

5G Wireless Researcher – Acces lab

Bell Labs

Country : France

City : Paris-Saclay

Permanent contract

Ref :1700000HRO

Nokia Bell Labs conducts research in a wide variety of topics, ranging from leading wireless and optical fiber technologies, to cloud-based and highly distributed computing, to fundamental physics, mathematics and computing. It is the birthplace of the transistor, information theory, cellular networking, Unix and C, and many other fundamental technological discoveries and inventions. Bell Labs researchers have won 8 Nobel Prizes, 3 Turing Awards, and several National Medals of Science and of Technology and Innovation.

With state-of-the-art software, hardware and services for any type of network, Nokia is uniquely positioned to help communication service providers, governments, and large enterprises deliver on the promise of 5G, the Cloud and the Internet of Things. Serving customers in over 100 countries, our research scientists and engineers continue to invent and accelerate new technologies that will increasingly transform the way people and things communicate and connect.

Role description

Are you interested in shaping the future? Our team is shaping the future of wireless communications by researching and designing the 5G radio access and mobile end to end network. We have world leading experts, who are behind many of the advances in the cellular communications, and we aim to have a key role in developing the new generation of cellular radio, providing ground-breaking new use cases and capabilities.

Ideal candidate has innovative mind, wants to impact and shape the global 5G network, is excited of solving complex problems, and is not afraid of getting hands dirty in analyzing and proving the benefits of the concepts. The candidate should have the ability to learn from the colleagues, and at the same time courage to challenge the community with your own ideas.

Your responsibilities in the team will depend on your personal skills and interests, but there is a large set of challenges ahead:

- developing and analyzing physical layer concepts for 5G,



- air interface related modeling and simulations,
- designing protocols for 5G taking into account the complexity of the emerging 5G specifications,
- developing radio resource management concepts,
- architecting end2end network solutions enabling dynamic network slicing,
- applying cognitive technology for autonomous orchestration and network optimization,
- supporting our standardization efforts with leading research contributions.

Bell Labs needs the greatest people to strengthen Nokia leadership in 3GPP by world class research innovations. Join us, and help us to define the future!

Qualifications

Ideal candidate has multiple of the following qualifications:

- Suitable academic degree (PhD in telecommunications, mathematics, physics or other relevant field)
- Expertise in state-of-the-art cellular communication systems in areas of physical layer, multiantenna technologies, MAC, protocols, and/or radio resource management.
- Expertise in E2E network architectures, networking protocols, cloud-RAN, network function virtualization, data analytics.
- Experience in Radio system simulations and/or link level simulations.
- Proven skills in Matlab and/or C++ programming.
- Innovative and creative mind
- Strong communication skills (writing and presentation)
- Fluent English

Application

In order to apply, please, send your CV and publication record to : delphine.izanic@nokia.com (with ref. of the job)

More information on www.nokia.com/carrers or www.bell-labs.com

5G Wireless Researcher – End2End Mobile Network

Bell Labs

Country : France

City : Paris-Saclay and Lannion

Permanent contract

Ref : 1700000HUR



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Role description

Nokia Bell Laboratories is seeking a researcher to participate in our teams defining the global 5G network, developing protocols, standards and architecture solutions. The candidate should have proven knowledge on end-to-end mobile network architectures and strong research skills with analytical/theoretical capabilities and simulation or prototyping experience. Successful candidates are expected to solve complex problems, analyzing and proving the benefits of the concepts, evaluate their performance and contribute to the standardization of these concepts in standardization bodies like 3GPP.

Main duties and responsibilities:

- developing and analyzing user-plane and control-plane concepts for 5G,
- user-plane and control-plane related modeling and simulations,

- designing protocols for 5G, considering the complexity of the emerging 5G specifications,
- developing radio resource management concepts,
- supporting our standardization efforts with leading research contributions.

Qualification

- MSc or PhD or similar documented expertise in electrical engineering, communications engineering, physics, or a related discipline
- Very strong analytical skills and eager to find innovative/disruptive solutions to problems
- Sound understanding of state-of-the-art wireless communication systems.
- Knowledge in E2E network architectures, networking protocols and radio resource management
- Experience in mobile system simulations.
- Proven skills in programming.
- Self-motivated, passionate and hands-on
- Strong written and verbal communication skills, can express him/herself fluently in English

Application

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Data Analytics Researcher

Bell Labs

Country: France

City: Paris-Saclay

Permanent contract

Ref : 16000001WD



Nokia is providing Software, IT equipment and Services at the cutting edge of technology and adaptable to all types of Networks. Nokia is the only one on the market to hold technological promise made possible by the 5G, Cloud and Internet Objects toward service providers, governments and large companies. To meet the needs of customers spread over 100 countries, our scientists and engineers are constantly innovating and developing future technologies that significantly transform the way people and objects interact.

Powered by the innovation of Nokia Bell Labs, the company is at the forefront of creating the technologies that are increasingly at the heart of our connected lives. Nokia Bell Labs mission is to define the future of communications and networking and deliver disruptive innovations that redefine human existence and business realities.

Role description

A successful candidate is expected to have experience in one or more of the following topics:

- Machine Learning and Statistics
- Text mining, natural language processing and linked data,
- Streaming algorithms,
- Large-scale data processing systems, like Hadoop, Spark, etc.

Your role :

- Identify new and ambitious research challenges, define research projects to address these challenges and carry out these projects to completion.
- Publish research results in major scientific venues worldwide, including top conferences and journals.
- Collaborate with other researchers in Bell Labs and create and maintain strong relationships with partners in the external research community
- Partner with Nokia business units to transfer research results into products.
- Generate intellectual property through the patenting of ideas.

Qualifications

- Candidates must have a PhD in computer science or engineering or any related field.
- A proven track record of high-quality research publications in major international conferences and an in-depth understanding of the field is required.
- Candidates are expected to have the ability to conduct independent research while also contributing to team-oriented projects that often span across multiple Bell Labs sites.
- A successful candidate will be versatile, flexible, hands-on, and a self-starter. Experience in software development activities is also highly valued.
- Strong written and spoken communications skills and the ability to participate in robust discussions in English are required

Application

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Research and Innovation - MTS

Bell Labs

Country: France

City: Paris-Saclay

Permanent Contract

Ref : 1700000E7P

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Role description

The position is for a Member of Technical Staff at Nokia Bell Labs in Paris-Saclay location.

Successful candidate is expected to have deep knowledge, expertise and experience in two or more of the following areas :

- Next Gen Mobile Applications/Services VR, AR etc.
- Next-Gen IP and Mobile Networking
- Big Data, Machine Learning, Neural Networks, AI
- Cloud Computing and Open Source Software

Your role :

- Identify ambitious research challenges, with problems that are unsolved or not optimally solved.
- Identify unique/disruptive approaches to solve problems
- Conduct research, studies, experiments and advance the state of the art
- Desire and ability to work hands-on, develop software systems, PoCs, Demonstrations
- Help commercialize the innovations in collaboration with Nokia Products and Solutions teams



- Collaborate across Bell Labs and cultivate external collaborations with other leading research labs/institutions
- File Patents to protect intellectual property
- Publish research results in top tier conferences, journals

Qualifications

- Candidates must have a PhD in Computer Science, Data Science, Engineering or related fields
- Proven track record of high-quality research publications in top tier international conferences
- Proven record of developing software systems
- Very strong written and spoken communications/presentation skills
- Proven Ability to conduct independent research while actively collaborating in team-oriented projects spanning multiple organizations and locations
- Self-motivated, passionate and hands-on
- Ability to participate in robust discussions in
- High level of proficiency in English language

Application

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Research Standardization professional

Bell Labs

Country : France

City : Paris-Saclay

Permanent contract

Ref :1700000HUD

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Role description

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Your responsibilities in the team will depend on your personal skills and interests, but there is a large set of challenges ahead :

- developing and analyzing physical layer concepts for 5G,
- air interface related modeling and simulations,



- designing protocols for 5G taking into account the complexity of the emerging 5G use cases,
- developing radio resource management concepts,
- architecting end2end network solutions enabling dynamic network slicing,
- developing the system architecture to fully take advantage of network function virtualization and latest cloud software advances
- applying cognitive technology for autonomous orchestration and network optimization,
- supporting our standardization efforts with leading research contributions and participation into standards forums.

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Qualifications

- Suitable academic degree (PhD in telecommunications, mathematics, physics or other relevant field)
- Expertise in state-of-the-art cellular communication systems in areas of physical layer, multi-antenna technologies, MAC, protocols, and/or radio resource management.
- Expertise in E2E network architectures, networking protocols, cloud-RAN, network function virtualization, data analytics, Radio system simulations and/or link level simulations.
- Experience in working in standardization and other cooperative forums
- Proven skills in Matlab and/or C++ programming.
- Innovative and creative mind
- Strong communication skills (writing and presentation)

Application

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More information on www.nokia.com/careers or www.bell-labs.com

Researcher in E2E Mobile Networks

Bell Labs

Country : France

City : Paris-Saclay and Lannion

Permanent contract

Ref : 160000045V

Nokia is providing Software, IT equipment and Services at the cutting edge of technology and adaptable to all types of Networks. Nokia is the only one on the market to hold technological promise made possible by the 5G, Cloud and Internet Objects toward service providers, governments and large companies. To meet the needs of customers spread over 100 countries, our scientists and engineers are constantly innovating and developing future technologies that significantly transform the way people and objects interact.

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Rôle description

As a permanent senior research position inside the "end-to-end mobile network system" lab with a focus on reconfigurable radio systems and their integration within cloud-native architectures, you will lead innovation on this new "telco cloud" paradigm, particularly on how to support realtime functions within the cloud using embedded technology.

For open position in Lannion, you will lead connection with the local ecosystem and develop our presence in Bretagne.

Your main activities :

- maintain state-of-the-art technological and scientific knowledge on this fast-evolving discipline
- innovate theoretically through active collaboration with academic partners (LabSoc, INRIA...) => IPR creation, possibility to participate to Open Source
- innovate practically through usage of latest technology from industrial partners (Xilinx, Intel...) => proof of concept realization
- mentor research student activity (PhD, internships)
- participate to international collaborative projects (ANR, H2020)



- contribute to technical and scientific communication of the laboratory work by publishing articles and participating in thematic national or international conferences
- keep tight connection with the rest of the lab geographically distributed

Qualifications

- PhD in Software Defined Radio/Digital signal processing
- Expertise in FPGA/Sock reprogrammability using techniques like Partial Reconfiguration or specific embedded platforms
- Proficient in low level programming languages (VHDL, C/C++)
- Proficient in high level description languages for embedded systems
- Expertise in radio technology (4G+), willingness to support new radio features for 5G (IOT, low latency...)
- Exposure to open source embedded platforms (e.g. embb, xenomai...)

Application

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More information on www.nokia.com/carrers or www.bell-labs.com

Researcher in Networking Systems and Protocols

Bell Labs

Pays : France

Site : Paris-Saclay

Permanent Contract

Ref : 16000003MO

Nokia is a global leader in the technologies that connect people and things. With state-of-the-art software, hardware and services for any type of network, Nokia is uniquely positioned to help communication service providers, governments, and large enterprises deliver on the promise of 5G, the Cloud and the Internet of Things. Serving customers in over 100 countries, our research scientists and engineers continue to invent and accelerate new technologies that will increasingly transform the way people and things communicate and connect.

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Role description

The candidate will work on research issues in networking systems including the design, implementation, and analysis of new network architectures, protocols, and systems for network virtualization, cloud automation, software-defined networking and Internet of Things. The candidate must be aware of the current state-of-the-art in these areas including published research work. The work will encompass development of innovative ideas, evaluation and analysis of them, and implementation as prototype systems. The candidate's research will contribute toward the development of concepts and architectures for the next generation of network systems and software.

Key Responsibilities / Functions:

- Drive and carry out groundbreaking and innovative research in networking systems.
- Build and prototype systems to demonstrate research innovations and technology impact
- Propose, investigate and publish research in premier conferences and journals worldwide



- Partner with Nokia's business units to ensure the successful transfer and commercialization of research assets
- Create and maintain strong collaborative associations with university-based researchers, other leading research organizations

Qualifications

Required Qualifications :

- PhD in Electrical Engineering, Computer Science or related field with deep understanding of IP networking and expertise in areas such as cloud computing, data center networking, software defined networking, and Internet of Things.
- Proven track record of research contributions and publications in leading and internationally recognized conferences and journals

Desired Qualifications :

- Ability to conduct independent research while also contributing to team-oriented projects. A successful candidate will be versatile, flexible, hands-on, and a self-starter
- Strong background in networking with hands-on and practical system building experience.
- Strong written and verbal communication skills
- Ability to work in a collaborative environment amongst business and research partners

Application

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