

# **Stony Brook University The Graduate School**

## **Doctoral Defense Announcement**

### **Abstract**

**Collaborating, Mentoring, and Liaising: Analyzing What Teacher Leadership  
Frameworks Say and What STEM Teacher Leaders Do**

**By**

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This study examined nineteen frameworks developed for teacher leadership between 2008-2017 and used that analysis to investigate the leadership activities of a group of STEM master teachers. Emergent coding was used to analyze the frameworks and to reveal patterns in the way they conceptualize teacher leadership. The findings indicated that teacher leadership can be understood at two different levels: the individual teacher leader and teacher leadership as an organization, leading to implications for those wishing to develop teacher leadership. Although few of the frameworks agreed on a firm definition of teacher leadership, the present study also used the codes that emerged from the frameworks to create a ‘working’ definition for teacher leadership: a view of teacher leaders that included their work as collaborators, mentors, and liaisons. To test its utility, this definition was then applied to the professional activities of a set of STEM master teachers, that were not previously identified as leaders, in order to determine the extent of their leadership work. The findings supported the ‘working’ definition and found that most of the leadership activities of the master teachers were in the role as collaborator, working with and leading their colleagues. This finding is aligned the notion of teacher leadership as a *process* rather than a formal *position*. A closer analysis of the activities of master teachers in various STEM disciplines revealed little difference between the way math and science teachers enact leadership. Slight but significant differences were detected between middle school science teacher leaders and their biology and chemistry counterparts. In the end, the framework analysis done in this study synthesized the various views of teacher leadership seen in the literature into an inclusive ‘working’ definition ultimately contributing to a more coherent message of what teacher leadership is and what teacher leaders do. Furthermore, the case study of the STEM master teachers can inform the design of future programs by revealing the ways in which teacher leaders in such a program currently enact leadership (as collaborators) and arenas of leadership in which they might need further support (as mentors and liaisons).

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**Time:** 10:00 am

**Place:** Life Sciences, Room 038

**Program:** Science Education

**Dissertation Advisor:** Gregory Rushton, Ph.D.