W. Żelazko (Warszawa), Ideals in F-algebras

An F-algebra is a topological algebra which is an F-space (a complete metric t.v.s.). Let $A$ be such an algebra. In my talk I shall discuss the following questions

(1) When all maximal (left, right, two-sided) ideals in $A$ are closed;

(2) When all ideals in $A$ are closed.

and present recent results and open problems.

In particular I shall sketch the proof of the following result

**Theorem.** Let $A$ be a unital F-algebra. Then the following are equivalent

(i) All maximal left ideals in $A$ are closed;

(ii) The set $G_l(A)$ of all left-invertible elements in $A$ is open;

(iii) The set $G(A)$ of all invertible elements in $A$ is open.

(iv) The set $G_r(A)$ of all right-invertible elements in $A$ is open.

(v) All maximal right ideals in $A$ are closed.