



**Time:** Thursday, September 15, 2022, 12:30-1:20pm

**Location:** Parker Building, room 301

**Speaker:** Abdelkrim Bourouihiya, Ph.D., Associate Professor, NSU Florida, Department of Mathematics

**Title:** On the Linear Independence of Finite Gabor and Wavelet Systems

**Abstract:** Gabor and Wavelet Systems are some of the most important families of integrable functions with great potential in applications. Those applications include numerical analysis, signal processing (sound, images), and many other areas of physics and engineering. In this talk, we will present some partial results on a conjecture that states each finite Gabor system is linearly independent. We will also present cases of linearly independent and cases of linearly dependent finite wavelet systems.

**The entire NSU community, including students at all levels of mathematics, is invited and encouraged to attend.**

**About the speaker:** Dr. Abdelkrim Bourouihiya is an Associate Professor of Mathematics at NSU Florida. He earned his Ph.D. in Mathematics from the University of Maryland at College Park in 2006. Dr. Bourouihiya joined NSU in 2008 and has served as a mentor and professor to hundreds of NSU students. His current research projects center on multipliers, HRT conjecture, radar signals, and data compression.

For more information about Dr. Bourouihiya's research, please visit:

<https://works.bepress.com/abdelkrim-bourouihiya/>

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