

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

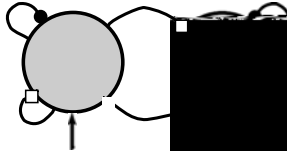
Suren Jayasuriya · Zachary P. Kilpatrick

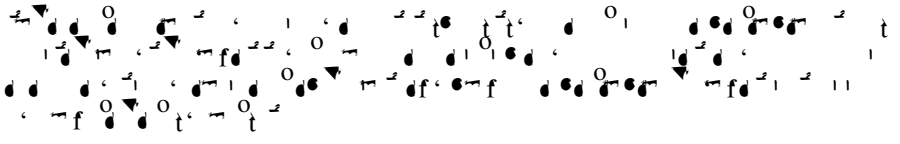
Abstract

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The abstract text is rendered as a dense, illegible pattern of black and white characters and symbols, resembling a corrupted or heavily stylized font. It is arranged in several lines across the page.

Main body of handwritten musical notation, consisting of multiple staves with notes, rests, and dynamic markings such as *f*, *ff*, and *pp*.





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

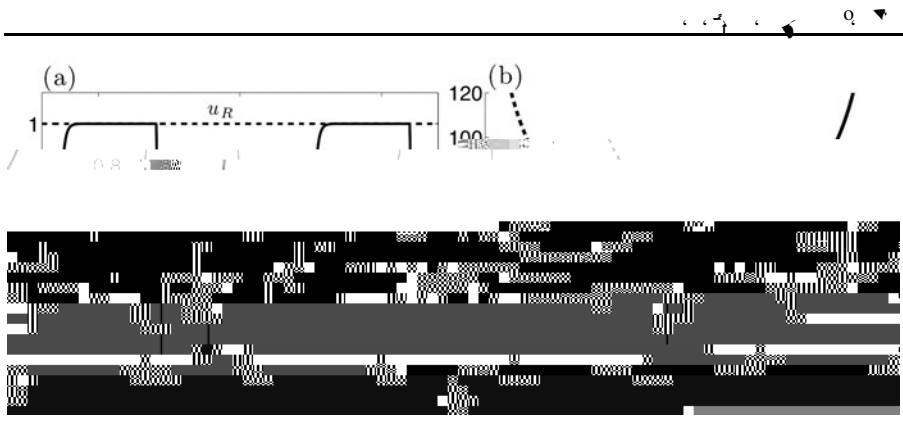


Fig. 5 $u_R = 1$, $I_R = 1$, $I_L = 1$ (a) $u_R = 120$, $I_R = 120$, $I_L = 120$ (b)

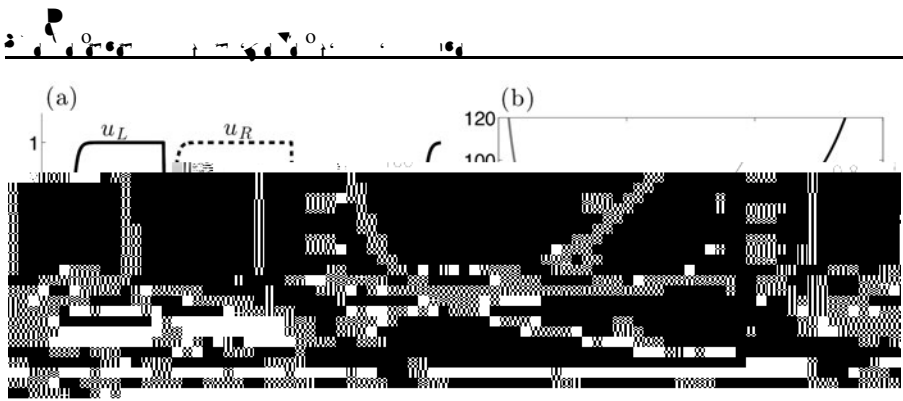


Fig. 6

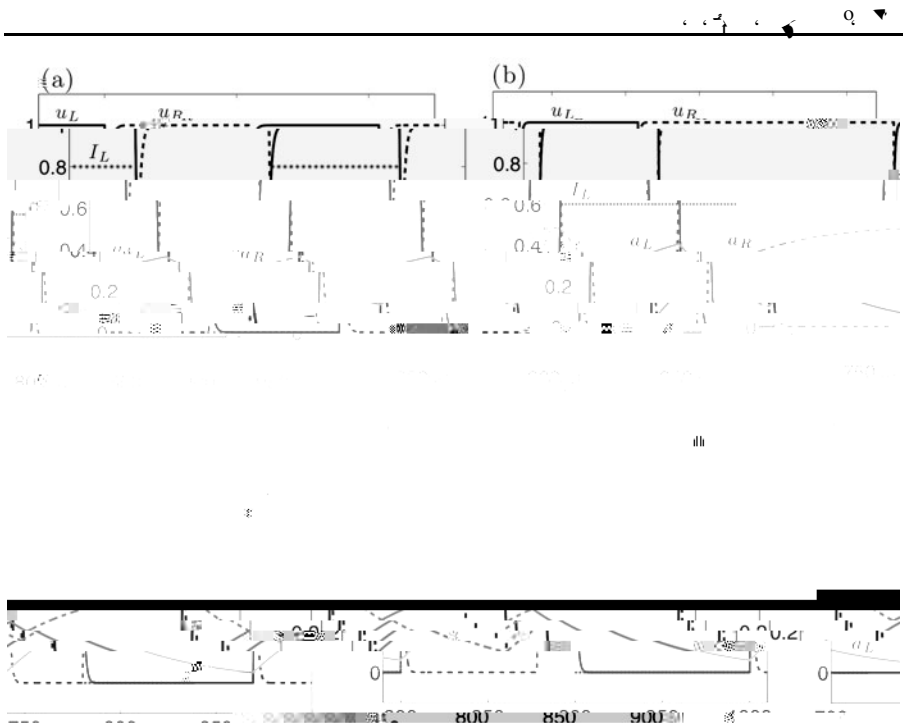
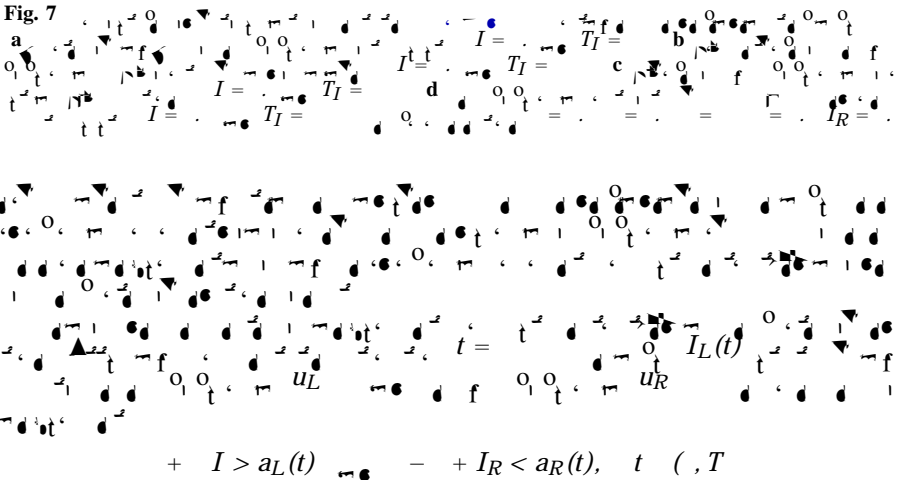


Fig. 7



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

$$\langle a_L(T_I) \rangle = \langle a_L \rangle e^{-\lambda T_I}$$

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

$$\int_{t=T_I}^{\infty} a_L(t) e^{-\lambda(t-T_I)} dt = \langle a_L(t) \rangle e^{-\lambda(t-T_I)}$$

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

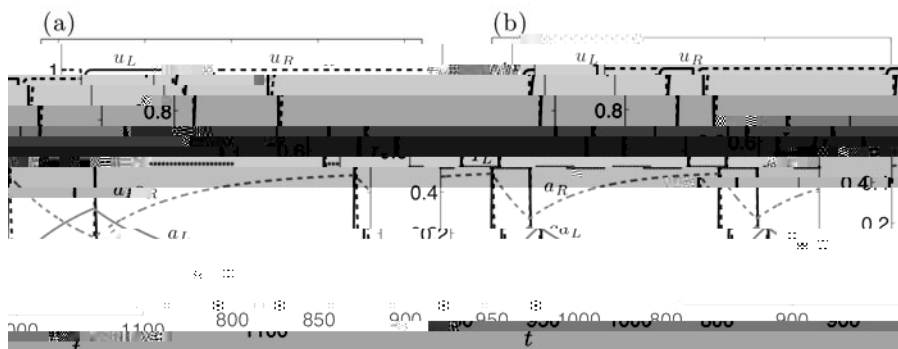
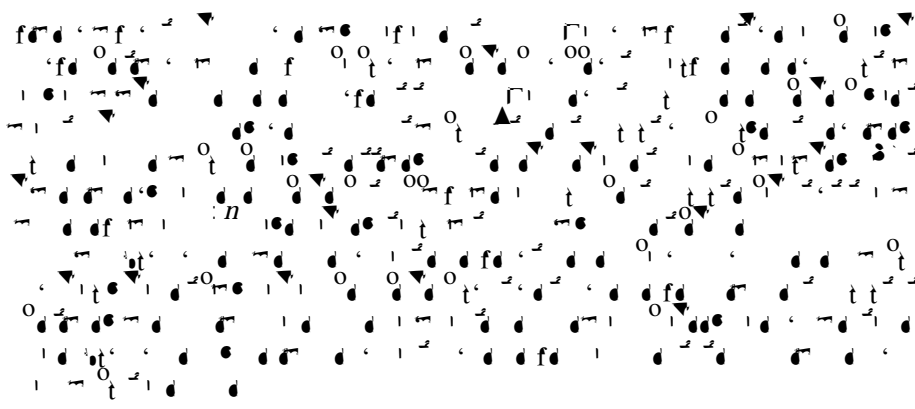
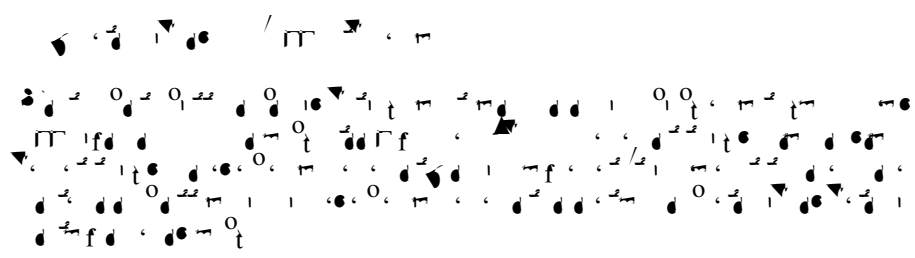
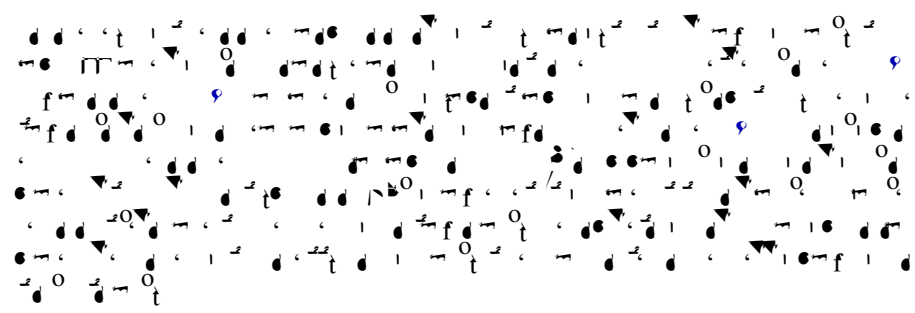


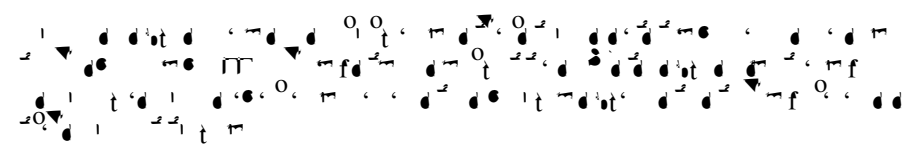
Fig. 8



5 Time-Variation in Both Inputs



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



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

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

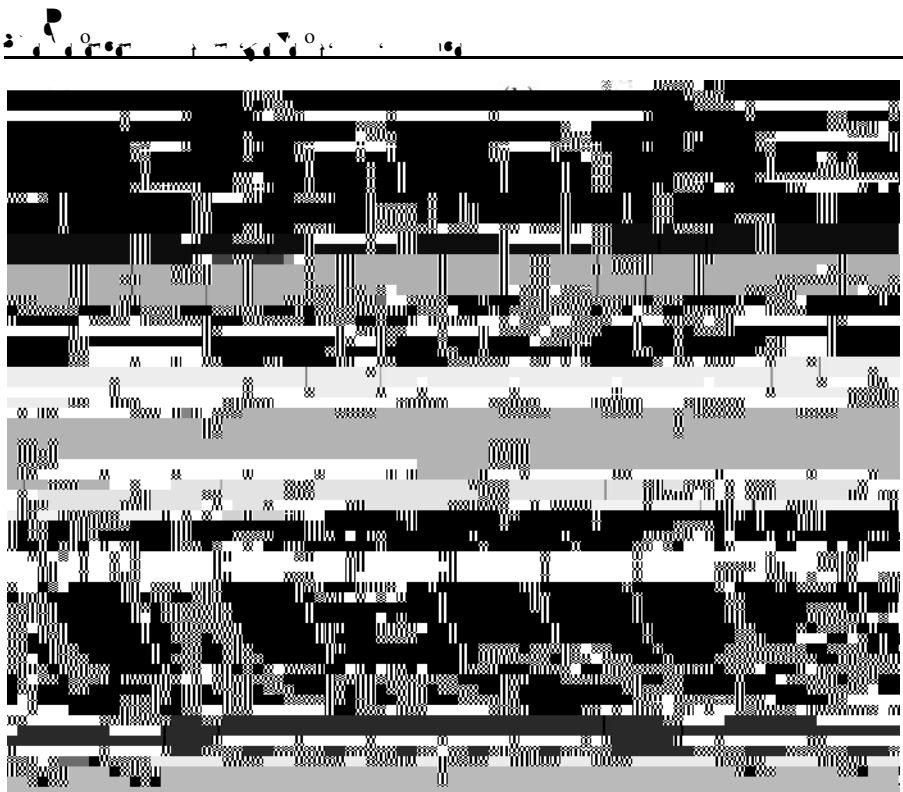
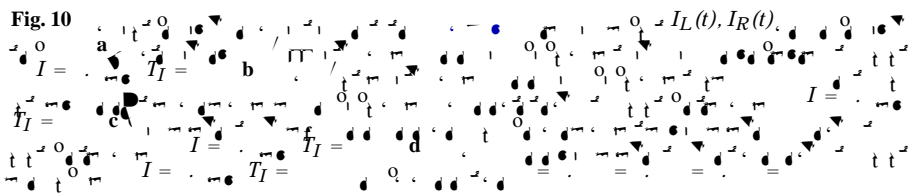


Fig. 10



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

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

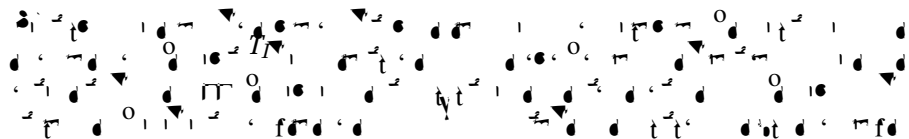
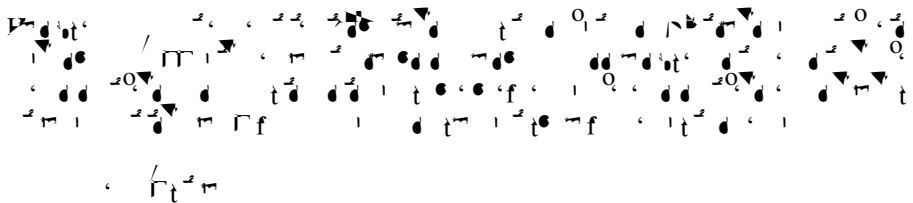
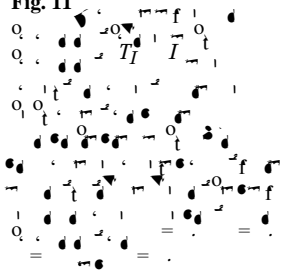
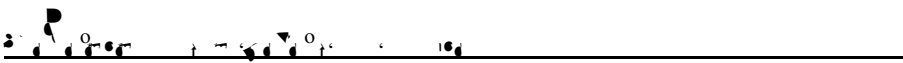


Fig. 11





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

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

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

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

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

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

The image shows a musical score with two staves. The top staff contains a sequence of notes and rests, including a treble clef, a key signature of one flat, and a common time signature. The bottom staff contains a more complex sequence of notes, rests, and dynamic markings. The notation includes various note values (quarter, eighth, and sixteenth notes), rests, and dynamic markings such as *f* (forte) and *mf* (mezzo-forte). There are also some unusual symbols, possibly representing ornaments or specific performance instructions, such as the letters 'T' and 'I' with arrows pointing to notes. The score is written in a style that appears to be a transcription or a specific notation system, possibly for a particular instrument or voice part.

