Recurrence properties for quantum walks

Alberto Grünbaum

(University of California, Berkeley, California)

I will introduce quantum walks and show the two way connections between the study of their recurrence properties and mathematical subjects such as probability, operator theory, complex analysis, OPUC etc. This is joint work with Velazquez, Werner and Werner and provides a definition of recurrence for quantum walks that is different from the one proposed in 2008 by Stefanak, Jex and Kiss.