1163-47-182   **Kelly Bickel**, **Anne Greenbaum**, **Pamela Gorkin*** (`pgorkin@bucknell.edu`), **Thomas Ransford**, **Felix Schwenninger** and **Elias Wegert**. *Crouzeix's Conjecture and Related Problems.*

Let $W(A)$ denote the numerical range of an $n \times n$ matrix A:

$$W(A) = \{\langle Ax, x \rangle : \|x\| = 1\}.$$

Michel Crouzeix showed that there is a constant C such that

$$\|f(A)\| \leq C \sup_{z \in W(A)} |f(z)|,$$

for all f analytic on a neighborhood of $W(A)$ and he conjectured that the best constant is $C = 2$. In this talk, we present a short history of work on the conjecture, some recent results, and open questions related to this conjecture. (Received August 25, 2020)