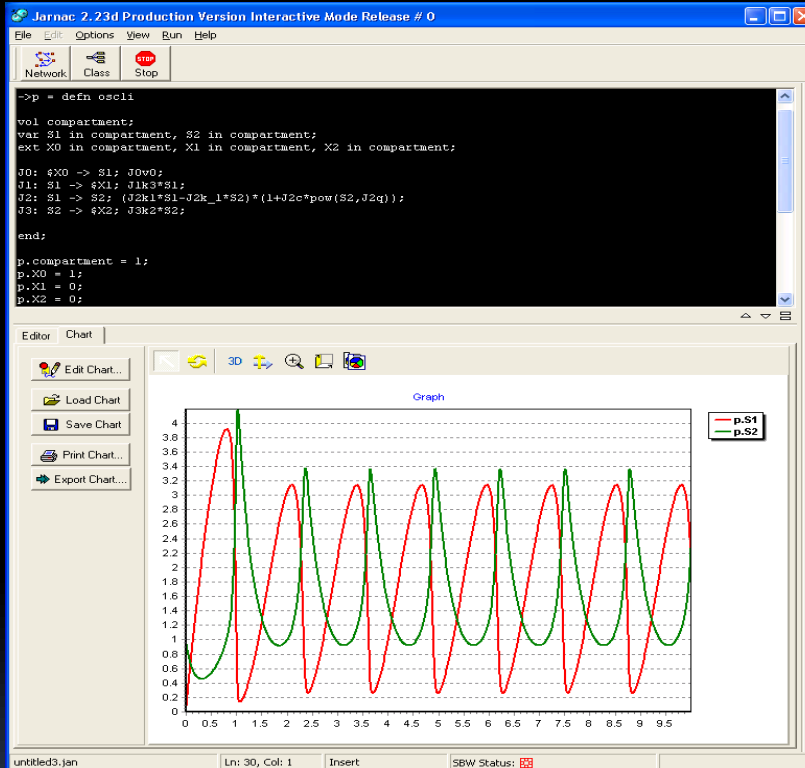
Load External Data X Axis Time

Legend: PX, PY, PZ, X, Y, Z

Time

Standing By SBW Connected 682, 158 BIOMD000000012.xml - SBML Level: 2 Mag: 0.64

Jarnac / JarnacLite



Bifurcation Discovery

BioSPICE Bifurcation Discovery Tool

File SBW Help

Discover

Oscillation

↑ + ↓

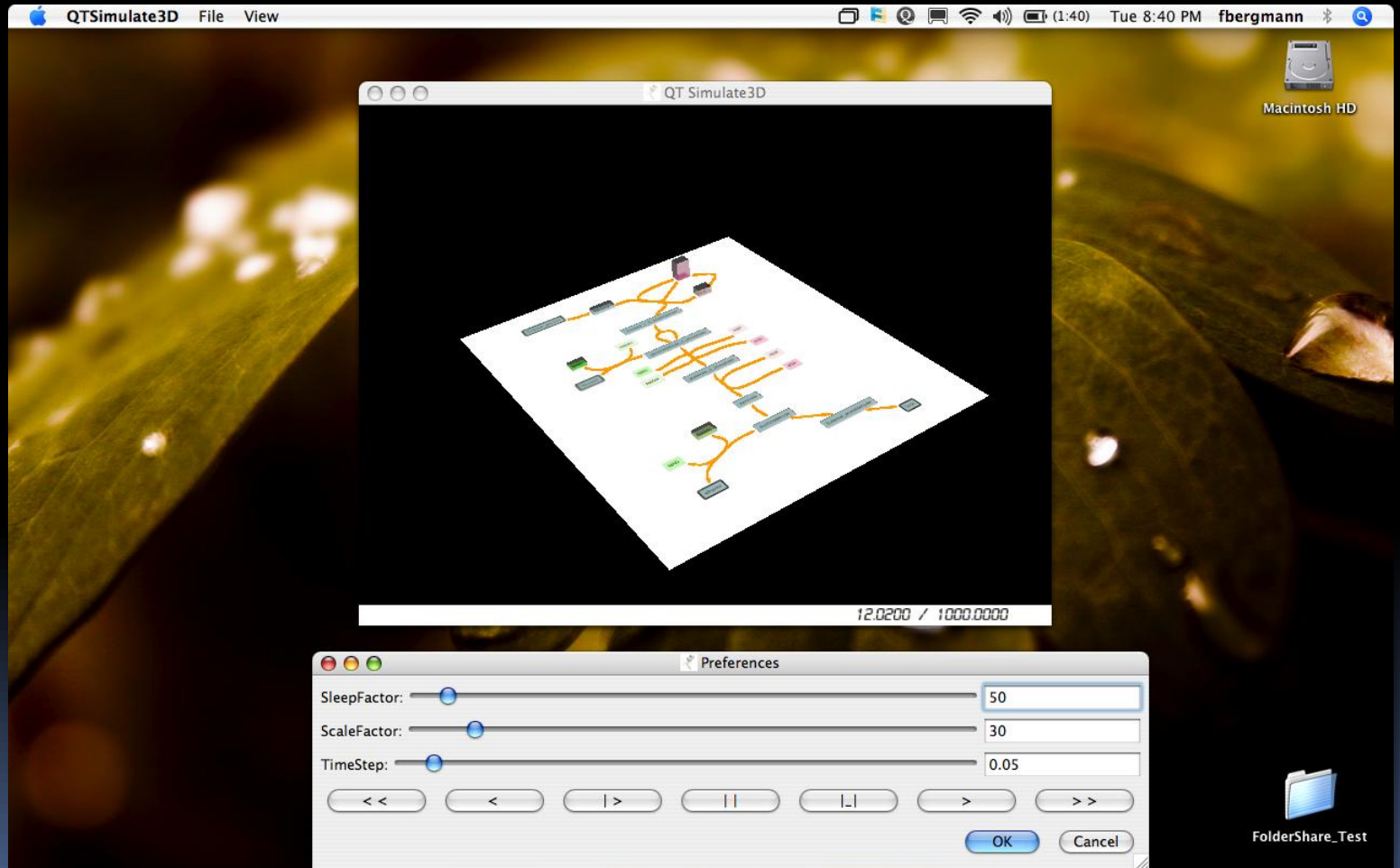
parameter na	enabled	initial value	optimized val	MIN	MAX
J0v0	<input checked="" type="checkbox"/>	8.529786962	7.083904292	0.852978696	10
J1k3	<input checked="" type="checkbox"/>	1.151642913	0.898114478	0.115164291	10
J2q	<input checked="" type="checkbox"/>	2.705029730	3.859779450	0.270502973	10
J2c	<input checked="" type="checkbox"/>	0.688295296	0.814698580	0.068829529	10
J2k_1	<input checked="" type="checkbox"/>	0	0	0	10
J2k1	<input checked="" type="checkbox"/>	0.913697027	1.098729572	0.091369702	10
J3k2	<input checked="" type="checkbox"/>	3.686920997	3.767292508	0.368692099	10
X0	<input checked="" type="checkbox"/>	0.749457004	1.109062886	0.074945700	10
X1	<input checked="" type="checkbox"/>	0	0	0	10
X2	<input checked="" type="checkbox"/>	0	0	0	10

eigenvalues of the last run:

RealPart	ComplexPart
4.01193938266431E-05	4.65600706959757
4.01193938245892E-05	-4.65600706959757

Fitness value: 1.64029E-009 Current lowest eigenvalue: done Iteration: 0000010 # Simulations: 0000090

3D Tool



3D Tool



Update



RoadRunner (Simulator)	X	X	X
Network Layout (Service / GUI)	X / X	X / +	X / X
SimDriver (Simulator GUI)	X	+	X
StructAnalysis Tool	X	+	X
Bifurcation Discovery Tool	X	+	X
Jarnac / JarnacLite	X	- / +	- / X
SBML Translators	X	X	X
3D Tool	X	X	X
JDesigner	X	-	-

Acknowledgement

KGI:

Herbert Sauro,

Anastasia Deckard,

Sri Rama Krishna Paladugu,

Ravishankar Rao Vallabhajosyula,

Vijay Chickarmane

Emery Conrad, VT

Robert Ball, VT

Funded through the generous support of ERATO,
DARPA (contract number MIPR 03-M296-01) and
the DOE (under Grand No. DE-FG02-04ER63804,
"Computational Resources for GTL").

Original Program Investigators: Hiroaki Kitano, John
Doyle, in collaboration with Hamid Bolouri,
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