

# **Analysis on Graphs and Fractals**

**( Satellite Meeting at Cardiff University)**

**May 29 (Tuesday)**

## **Morning Session**

**8:30-09:00 Conference registration**

**8:50 Conference opening**

**9:00-9:50 Volodymyr Nekrashevich (Texas A&M University)**  
**“Schreier graphs, operator algebras and fractal  
Geometry”**

**10:00-10:50 Massimo Piccardello (University of Rome "Tor  
Vergata")**  
**“Admissible convergence of harmonic functions on  
trees and buildings”**

**11:00-11:30 Coffee/tea break**

**11:30-12:20 Jun Kigami (Kyoto University)**  
**“Measurable Riemannian geometry on the Sierpinski  
gasket”**

**12:30-13:30 Lunch**

## **Afternoon Session**

**14:00-14:50 Daniel Guido (University of Rome "Tor Vergata")**  
**“Aspects of self-similar graphs”**

**15:00-15:50 Zoran Sunik (Texas A&M University)**  
**“Schreier spectra of self-similar groups”**

**16:00-16:30 Coffee/tea break**

**16:30-17:20 Laurent Bartholdi (IEPFL, IGAT, Lausanne)**  
**“Self-similar graphs arising from groups”**

**19:30 Dinner**

## **May 30 (Wednesday)**

### **Morning Session**

**9:00-9:50 Motoko Kotani (Tohoku University)**

**“Geometric aspects of random walks on a crystal lattice”**

**10:00-10:50 Alexander Gamburd (Univ. of California, Santa Cruz)**

**“ Sum-product estimates, expanders and sieving.”**

**11:00-11:30 Coffee/tea break**

**11:30-12:30 Tommaso Isola (University of Rome "Tor Vergata")**

**Ihara zeta function for infinite graphs**

**12:30-13:30 Lunch**

### **Afternoon Session**

**3:00 – 3:15 LMS business meeting**

**3:15 – Michael Aizenman (Princeton)**

**“The curious effects of disorder on spectra of random operators”**

**4:15 – 5:00 Tea**

**5:00 – Toshikazu Sunada (Meiji University)**

**“The  $K_4$  crystal --a new crystal structure similar to the diamond lattice”**

**19:00 Music recital**

**20:00 Dinner**

## **May 31 (Thursday)**

### **Morning Session**

**9:00-9:50 Serguei Novikov (University of Maryland and Russian Academy of Sciences)**

**“Discrete Complex Analysis, Discrete 2D Schroedinger Operators and Discrete Geometry”**

**10:00-10:50 Michel Lapidus (Univ. of California, Riverside)**

**“Complex Fractal Dimensions and Zeta functions”**

**11:00-11:30 Coffee/tea break**

**11:30-12:30 Erin Pearse (Cornell)**

**“Self-similar systems and their complex dimensions”**

**12:30-13:30 Lunch**

### **Afternoon Session**

**14:00-14:50 Ben Hambly (Oxford)**

**“Local limit theorem for random walk on percolation cluster”**

**15:00-15:50 Satoshi Ishiwata (Tsukuba University)**

**“Connectivity on discrete nilpotent groups”**

**16:00-16:30 Coffee/tea break**

**16:30-17:20 Kasso A. Okoudjou (University of Maryland)**

**“Uncertainty principle for fractals, graphs and metric measure spaces”**

**19:15 Cash bar**

**19:45 Conference Dinner**

## **June 1 (Friday)**

### **Morning Session**

**9:00-9:50 Tatiana Smirnova-Nagnibeda (University of Geneva)  
“Probability and geometry on trees, with applications”**

**10:00-10:50 Mikhail Zaidenberg (Fourier Institute)  
“Pluri-periods of harmonic functions on Cayley graphs”**

**11:00-11:30 Coffee/tea break**

**11:30-12:20 Simone Warzel (Princeton)  
“Bernoulli decompositions for random variables, a  
concentration bound and spectral localization”**

**12:30-13:30 Lunch**

### **Afternoon Session**

**14:00-14:50 Luke Rogers (Cornell)  
“Distributions on p.c.f. fractafolds”**

**15:00-15:50 Anders Pelander (University of Uppsala)  
“Products of random matrices and derivatives on p.c.f.  
Fractals”**

**16:00-16:30 Coffee/tea break**

**16:30-17:20 Roberto Peirone (University of Rome "Tor Vergata")  
“Existence of eigenforms with weights on fractals”**

**19:30 Dinner**

## **June 2 (Saturday)**

**9:00-9:50 Andrzej Zuk (Paris 7)**  
**Title to be announced**

**10:00 Closing of the conference**