$$\boxed{\textbf{ELA}}$$

FURTHER RESULTS ON THE CRAIG-SAKAMOTO EQUATION[*]

JOHN MAROULAS[†]

Abstract. In this paper, necessary and sufficient conditions are stated for the Craig-Sakamoto equation $det(I - sA - tB) = det(I - sA)\, det(I - tB)$ to hold for all scalars $s, t \in \mathbb{C}$. Moreover, spectral properties for matrices A and B that satisfy this equation are investigated.

Key words. Determinant, Characteristic polynomial, Craig-Sakamoto equation, Bilinear form.

AMS subject classifications. 15A15, 15A18, 15A63.