Takeshi Miura (miura@yz.yamagata-u.ac.jp) Department of Applied Mathematics and Physics, Graduate School of Science and Engineering, Yamagata University, Yonezawa 992-8510, Japan, *Generalizations of spectrally multiplicative surjections between uniform algebras.*

ABSTRACT. The study of spectra-preserving surjections between Banach algebras is one of the active research area in Banach algebra theory. Let $\mathcal{A}$ and $\mathcal{B}$ be semisimple commutative Banach algebras with unit e. We show that if surjective maps $S, T \colon \mathcal{A} \to \mathcal{B}$ satisfy $S(e) = T(e) = e$ and

$$\mathrm{r}(S(a)T(b) - e) = \mathrm{r}(ab - e)$$

for all $a, b \in \mathcal{A}$, then $S = T$ and they are real algebra isomorphism, where $\mathrm{r}(\cdot)$ is the spectral radius. This is a joint work with O. Hatori, R. Shindo and H. Takagi.