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James Ruffo* (ruffojv@oneonta.edu), Department of Mathematics, State University of New York, College at Oneonta, Oneonta, NY 13820. *Quasimaps, straightening laws, and quantum cohomology for the Lagrangian Grassmannian*. Preliminary report.

The space of degree- d algebraic maps from \mathbf{P}^1 into a homogeneous space has been the subject of recent interest due to its applications in diverse areas of mathematics, engineering, and physics. When the homogeneous space is the Lagrangian Grassmannian, the space of maps has a natural compactification whose defining equations give a straightening law on an ordered set. This result implies that the compactification is integral and Cohen-Macaulay, and provides a new approach to the study of the quantum cohomology of the Lagrangian Grassmannian. (Received February 03, 2008)