Response of traveling waves to transient inputs in neural fields

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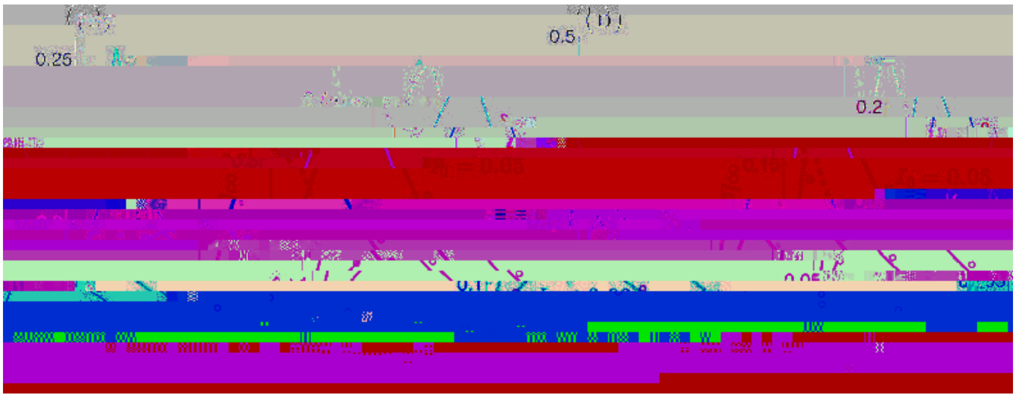
A. Wave response function: Adjoint

$(I(\ ,t) = 0)$, ... $u(\ ,t) = U(\ \ ct)$ ... c, ... $f \in C$ ... $f'' > 0$, ... $u + f(u)$ ... $u_0 < u < u$ ... u_0, ... $w \in C$ ... $\int_{-\infty}^{\infty} w(\ )d\ < \infty$. ... $u(\ ,t) = U(\ )$, ... $=\ \ ct$, ... $I(\ ,t) = 0$,

$$cU' = U + \int_{-\infty}^{\infty} w(\ ) f\big(U(\ )\big) d\ . \qquad (\ )$$

... $0 < I(\ ,t)$ ... $I(\ ,t) =$

i8203 0151(30 0 1 scn (11.5814 1.358 TD 0.0592 90.610< - (o.4177 -1()] w 9 0 . 4 9 9 6


0.25
0.5
0.2

[illegible]

Δ, $\in (\ \ \Delta,\ )$,

$$cU = U + A \int_{\Delta} (\ )d\ . \qquad (\ )$$

( )

$$U(\ ) = \frac{\Delta \quad c \quad + \Delta \quad + \Delta}{c\ +}. \qquad (\ )$$

$U(\ \ \Delta) = U(\ ) =$,

( ) c Δ

$$\frac{A \quad \Delta \quad \Delta \quad c \quad \Delta}{c\ +} = \ , \qquad (\ )$$

$$\frac{A \quad \Delta \quad \Delta + \quad + c \quad \Delta +}{c\ +} = \ . \qquad (\ )$$

( ) ( ),

$$\frac{A(\ \ \Delta\ )}{c\ +}(\ \ \ c\ \ ) = 0.$$

$\Delta =$

$Be^{\;/c}$

$$V(\;) = H(\;+\;) + e^{\;/c} + e^{\;/c} + \; e^{(\;+\;)/c} + H(\;+\Delta) + e^{\;/c} + e^{\;/c} + \; e^{(\;\Delta\;)/c}.$$

$= \Delta \quad = ,$

$$\sum_{n=} e^{\;n\;/c} = - \frac{}{c}.$$

$$c\;C(\;)(\;+\;) + c\;C(\;\Delta)(\;+\;\Delta) = 0,$$

$$C(\;) = \frac{c}{\Delta}(\;+\;\Delta)$$

$$C(\;\Delta) = \frac{c}{\Delta}(\;\Delta+\;).$$

$=$

$$V(\;) = H(\;+\;) + \frac{(\;/c)}{} e^{(\;+\;)/c}$$

$$H(\;+\Delta\;) + \frac{(\;/c)}{} e^{(\;\Delta\;)/c}.$$

$I(\;,t) = I_0(t),$

$$_\infty = \frac{I_0 \; V(\;)d}{\frac{dU(\;)}{d} V(\;)d} = 0, \qquad (\;)$$

$(\;),$ $(\;)$

$$_\infty = I_0 \frac{\mathcal{P}_+(\;_p) \;\; \mathcal{P}(\;_p)}{A \;\; (\;\Delta\;)} \qquad (\;0)$$

$$\mathcal{P}_+(\;_p) = \begin{cases} \mathcal{H}_+ e^{(\;+\;_p)/c}, & _p > \Delta \\ \mathcal{H}\; e^{(\;+\;_p)/c} + \mathcal{E}(\;), & _p < \Delta \end{cases}$$

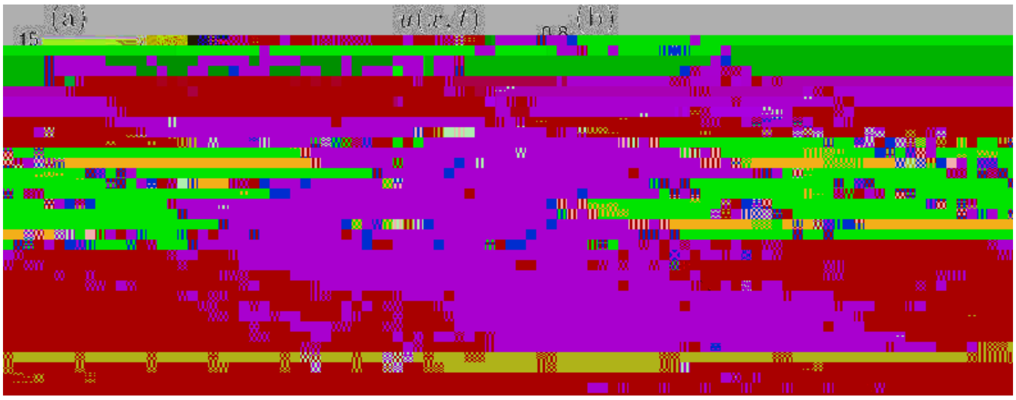
$$\mathcal{P}(\;_p) = \begin{cases} \mathcal{H}_+ e^{(\;\Delta\;_p)/c}, & _p > p_+ \\ \mathcal{H}\; e^{(\;\Delta\;_p)/c} + \mathcal{E}(\;\Delta), & _p \in (p\;, p_+) \\ \mathcal{H}\; e^{(\;\Delta\;_p)/c}, & _p < p\; \end{cases}$$

$p \;=\; \Delta \;\; \Delta$

$$\mathcal{H} = \frac{}{c} \quad \frac{\Delta}{c},$$

$$\mathcal{E}(\;) = e^{(\;_p\;\Delta\;)/c}.$$

0 0 0.



( ). ( ). $I(,t) = I_0 (t \quad t_p)$. ( ) $u(,t)$ $t_p =$

$= U_s(/) \quad I_0$,

$$I_0 = A \ldots \quad \frac{}{A} + \quad (\ )$$

$= A$

$I_0 + >$, $I_0 > A$

$$I(,t) = I_0(t) H(+ \Delta_I),$$

U_s

$\Delta_s \quad \Delta_u$.

$$I_0 > A \ldots \frac{(/A)}{} \quad (\ )$$

$$\Delta_I = \Delta_s \quad \Delta_u = \quad (/A) \ldots \quad (\ )$$

V. CONCLUSION

[illegible] *in vivo* [illegible]

ACKNOWLEDGMENTS

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[illegible] 90, (0 0).
[illegible] 14, (00).
[illegible] 91, [illegible]
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[illegible] 9, (00).
[illegible] 105, (00).
[illegible] 60, [illegible]
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[illegible] 123, [illegible]
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[illegible] 155, (00).
[illegible] 62, 0 (00).
[illegible] 63, (00).
[illegible] 14, (00).
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