

Effects of Time-Dependent Stimuli in a Competitive Neural Network Model of Perceptual Rivalry

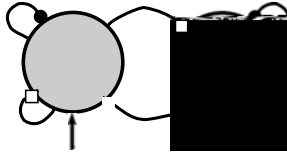
Suren Jayasuriya Zachary P. Kilpatrick

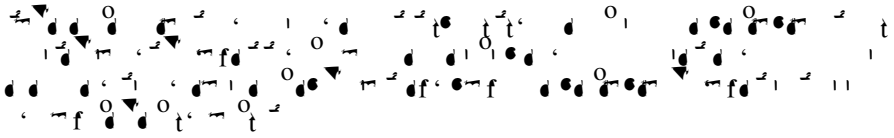
Abstract

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The abstract section contains a dense, illegible block of text, likely representing the main body of the paper's abstract, which is obscured by a complex pattern of overlapping characters and symbols.

Main body of handwritten musical notation, consisting of approximately 10 staves. The notation is dense and includes various musical symbols such as notes, rests, and dynamic markings. The dynamic markings 'f' (forte) and 'ff' (fortissimo) are visible. There are also some blue ink annotations, possibly 'pp' (pianissimo), scattered throughout the score.





$$I(t) = - \frac{t}{T}$$

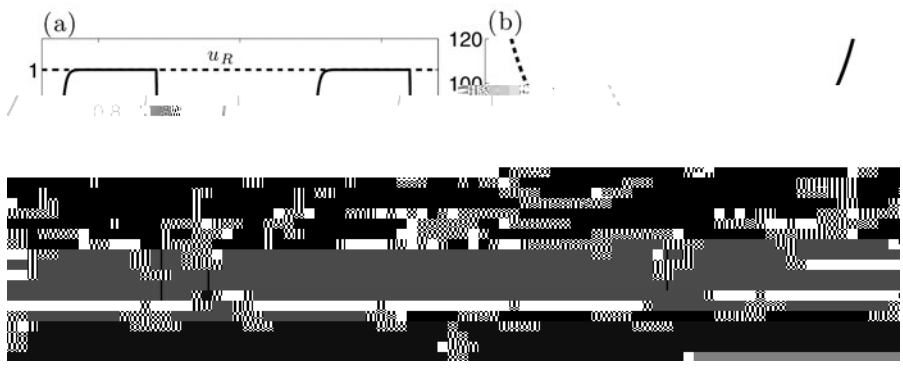


Fig. 5 $u_R = \dots$ $I_L = \dots$ **a** \dots

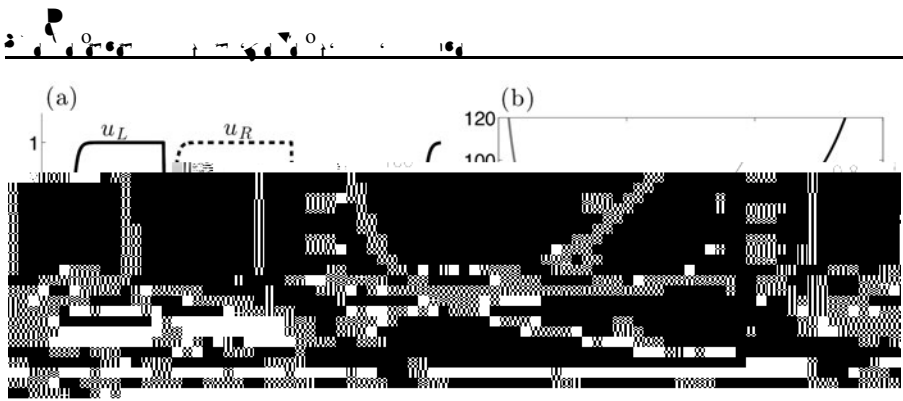


Fig. 6

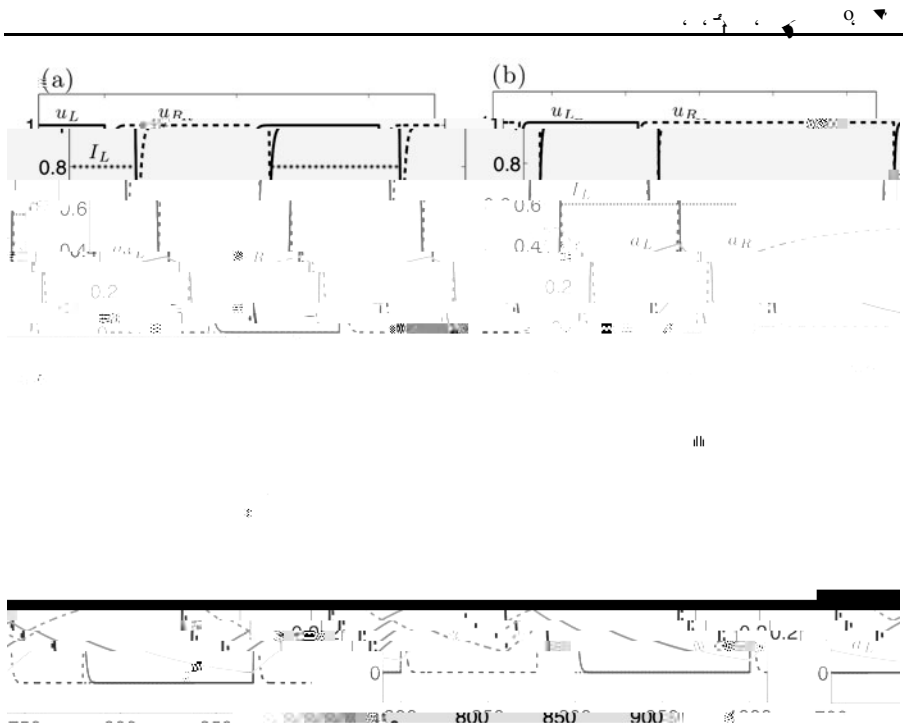
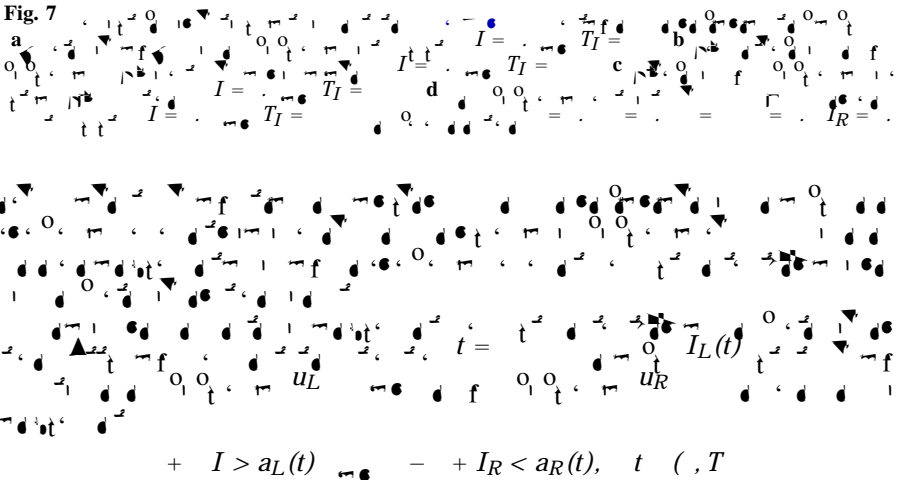


Fig. 7



$$+ I > a_L(t) \quad - + I_R < a_R(t), \quad t \in (, T$$

$$I_L(t) = \int_0^t a_L(t') e^{-\lambda(t-t')} dt' \quad (1)$$

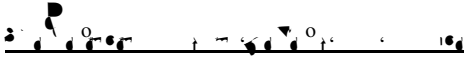
$$\langle a_L(T_I) \rangle = \int_0^{T_I} a_L(t) e^{-\lambda t} dt \quad (2)$$

$$I_R > a_R(T_I) = a_R(0) e^{-\lambda T_I} \quad (3)$$

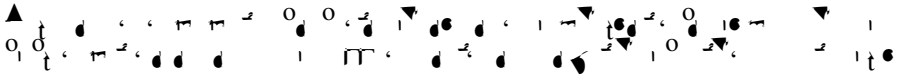
$$\int_0^{T_I} a_L(t) e^{-\lambda t} dt = \int_0^{T_I} a_L(t) e^{-\lambda t} dt \quad (4)$$

$$\langle a_L(t) \rangle = \int_0^{T_I} a_L(t) e^{-\lambda t} dt \quad (5)$$

$$\langle a_L(t) \rangle = \int_0^{T_I} a_L(t) e^{-\lambda t} dt \quad (6)$$

2: 



▲ 

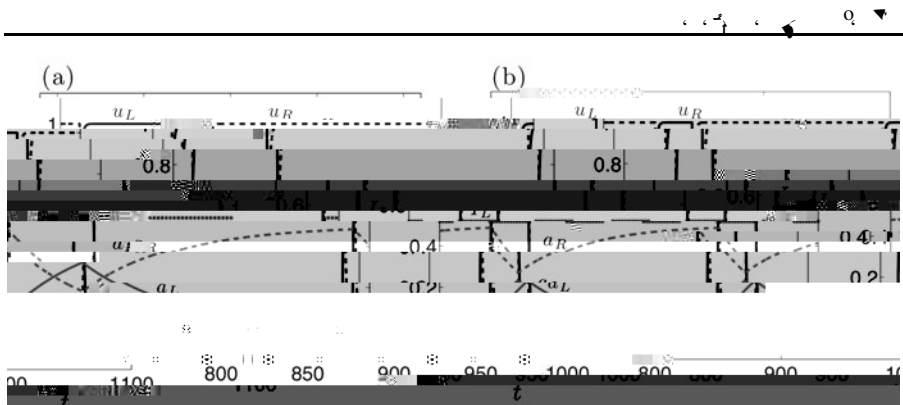
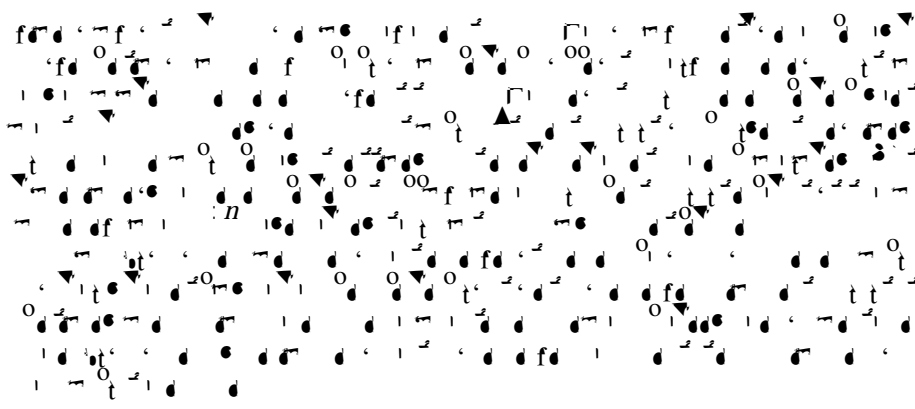
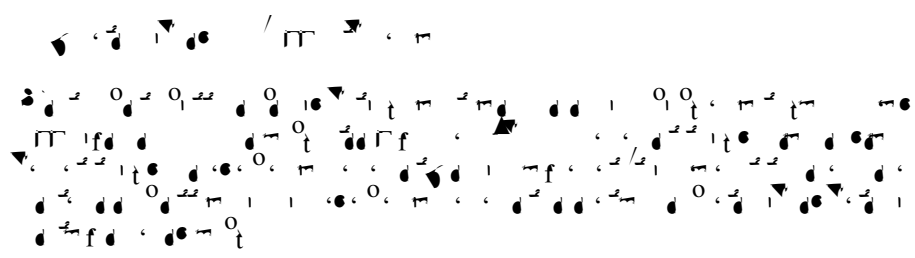
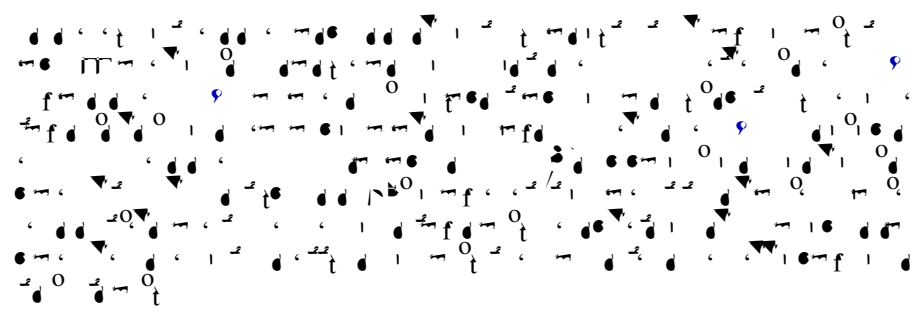


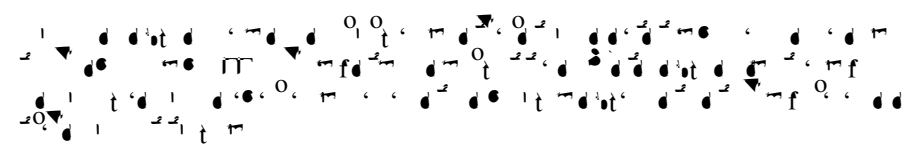
Fig. 8



5 Time-Variation in Both Inputs



$$a_j(\cdot) = a_j(T_I) = \frac{\cdot}{+ e^{T_I/}} \quad a_j(T_I) = \frac{\cdot}{+ e^{-T_I/}}, \quad j = L, R.$$



$$(\Gamma) \quad I + \quad > \quad \frac{\cdot}{+ e^{-T_I/}},$$

$$(\Gamma) \quad - \quad < \quad \frac{\cdot}{+ e^{-T_I/}},$$

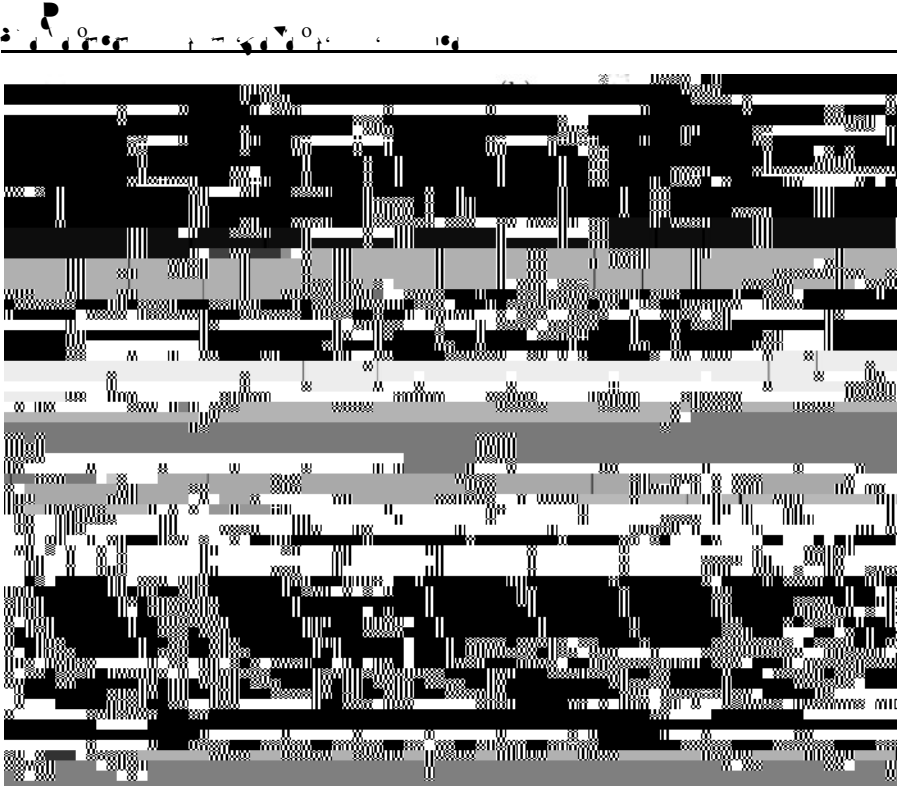
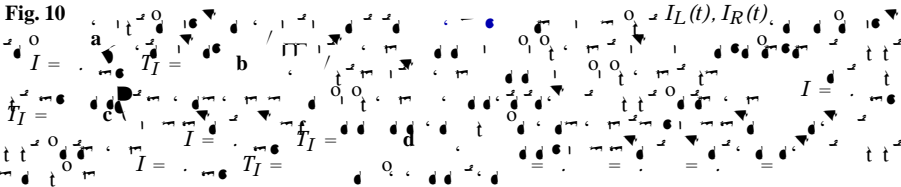


Fig. 10



$$(\Gamma) \quad \text{for } I < \frac{1}{e^{T_I}},$$

$$(\Gamma) \quad \text{for } I > \frac{1}{e^{T_I}}.$$

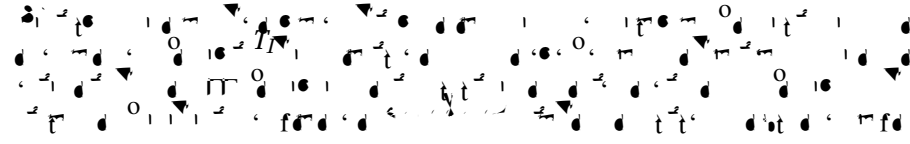
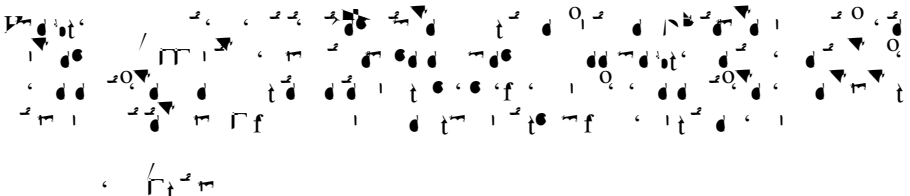
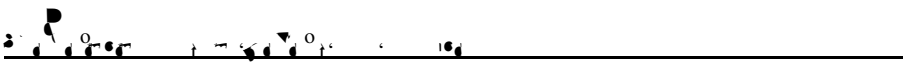


Fig. 11



□ $\int_{-\infty}^{\infty} \delta(x) dx$

$$I > \frac{e^{-T_I/} (-e^{-T_I/} + e^{-T_I/})}{\frac{+ - - I}{- + I} + e^{-T_I/}},$$

□ $\int_{-\infty}^{\infty} \delta(x) dx$

$$- + I > \frac{\frac{+ - - I}{- + I} (e^{-T_I/} - e^{-T_I/}) + e^{-T_I/}}{\frac{+ - - I}{- + I} + e^{-T_I/}},$$

□ $\int_{-\infty}^{\infty} \delta(x) dx$

$$- + I > \frac{(- + I) (e^{-T_I/} - e^{-T_I/}) + (e^{-T_I/} - e^{-T_I/})}{- e^{-T_I/} + e^{-T_I/}},$$

Handwritten musical score on a single staff. The notation includes a treble clef, a key signature of one flat (B-flat), and a 3/4 time signature. The score consists of several measures of music, featuring various note values (quarter, eighth, and sixteenth notes), rests, and dynamic markings such as *f* and *ff*. A section of the score is marked with *TI* and *I*. The notation is somewhat dense and appears to be a transcription of a handwritten manuscript.

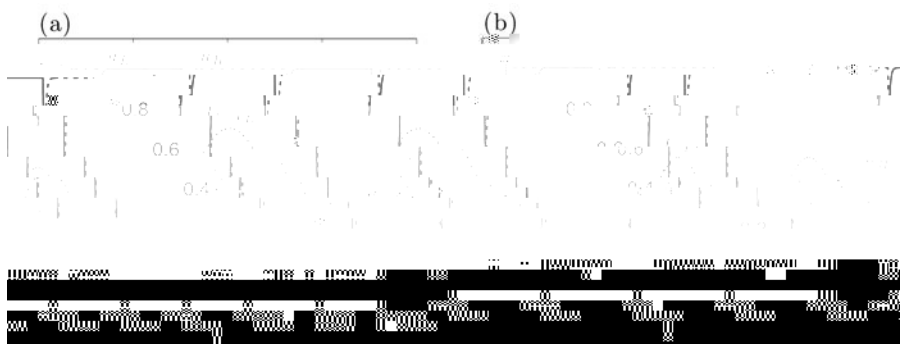
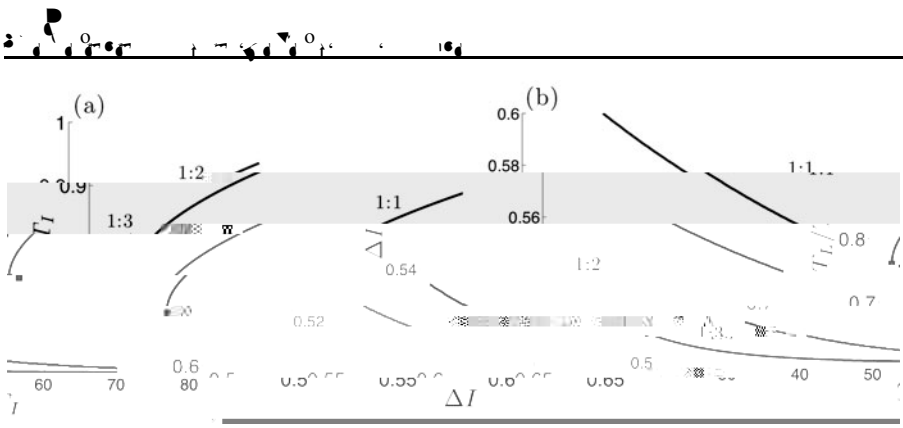


Fig. 12

$$\begin{aligned}
 & \dots a \dots t \dots I = \dots t \dots T_I = \dots I = \dots T_I = \dots b \dots \\
 & \dots t_{I_R} = \dots \\
 & \dots I_L \dots T_L \dots \\
 & + I_L(T) = a_L(T + T_L), \\
 & \dots a_L \dots \\
 & \underline{I}
 \end{aligned}$$



A musical score consisting of two staves. The top staff begins with a treble clef and a key signature of one sharp (F#). It contains several measures of music with notes, rests, and dynamic markings such as *f* and *mf*. A section is marked with a large *I*. The bottom staff begins with a bass clef and contains notes and rests corresponding to the top staff. The score concludes with a double bar line.



$$I(T_U + T_L + T_R - T) + a_R(T_U + T_L + T_R - T)$$

$$\frac{I}{T_I} = \frac{T}{T_I} = \frac{e^{-(T_I+T_L+T_U)/} - e^{-T_I/}}{-e^{-T_I/}},$$

$$\frac{I}{T_I} = \frac{(T_L - T)}{T_I} + \frac{e^{-(T_I+T_R+T_U)/} - e^{-T_I/}}{-e^{-T_I/}},$$

$$\frac{I}{T_I} = (T_U + T$$

This image shows a page of handwritten musical notation. The score is extremely dense, featuring a complex arrangement of notes, rests, and dynamic markings. Key markings include 'tff', 'f', and 'ff'. The notation includes various note values (eighth, sixteenth, and thirty-second notes), rests, and articulation marks like accents and slurs. The overall appearance is that of a highly detailed and intricate musical composition, possibly for a solo instrument or a small ensemble. The handwriting is consistent throughout, and the layout is organized into a single system of notation.

2. 