

# Introduction to L<sup>A</sup>T<sub>E</sub>X

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July 23, 2016

## Abstract

The abstract text goes here.

## 1 Introduction

$$\dot{x} = rx \left(1 - \frac{x}{K}\right) \quad (1)$$

$$x(t) = \frac{KPe^{rt}}{K + P(e^{rt} - 1)}, \quad (2)$$

$$Ci - Cells \quad (3a)$$

$$Ni - Nutrients \quad (3b)$$

$$C + N \xrightarrow{b_i} 2C, \quad (4a)$$

$$rate = b_i[C][N] \quad (4b)$$

$$C + N \xrightarrow{b_i[C][N]} 2C \quad (5)$$

$$- \delta_i \quad (6)$$

$$N + C \xrightarrow{b_i} 2C, \quad (7a)$$

$$\frac{dC}{dt} = b_i[N][C] \quad (7b)$$

$$r = b_i(N_0 + C_0) \quad (8a)$$

$$K = (N_0 + C_0) \quad (8b)$$

$$\frac{dC_i}{dt} = b_i N_i C_i, \quad (9a)$$

$$\frac{dN_i}{dt} = -b_i N_i C_i \quad (9b)$$

$$-k \sum_{j \in \delta_i} (N_i - N_j) \quad (9c)$$

$$(9d)$$

$$\frac{dC_i}{dt} = b_i N_i C_i, \quad (10a)$$

$$\frac{dN_i}{dt} = -b_i N_i C_i - k \sum_{j \in \delta_i} (N_i - N_j) \quad (10b)$$

$$(10c)$$