1145-92-841 **Xue-Zhi Li**, Department of Mathematics and Physics, Anyang Institute of Technology, Anyang, Henan 455500, Peoples Rep of China, **Junyuan Yang** (yangjunyuan00@126.com), Complex Systems Research Center, Shanxi University, Taiyuan, Shanxi 030006, Peoples Rep of China, and **Maia Martcheva*** (maia@ufl.edu), Department of Mathematics, University of Florida, Gainesville, FL. *A multi-patch SIS age-structured epidemic model with migration.* Preliminary report.

We consider a chronological age-structured SIS PDE model with n-patches and migration among the patches. The total population size is assumed constant. We show that the system always has a unique disease-free equilibrium. We define the basic reproduction number as the spectral radius of an appropriately defined operator. If the basic reproduction number is larger than one, then there is a unique endemic equilibrium. We show that if the reproduction number is less than one, the disease-free equilibrium is locally and globally stable. If the reproduction number is greater than one, the endemic equilibrium is locally and globally stable. (Received September 16, 2018)