The applications being considered are the following:

- User device support (NFV capabilities installed in users' gateways/set-top boxes, ...).
- Enterprise networks and virtual Customer Premise Equipment (vCPE);
- Datacenter applications handling high-throughput flows and I/O intensive functions;
- Low-latency processing of radio samples from remote antennas for 5G front-haul;
- Enhance performance of mobile networks with a focus on 5G mobile back-haul;
- Flow-level traffic processing, e.g., TCP gateways and other per-connection solutions to enhance performance of mobile networks with a focus on 5G mobile back-haul;
- Enterprise networks and virtual Customer Premise Equipment (vCPE);
- User device support (NFV capabilities installed in users' gateways/set-top boxes, ...).

### About Inria

Inria is the French national research institute for the digital sciences, promotes scientific excellence and technology transfer to maximise its impact. It employs 2,400 people. Its 200 agile project teams, generally with academic partners, involve more than 3,000 scientists in meeting the challenges of computer science and mathematics, often at the interface of other disciplines. Inria works with many companies and has assisted in the creation of over 160 startups. It strives to meet the challenges of the digital transformation of science, society and the economy.

### Assignment

In the context of the ongoing research activity at Bell Labs, described in recent publications from Nokia research group (S) [10], the postdoc collaborator will work on the definition, implementation, and experimental evaluation of high-performance modular NFV techniques. The applications being considered are the following:

- Carrier-grade middle-box applications, possibly with security-related objectives;
- Flow-level traffic processing, e.g., TCP gateways and other per-connection solutions to enhance performance of mobile networks with a focus on 5G mobile back-haul;
- Low-latency processing of radio samples from remote antennas for 5G front-haul;
- Datacenter applications handling high-throughput flows and I/O intensive functions;
- Enterprise networks and virtual Customer Premise Equipment (vCPE);
- User device support (NFV capabilities installed in users' gateways/set-top boxes, ...).
The postdoc will build on our on-going work and the performance evaluation will be carried out by means of system simulations (NS3 simulator) and of experimental evaluation (using the Grid5000 and/or PlanetLab testbed platforms).

The candidate(s) will collaborate with researchers working in other Bell Labs locations, may interact with Nokia Business Groups, and is expected to contribute to scientific papers and to the development of our system infrastructure. The duration of this postdoc is 18 months.


**Main activities**
Research activity

**Benefits package**
- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (after 6 months of employment) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Access to vocational training
- Social, cultural and sports events and activities
- Social security coverage

**Remuneration**
Gross Salary: 2650 brutto per month