** Two postdoc positions at Lille (France) **

Two 1-year postdoc positions are available at Institut Mines Télécom (IMT) Lille Douai, France, from September 2021:
* with Benoît Henry and David Coupier, Beyond5G project;
* with David Coupier, ANR GrHyDy.
DEADLINE JULY 1, 2021

More informations can be found in the attached files.

1-year post-doctoral position
at Institut Mines Télécom Lille Douai (France)

The position is funded by the Beyond5G project, Ministère de l'Économie, des Finances et de la Relance (French Government).

Supervisors: David Coupier and Benoit Henry.

Location: Lille (approximately 1h30 away from Paris by TGV, 1h30 away from London by Eurostar, and 30 minutes from Bruxelles).

Research areas: stochastic geometry, random graphs, percolation, D2D networks.

The 5G's Device-to-Device (D2D) technology consists in the possibility of short-range direct communications (according to microscopic rules) between two devices or users without the need for the signal to be routed through additional network infrastructure. Hence, a good connectivity in a D2D network, i.e. a long-range connection (macroscopic property), can be naturally interpreted as a percolation problem.

Our goal is to modelize D2D networks using stochastic geometry tools, especially random mosaics for the urban network and point processes for users, and then to study their percolation properties.

Practical informations:

- A post-doctoral funding is available for one year (12 months) with a monthly net salary of 2212 Euros.

- Teaching duties have to be discussed with the successful candidate.

- Financial support to attend workshops is granted by the Beyond5G project.

- Starting date in September 2021.

- Applications should include: CV, a list of publications, an approximately one-page description of research interests and two names that can be contacted for reference letters.

- Applications should be sent by email to David Coupier and Benoit Henry (see below). Informal inquiries are very welcome and can be sent to the same addresses. Deadline for applications: July 1, 2021.

Contacts:
David Coupier, `david.coupier@imt-lille-douai.fr` and
`https://sites.google.com/view/pageprodedavidcoupier`
Benoit Henry, `benoit.henry@imt-lille-douai.fr` and `https://www.bhenry.fr`

1-year post-doctoral position
at Institut Mines Télécom Lille Douai (France)

The position is funded by ANR Project GrHyDy:
`http://math.univ-lyon1.fr/~mitsche/GrHyDy/GrHyDy.htm`

Supervisor and contact: David Coupier, `david.coupier@imt-lille-douai.fr`
and webpage `https://sites.google.com/view/pageprodedavidcoupier`

Location: Lille (approximately 1h30 away from Paris by TGV, 1h30 away from London by Eurostar, and 30 minutes from Bruxelles).

Research areas: random graphs, random geometric (hyperbolic) graphs, random walks, percolation, probabilistic combinatorics.

In an Euclidean and/or hyperbolic setting, we will investigate the macroscopic properties (percolation, number of topological ends) of several (greedy) geometric random graphs. Their vertex sets are given by a Poisson point process and each Poisson point is connected to another vertex according to a local and geometric rule.

Practical informations:

- A post-doctoral funding is available for one year (12 months) with a monthly net salary of 2174 Euro.

- No teaching obligations (but teaching might be possible).

- Financial support to attend workshops / invite collaborators is granted by ANR Project GrHyDy. In particular, the candidate will be able to spend part of the time at the research institutes of the project partners.

- Starting date in September 2021.

- Applications should include: CV, a list of publications, an approximately one-page description of research interests and two names that can be contacted for reference letters.

- Applications should be sent by email to David Coupier: `david.coupier@imt-lille-douai.fr` Informal inquiries are very welcome and can be sent to the same address. Deadline for applications: July 1, 2021.