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**Synchronization effects in chaotic oscillators with spatially dependent frequency mismatch**[1] PHILIP JAVERNICK, TRINANJAN DATTA, Augusta State University — We investigate the phenomena of synchronization for two coupled chaotic oscillators with a frequency mismatch which is explicitly spatially dependent. We compute the frequency synchronization plot in the parameter space of coupling strength and frequency mismatch of the chaotic system. We find regimes where the system is frequency locked corresponding to a synchronous state and regimes of non-synchronous state. In the non-synchronous state the frequencies are either zero individually (quenched oscillations) or the difference between them is non-zero. We also find that the region with oscillation quenching is reduced compared to the case when the frequency mismatch is a constant.

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