Let $A = (A_1, \ldots, A_m)$ be an $m$-tuple of bounded linear operators acting on a Hilbert space $\mathcal{H}$. Their joint $(p, q)$-matricial range $\Lambda_{p,q}(A)$ is the collection of $(B_1, \ldots, B_m) \in M_q^m$, where $I_p \otimes B_j$ is a compression of $A_j$ on a $pq$-dimensional subspace. This definition covers various kinds of generalized numerical ranges for different values of $p, q, m$. In this talk, we will show that $\Lambda_{p,q}(A)$ is star-shaped if the dimension of $\mathcal{H}$ is sufficiently large. If $\dim \mathcal{H}$ is infinite, we consider the joint essential $(p, q)$-matricial range

$$\Lambda_{p,q}^{\text{ess}}(A) = \bigcap \{ \text{cl}(\Lambda_{p,q}(A_1 + F_1, \ldots, A_m + F_m)) : F_1, \ldots, F_m \text{ are compact} \},$$

and show that it is always non-empty, compact and convex. This is the joint work with Chi-Kwong Li, Yiu-Tung Poon, Nung-Sing Sze. (Received August 29, 2019)