

**Theoretical Neuroscience:**  
Computational and Mathematical Modeling of Neural Systems

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**Errata**

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Errata

Page	Location	Error	Scourge
<i>xv</i>	last line of second paragraph	Ketchen Zhang $\Rightarrow$ Kechen Zhang	
41	eqn 1.43	$s(t) \Rightarrow s(\tau)$ and $\exp(i\omega t) \Rightarrow \exp(i\omega \tau)$	Angela Yu
41	formula 2 lines above margin label <i>periodogram</i>	$s(t) \Rightarrow s(m\Delta t)$	Angela Yu
57	eqns 2.13-2.17	Link to an extended discussion.	Alex Loebel
72	eighth line of the caption to fig 2.21	$\alpha = 20\text{ms} \Rightarrow 1/\alpha = 20\text{ms}$	Sune Nørhøj Jespersen
95	8 lines from the end	likelihood $\Rightarrow$ likelihood ratio	Angela Yu
110	eqn 3.44	had we used the full $P[r s]$ of eqn 3.30, rather than the approximation in eqn 3.31, it would have been apparent that the term $\dots - f'_a(s)/f_a(s)$ in the sum in eqn 3.44 would cancel <i>even for asymmetric tuning curves</i>	Ed Snelson
112	eqn 3.48	both expressions should be <i>divided</i> rather than multiplied by $D$	Ed Snelson
134	eqn 4.29	$p_a[r_a] \Rightarrow p[r_a]$	Tatsuo Okubo
155	4 <sup>th</sup> , 12 <sup>th</sup> lines	Avagadro $\Rightarrow$ Avogadro	Rafael Yuste
158	12 <sup>th</sup> line	mm $\Rightarrow$ mm <sup>2</sup>	Larry Abbott
170	eqn 5.20	$A_\alpha \exp(-qB_\alpha/k_B T) \Rightarrow A_\alpha \exp(-qB_\alpha V/k_B T)$	Jihwan Myung
181	5 <sup>th</sup> line below eqn 5.30	The rise time is $1/(\alpha_s + \beta_s) = 0.9\text{ms}$ ; we are not employing the approximation of eqn 5.28 that $\alpha_s \gg \beta_s$	Sune Nørhøj Jespersen
187	last paragraph	all instances of $r$ should be $r$	Tatsuo Okubo
226	eqn 6.45	The symbol $A_\mu$ in the equation for $D_\mu$ denotes the surface area of compartment $\mu$ of the cable, it is not the coefficient denoted by $A_\mu$ that appears in the upper left equation and in equation 6.44. Different symbols should have been used for these two quantities.	David Simon
234	5 lines from the top	$\exp(-t/\tau_r)/\tau_r \Rightarrow \exp(-t/\tau_s)/\tau_s$	Angela Yu
235	eqn 7.6	$\dots v = F(I_s(t))$	Ming Hang
238	rightmost term in eqn 7.9	$-\mathbf{v} \Rightarrow -v_a$	Geoff Goodhill
296	6 <sup>th</sup> line below eqn 8.22	$N \Rightarrow N_u$	Tatsuo Okubo
296	3 <sup>rd</sup> line below eqn 8.23	matrix $\Rightarrow$ vector	Tatsuo Okubo
299	2 <sup>nd</sup> line of 3 <sup>rd</sup> paragraph	the $\Rightarrow$ that	Iain Murray
301	2 <sup>nd</sup> line below eqn 8.27	$\mathbf{v} \Rightarrow v$	Tatsuo Okubo
338	4 lines from the top	stimulus $\Rightarrow$ reward	Angela Yu
412	eqn A.69	$\tau \int_{z(0)}^{z(t)} dz' \frac{1}{z'} \Rightarrow \int_{z(0)}^{z(t)} dz' \frac{1}{z'}$	Alexander Lerchner
	Exercise 2.14	we are only interested in the spatial receptive field of the LGN neuron, so the values of $\alpha$ and $\beta$ are extraneous	Jack Kilgallen