Alcatel·Lucent

Bell Labs, the innovation engine of **Alcatel-Lucent**, is a worldwide research and development community that focuses its efforts on key technologies for telecommunications. It is internationally renowned as the birthplace of modern information theory, the transistor, the laser and the UNIX operating system.

Bell Labs' research facility in **Stuttgart**, Germany is a leading research lab in wireless communications, workings in the areas of RF hardware, 4G and 5G air interfaces, and architecture, management and energy efficiency of communication networks. Next to wireless networks, Bell Labs Stuttgart is working also in optical, fixed and IP networks. Bell Labs' research facility in **Dublin**, Ireland is a leading end-to-end systems and solutions lab working in the areas of RF hardware, thermal management, energy efficiency technology, small-cell networking, data analytics and cloud infrastructure research.

MIMO System Architecture Research and Prototyping

Bell Laboratories have several openings both in Stuttgart and Dublin for inspired innovators in our Network Energy research group, as **MIMO Researcher for System Architecture and Prototype Development**. We are seeking skilled, experienced and highly motivated PhD-level researcher with a proven track record to pursue original and fundamental research in energy efficient and low power wireless data networking.

Main duties and responsibilities:
 - Drive and carry out groundbreaking and innovative research and publish in premier conferences and journals worldwide.
 - Transfer of new theoretical concepts into demonstrators and experiments
 - Collaborate within Bell Labs and with university-based researchers, other leading research bodies, industry partners and government agencies.

Skills (Required Qualifications)
 - Ability to conduct independent research. A successful candidate will be versatile, flexible, hands-on, and a self-starter
 - Exceptional theoretical and analytical background with practical system level experience to implement proof-of-concept
 - Strong written and verbal communication skills. Ability to work in a collaborative environment amongst business and academic partners, and across multiple locations and time zones
 - PhD in Electrical Engineering, Computer Science or related field with an expert level understanding of wireless and IP networking, communication theory and expertise in:
    o cellular and mobile packet data networking (MAC, IP and higher layers)
    o digital signal processing theory and communication theory
    o wireless networking system architectures and 4G/5G air interface (specially LTE MIMO channel estimation and baseband processing)
    o (massive) MIMO system architecture and algorithms design
    o knowledge of Matlab / C++

Additional expertise in the following areas is desired:
    o small cells, heterogeneous networks
    o implementation of algorithms in FPGA

A full job description will soon be posted on http://www.alcatel-lucent.com/careers. A comprehensive benefits package exists including relocation costs. Applications by email to **Oliver Blume** (Oliver.Blume@alcatel-lucent.com).

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MIMO System Design and Simulation

Bell Laboratories have openings both in Stuttgart and Dublin for inspired innovators in our Network Energy research group, as **MIMO System Designer and Simulator**. We are seeking skilled, experienced and highly motivated PhD-level researcher with a proven track record to pursue original and fundamental research in energy efficient and low power wireless data networking.

Main duties and responsibilities:
- Drive and carry out groundbreaking and innovative research and publish in premier conferences and journals worldwide.
- Transfer of new theoretical concepts into demonstrators and experiments
- Collaborate within Bell Labs and with university-based researchers, other leading research bodies, industry partners and government agencies.

Skills (Required Qualifications)
- Ability to conduct independent research. A successful candidate will be versatile, flexible, hands-on, and a self-starter
- Exceptional theoretical and analytical background with practical system level experience in link and/or system level simulation
- Strong written and verbal communication skills. Ability to work in a collaborative environment amongst business and academic partners, and across multiple locations and time zones
- PhD in Electrical Engineering, Computer Science or related field with an expert level understanding of wireless and IP networking, communication theory and expertise in:
    o cellular and mobile packet data networking (MAC, IP and higher layers)
    o digital signal processing theory and communication theory
    o wireless networking system architectures and air interface
       (specially LTE MIMO channel estimation and baseband processing)
    o (massive) MIMO system dimensioning and numerical performance validation
    o knowledge of Matlab / C++

Additional expertise in the following areas is desired:
    o small cells, heterogeneous networks
    o 3GPP compliant system level simulation
    o 4G and 5G air interfaces

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MIMO System Implementation and Prototyping

Bell Laboratories have openings both in Stuttgart and Dublin for inspired innovators in our Network Energy research group, as **MIMO Researcher for System Implementation and Prototype Development**. We are seeking skilled, experienced and highly motivated PhD-level researcher with a proven track record to pursue original and fundamental research in energy efficient and low power wireless data networking.

Main duties and responsibilities:
- Drive and carry out groundbreaking and innovative research and publish in premier conferences and journals worldwide.
- Transfer of new theoretical concepts into demonstrators and experiments
- Collaborate within Bell Labs and with university-based researchers, other leading research bodies, industry partners and government agencies.

Skills (Required Qualifications)
- Ability to conduct independent research. A successful candidate will be versatile, flexible, hands-on, and a self-starter
- Exceptional theoretical and analytical background with practical experience to implement proof-of-concept
- Strong written and verbal communication skills. Ability to work in a collaborative environment amongst business and academic partners, and across multiple locations and time zones
- PhD in Electrical Engineering, Computer Science or related field with an expert level understanding of wireless and IP networking, communication theory and expertise in:
  - o cellular and mobile packet data networking (MAC, IP and higher layers)
  - o wireless networking system architectures and 4G/5G air interface (specially LTE MIMO channel estimation and baseband processing)
  - o design and FPGA implementation of algorithms for (massive) MIMO systems
  - o knowledge of Matlab / C++

Additional expertise in the following areas is desired:
  - o digital signal processing and communication theory
  - o basic RF hardware design,
  - o cross layer optimisation

A full job description will soon be posted on http://www.alcatel-lucent.com/careers. A comprehensive benefits package exists including relocation costs. Applications by email to **Oliver Blume** (Oliver.Blume@alcatel-lucent.com).