1113-35-226   **Yongzhi Steve Xu*** (`ysxu0001@louisville.edu`), Professor Yongzhi Xu, Department of Mathematics, University of Louisville, Louisville, KY 40292, **Heng Li** (`heng.li@louisville.edu`), Heng Li, Department of Mathematics, University of Louisville, Louisville, KY 40292, and **Jianrong Zhou** (`zhoujianrong2012@163.com`), Jianrong Zhou, Department of Mathematics, Foshan University, Foshan, Guangdong 528000, Peoples Rep of China. *Inverse problem for a parabolic equation with time-dependent boundaries.*

In this talk we discuss problems of a class of non-classical parabolic equations in which the boundaries are time-dependent function, which arise from a mathematical model of Ductal Carcinoma In Situ(DCIS). We use some transformation and heat potential theory to establish the integral form of solution and proved the existence and uniqueness of solution. Then we consider the inverse problem of determining the potential function of model from moving boundary information, which related to the mammography screening of DCIS. Algorithm and numerical simulation are presented to demonstrate the validity and applicability of solutions. (Received August 25, 2015)