

1123-53-208

Abraham David Smith* (smithabr@uwstout.edu), JHSW 227, MSCS Department, University of Wisconsin-Stout, Menomonie, WI 54751. *Progress Toward a Moduli Theory of Involutive Differential Equations*. Preliminary report.

This talk is an update on an ongoing project to answer the question "what is the geometry of the space of Involutive differential equations?"

Recent reinterpretations of Guillemin Normal Form have allowed explicit calculation of the ideal of involutive tableaux/symbols with *any* Cartan characters, and the space is ripe for exploration by students and faculty alike.

In this talk, I'll summarize the technique, and show some examples of these spaces, and—if time permits—state some preliminary results about how integrable systems fit into this framework. (Received August 26, 2016)