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**Leonardo C. Mihalcea\*** (Leonardo\_Mihalcea@baylor.edu), University of Louisiana at Lafayette, Dept. Of Mathematics, 440 Maxim Doucet Hall, Lafayette, LA 70504, and **Anders S. Buch**. *Spaces of rational curves in flag manifolds and the quantum Chevalley formula*. Preliminary report.

Given  $\Omega$  a Schubert variety in a flag manifold, one can consider two spaces: the moduli space  $GW_d(\Omega)$  of rational curves of fixed degree  $d$  passing through  $\Omega$  (a subvariety of the moduli space of stable maps), and the space  $\Gamma_d(\Omega)$  obtained by taking the union of these curves (a subvariety of the flag manifold). I will show how some simple considerations about the geometry of these spaces leads to a new, natural, proof of the equivariant quantum Chevalley formula proved earlier by Fulton and Woodward and by the speaker. This is joint work with A. Buch. (Received September 15, 2010)