

Abstract submitted for Celebration of Women in Australian Mathematical Sciences

Title: Balancing the Equation: A Mentoring Program for First-Year Female Students in STEM

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Session: Gender Equity and Diversity in Mathematics

This talk will be jointly presented by Jackie Reid and Erica Smith (University of New England).

Women are under-represented in Science, Technology, Engineering and Mathematics (STEM) disciplines internationally. For example, in the USA females are estimated to represent 24% of the STEM workforce, and the proportion of females employed in STEM careers is half the number of female STEM graduates. Furthermore, women who have advanced degrees in STEM are far more likely to leave related occupations than women in other professions. There is an even greater loss of female graduates in the transition to the workforce in the prime STEM disciplines, which includes mathematics, where only 33% are female graduates. This underrepresentation of women is even more marked in the STEM workforce, where only 12% are women. A 2013 report from the Australian Council of Learned Academies includes two key findings that promote the use of mentoring programs, and course and career counselling to effectively encourage young women to follow STEM pathways. In 2015, we developed a project designed to assist first-year female students enrolled in STEM disciplines to make a successful transition to an ongoing career in STEM. Our objectives were: to identify issues that students perceive as possible hurdles to a successful progression through their studies and onto a career in STEM, to provide a multifaceted mentoring program (Balancing the equation) that assists in recognising, understanding and addressing potential issues and roadblocks to a sustained and successful career in STEM, to help build confidence in pursuing career goals, and to support the development of sound decision-making skills in career planning. The program targeted first-year on-campus and distance students as they make the transition to tertiary studies, thereby laying the foundations for students to make appropriate and effective choices in pursuing and achieving their career goals during and after university. In this presentation, we will discuss some of the issues facing women interested in pursuing a career in STEM, with

a particular focus on mathematics, and describe the key components and outcomes of the program.