



## WYDZIAŁ MATEMATYCZNO – FIZYCZNY Instytut Matematyki

Zaprasza na wykład pod tytułem:

### **Applications of mutations in the derived categories of weighted projective lines to Lie and quantum algebras**

który wygłosi:

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#### **ABSTRACT:**

Let  $\text{coh } X$  be the category of coherent sheaves over a weighted projective line  $X$  and let  $D^b(\text{coh } X)$  be its bounded derived category. In this talk we will focus on the study of the right and left mutation functors arising in  $D^b(\text{coh } X)$  attached to certain line bundles. We first show that these mutation functors give rise to simple reflections for the Weyl group of the star shaped quiver  $Q$  associated with  $X$ . By further dealing with the Ringel-Hall algebra of  $X$ , we show that these functors provide a realization for Tits automorphisms of the Kac-Moody algebra  $g_Q$  of  $Q$ , as well as for Lusztig's symmetries of the quantum enveloping algebra of  $g_Q$ . This talk is based on joint work with Bangming Deng and Jie Xiao.

Wykład odbędzie się **10 kwietnia 2017 r.** (poniedziałek)  
o godz. **16.00** w sali 212  
w budynku Wydziału Matematyczno – Fizycznego.