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Prd. Madhav Gadgil & Vijaykumar Nair.

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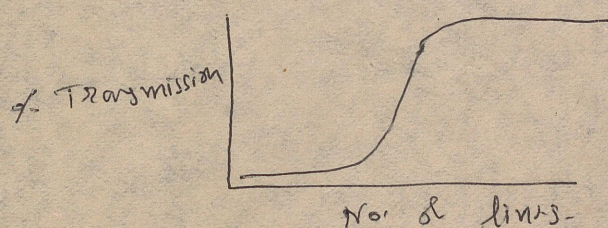
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I Dictyostelium discoideum  
Oscillations & Relay

(Dr. V. N.)

II Sensory Perception, (Bacterial Chemotaxis)  
~~Differential~~ Binding & ~~substate~~ substate to receptors.  
Time spent in the bound state.

III Hopping conduction; Percolation theory



IV Pattern formation using eqn.

$$\frac{\partial f}{\partial t} = af + bf^3 + D \frac{\partial^2 f}{\partial x^2}$$

Solution - Jacobian elliptic functions  $P(x, \mu)$   
stability analysis.

V Noise problem. Power spectrum.  
Synaptic Transmission.

VI Fokker Planck equation, Langevin equation

$$P(m, n) = p(m-1, n-1) + q(m+1, n+1) + (1-p-q)$$

Analysis

(2)

- (i) PNAS 74 1543 (1977) A. Goldbeter & A. Segel
- (ii) Nature 253 540 (1975) A. Goldbeter.
- (iii) ~~FEBS~~ FEBS letters. — W. Roos, V. Nanjundiah, D. Malchow,  
& G. Gerisch.
- (iv) J. Cell. Sci. 30 319 (1978) — D. Malchow,  
— V. Nanjundiah & G. Gerisch.

(i) Population ecology of bamboos.

(a) Optimal rates of harvesting.

Nonoverlapping generation, unusual growth rates.

(b) Correlation between flowering and draught.

(ii) Remote sensing.

Landsat images.

Interpretation of areal photographs

Key for land use pattern.

Environmental implications -

(iii) Dominance hierarchy

Fighting patterns.

Prediction of social behaviour.