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Daniel Bates, Jon Hauenstein, Matthew Niemerg* (niemerg@math.colostate.edu) and
Frank Sottile. *Computational Aspects of Gale Duality.* Preliminary report.

Certain polynomial systems can be solved more efficiently by transforming the system to its gale dual. Various symbolic choices in the conversion of a polynomial system to its Gale dual have an impact on the numerical methods (Khovanskii-Rolle continuation) used to solve the Gale dual system. The point of this effort (joint with D. Bates, J. Hauenstein, and F. Sottile) is to create heuristics for making reasonable symbolic choices in the context of numerical conditioning and efficiency. (Received September 14, 2010)