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# In Silico Biology

Journal of Biological Systems Modeling and Simulation

IOS Press 2016



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```
%simulation loop
while ((maxCount) <= max(Span))
% Step 1: stochastic propensities,
% Step 2: stochastic rates
% Simulation completed
t = T((tmaxcount-1));
% = X((tmaxcount-1),:);
end
```

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*In Silico Biology* is a scientific research journal for the advancement of computational models and simulations in studies of complex biological phenomena. We publish peer-reviewed leading-edge biological, biomedical and biotechnological research in which computer-based (i.e., "in silico") modeling and analysis tools are developed and applied to generate new knowledge about biological systems dynamics, their design and control, and their evolution.

Studies published in *In Silico Biology* generally use theoretical models and computational analysis to gain quantitative insights into regulatory processes and networks, cell physiology and morphology, tissue dynamics and organ systems. Specific areas of interest include signal transduction and information processing, gene expression and gene regulatory networks, metabolism, differentiation and morphogenesis, among others. *In Silico Biology* also publishes foundational research in which novel algorithms are developed to facilitate modeling and simulations. Such research must demonstrate application to a concrete biological problem.

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The term "*in silico*" is a pendant to "*in vivo*" (in the living system) and "*in vitro*" (in the test tube) biological experiments, and implies the gain of insights by computer-based simulations and model analyses.

*In Silico Biology* (ISB) was founded in 1998 as a purely online journal. IOS Press became the publisher of the printed journal shortly after. Today, ISB is dedicated exclusively to biological systems modeling and simulations and is published solely by IOS Press. The previous online publisher, Bioinformation Systems, maintains a website containing studies published between 1998 and 2010 for archival purposes.

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## Subscription Information 2016

ISSN 1386-6338 (print)  
ISSN 1434-3207 (online)

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Volume 12 (6 issues)  
Print & Online:  
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