

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

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## Abstract

The abstract text goes here.

## 1 Introduction

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

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

$$\dot{C} = rC \left(1 - \frac{C}{K}\right) \quad (3)$$

$$C(t) = \frac{KC_0e^{rt}}{K + C_0(e^{rt} - 1)}, \quad (4)$$

$$Ci - Cells \quad (5a)$$

$$Ni - Nutrients \quad (5b)$$

$$C + N \xrightarrow{b_i} 2C, \quad (6a)$$

$$rate = b_i[C][N] \quad (6b)$$

$$C_i + N_i \xrightarrow{b_i[C_i][N_i]} 2C_i \quad (7)$$

$$C + N \xrightarrow{b[C][N]} 2C \quad (8)$$

$$- \delta_i \quad (9)$$

$$N + C \xrightarrow{b_i} 2C, \quad (10a)$$

$$\frac{dC}{dt} = b_i[N][C] \quad (10b)$$

$$r_i = b_i(N_0 + C_0) \quad (11a)$$

$$K_i = (N_0 + C_0) \quad (11b)$$

$$r = b(N_0 + C_0) \quad (12a)$$

$$K = (N_0 + C_0) \quad (12b)$$

$$\frac{dC_i}{dt} = b_i N_i C_i, \quad (13a)$$

$$\frac{dN_i}{dt} = -b_i N_i C_i \quad (13b)$$

$$-k \sum_{j \in \delta_i} (N_i - N_j) \quad (13c)$$

$$(13d)$$

$$\frac{dC_i}{dt} = b_i N_i C_i, \quad (14a)$$

$$\frac{dN_i}{dt} = -b_i N_i C_i - k \sum_{j \in \delta_i} (N_i - N_j) \quad (14b)$$

$$(14c)$$