

MAR13-2012-020025

Abstract for an Invited Paper
for the MAR13 Meeting of
the American Physical Society

How the “Blues” reveals the intimacy of music and physics

J. MURRAY GIBSON, Northeastern University, College of Science

Little do most people know when they hear blues piano – and you’ll hear some live in this talk – that physics permeates the style, as it does all of music. Why should you care? By deconstructing blues piano the intimacy of physics, mathematics and music will be revealed in its glory.¹ The exercise says something about how the brains of the music composer and of the listener must be intimately linked to the physical principles of acoustics. And it provides a great vehicle to explain physical phenomena to non-scientists – everything from quantum mechanics to protein structure.

¹Gibson, J. M. “The birth of the blues: how physics underlies music,” Reports on Progress in Physics **72**, 076001, (2009).