Contact

dc2686@columbia.edu

www.linkedin.com/in/doru-calin-1ba4245 (LinkedIn)

Top Skills

CDMA
WiMAX
HSPA

Languages

English
French
Romanian

Honors-Awards

Fellow of Bell Labs
Best Paper Award
Best Paper Finalist
Best Paper
Bell Labs Teamwork Award

Publications

Book Chapter: "Downlink Coordinated Beamforming"

On the High Capacity lightRadio Metro Cell Design for Stadiums

On the Performance of Stadium High Density Carrier Wi-Fi Enabled LTE Small Cell Deployments

An Approach for Just-In-Time Radio Access Network Capacity Planning in CDMA Networks

Technologies for Future Broadband Wireless Evolution

Patents

Method and Apparatus for Controlling Buffer Status Report Messaging

Proxy-Based Signaling Architecture for Streaming Media Services in a Wireless Communication System

Doru Calin

Bell Labs Fellow | Small cells technology pioneer | Adjunct Professor @ Columbia University
Greater New York City Area

Summary

Seasoned research & innovation leader with passion and sustained focus on creation and incubation of novel, disruptive technologies from inception stage to field trials in Operator environment and market adoption.

Bell Labs Fellow award 'for bridging the gap between theory and practice with key innovations at the foundation of the first metro cell products, commercial wireless capacity planning services and network protocols optimization solutions'.

• Pioneered small cells technology. Co-inventor of the patented technology at the foundation of the first small cell products in Alcatel-Lucent/Nokia. Led pioneering work on small cell technologies from design to feasibility tests in operational environments. Significant outcome - the creation of the small cell business unit.
• Created wireless capacity planning services. Co-inventor of the patented methodology at the foundation of commercial wireless capacity management services deployed by Alcatel-Lucent/Nokia in over 20 networks worldwide.
• Co-inventor of differentiating network protocols and optimization solutions offered by Alcatel-Lucent/Nokia to top tier customers.

Innovation & Intellectual Property include 35 independent patents awarded in multiple countries, over 20 patents pending, 100+ peer-reviewed publications/tutorials/keynotes.

Experience

Nokia Bell Labs
Partner, Future Government, Smart Cities & Transportation Industries
September 2017 - Present
Murray Hill, New Jersey, USA

Leading creation of innovative solutions and business models enabling successful digital transformation of global public sector (e.g., future smart cities) & transportation industries (e.g., future rail, aviation, automotive).

Nokia Bell Labs
Bell Labs Fellow
December 2016 - Present
Murray Hill, New Jersey

Bell Labs Fellow with citation 'for bridging the gap between theory and practice with key innovations at the foundation of the first metro cell products, commercial wireless capacity planning services and network protocols optimization solutions'.

The award is the highest honor bestowed upon members of technical community (only 279 Bell Labs Fellows since the award was introduced in 1982). It recognizes sustained technical excellence over a prolonged period that leads to industry redefinition and unique innovations that differentiate our portfolio.

https://www.bell-labs.com/var/articles/2016-bell-labs-fellows-announced/

Columbia University
Adjunct Professor
September 2009 - Present
New York City

School of Engineering and Applied Science, Electrical Engineering Department
http://www.ee.columbia.edu/doru-calin

• Teaching Graduate level courses ELEN E6771 "5G Programmable Networks" and ELEN E6888 "Principles of Modern Broadband Wireless Communication Technologies and Systems".
• Leading collaborative research between academia and industry in the areas of network softwarization and integration of Content Delivery Networks within wireless networks: 6 ground-breaking research papers (1 best paper award), 2 patents filed (1 US patent grant), 1 Proof of Concept for video content delivery via SDN over mobile networks.

https://twitter.com/ee_columbiaseas/status/586223550605959168

Springer Publishing Company
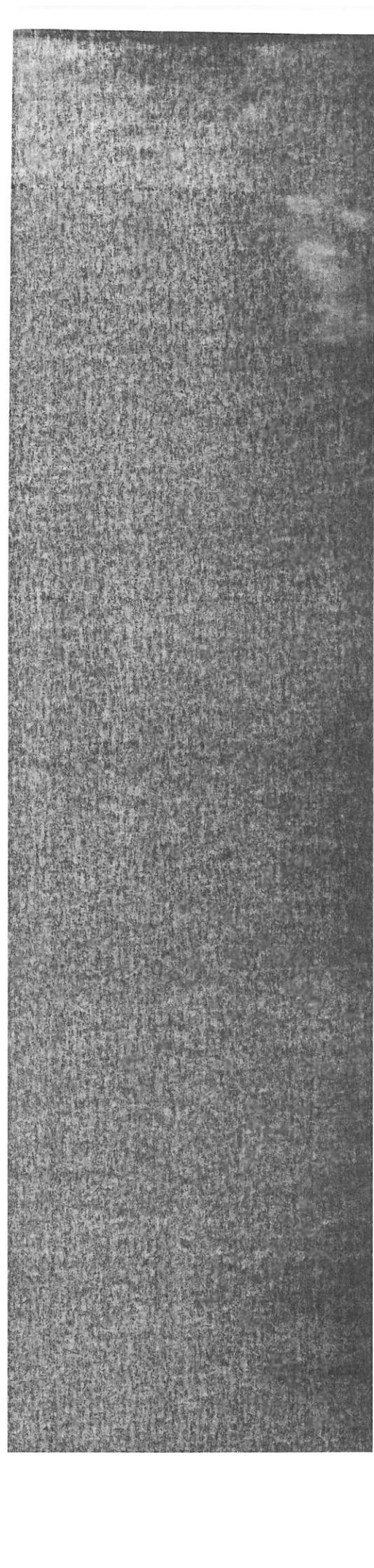
Editorial Board Member, Wireless Personal Communications
International Journal
September 2016 - Present

http://www.springer.com/engineering/signals/journal/11277?
detailsPage=editorialBoard

IEEE Communications Society
Associate Editor, IEEE Communications Letters
June 2016 - December 2018 (2 years 7 months)

http://www.comsoc.org/CL/editorial-board

Nokia
Innovation Domain Leader, Cloud Based Value Added Networks at
Mobile Networks CTO, Nokia
April 2016 - September 2017 (1 year 6 months)
Murray Hill, New Jersey, USA

A new and thrilling adventure. Go Nokia!!

Accelerating innovations in 5G, mobile network virtualization, mobile cloud
computing, cloud based technologies, IoT and verticals for adding business
value to networks.

Bell Labs, Alcatel-Lucent
Director, Bell Labs Research
March 2014 - April 2016 (2 years 2 months)
Murray Hill, New Jersey, USA

https://www.bell-labs.com/usr/doru.calin

Key Highlights:
Led research in 5G wireless technologies
• Designed hybrid multi-radio ultra-broadband wireless communication system,
a solution for next gen fixed broadband access.
• Led design of original concept and lab PoC for intelligent network traffic
steering and intelligent content delivery in future programmable 5G networks.

Established and led research collaborations with top notch academic
institutions: Columbia University, University of Pennsylvania, University
of Texas, New Jersey Institute of Technologies, Memorial University of
Newfoundland, University of Oulu ...

Bell Labs, Alcatel-Lucent

Director, Emerging Wireless Technologies Incubation
January 2013 - March 2014 (1 year 3 months)
Murray Hill, New Jersey, USA

Key Highlights:

Led innovations resulting in differentiating product features, services and solutions for Alcatel-Lucent

• Designed intelligent traffic management algorithms (e.g. uplink traffic shaping, radio & transport CAC) for LTE eNodeB products.
• Created solution for optimized distribution of content over commercial networks, including TCP optimization in several US markets.

Bell Labs, Alcatel-Lucent
Director, High Performance Wireless Technologies and Networks
July 2009 - January 2013 (3 years 7 months)
Murray Hill, New Jersey, USA

Key Highlights:

Established and led several high impact research and applied research projects, from inception to maturity stage - in strong partnership with Alcatel-Lucent's Business Units.

Represented Bell Labs and Alcatel-Lucent in industry fora and scientific events.

• Pioneered small cells technology. Created small cell assets for Alcatel-Lucent (definition of the first small cell prototype products – patent EP 2,317,789).
• Created wireless capacity planning services. Created a commercial-grade SW engine (built in Java and open source) enabling commercial 3G & 4G capacity management services based on patented (US 8,050,671) methodology (transferred to Alcatel-Lucent's Wireless Business Unit). Services deployed in over 20 networks around the globe.
• Created LTE end to end network and application performance simulation platform (transferred to Alcatel-Lucent's Wireless Business Unit).
• Designed highly scalable overload control algorithms for Alcatel-Lucent's products.
• Created guidelines for clock distribution in wireless networks.

Bell Labs, Alcatel-Lucent
Technical Manager
August 2008 - July 2009 (1 year)
Murray Hill, New Jersey, USA

Key Highlights:

- Team builder: recruited, nurtured and mentored talent for Bell Labs and Alcatel-Lucent.
- Created a portfolio of strategic innovations in small cells and wireless services, in close collaboration with Alcatel-Lucent's business units.
- Designed framework for a high performance 4G backhaul network integrating multiple technologies (WiMAX, CDMA, and iDEN) in 17 Sprint markets.

Bell Labs, Alcatel-Lucent
Member of Technical Staff
December 2006 - August 2008 (1 year 9 months)
Murray Hill, New Jersey, USA.

Research in advanced technologies of strategic importance to Alcatel-Lucent. Selected areas of research and business impact:
- Strong contributions to the Alcatel-Lucent WiMAX program (VoIP over WiMAX, design of advanced collaborative MIMO communications, RFI/RFP responses to Sprint, cross-layer technologies performance comparison, Tutorial in WiMAX at prime IEEE conferences).
- Bell Labs President's Gold Award – for "Extraordinary Achievement in Innovation, Technical Excellence, and Business Impact demonstrated by the WiMAX Technologies & Innovations Team", 2008.
- Designed novel architectures for enhanced mobile video experience.

Bell Labs, Lucent Technologies
Member of Technical Staff
March 2001 - December 2006 (5 years 10 months)
Holmdel, New Jersey, USA

Research in advanced technologies of strategic importance to Lucent Technologies.
Key Highlights:
- Created end-to-end CDMA growth planning service and capacity planning methodology/engine.
- Initiated, planned and coordinated Bell Labs participation to the FP6 European R&D project MAGNET (My Personal Global NET).
- Bell Labs President's Gold Award – for "Conducting breakthrough research on critical national infrastructures and on simulating the telecom and datacom infrastructure for multiple metropolitan and national networks for Sandia National Labs", 2005.

Motorola Research Labs
Senior Research Engineer
1998 - 2001 (4 years)

Research in advanced technologies of strategic importance to Motorola.
Key Highlights:

• Work package technical leader for the European IST Research Project "Transparently Reconfigurable UbuiquitouS Terminal (TRUST)" – Designed advanced/flexible spectrum sharing techniques in a multi-operator context.

• Led "Advanced Radio Resource Management for 3G Wireless Networks".

Bouygues Telecom
Consultant
1995 - 1998 (4 years)

Architectures & protocols for introducing high bit data rate services over GSM networks (HSCSD & GPRS).

TELECOM SudParis
Research Scientist
1995 - 1998 (4 years)

European Collaborative Research Project "Software Tools for Optimization of Radio Mobile Systems (STORMS)" - ACTS 4th European Research Program.

TELECOM SudParis
Research Scientist
March 1994 - August 1994 (6 months)
Paris Area, France

MSc Thesis "Code Synchronization at Receiver in DS-CDMA". This 6 months merit grant was offered by the European Community as part of the MScEE program from University POLITECHNICA of Bucharest.

Communication and Informatics Training Center "Decebal", Sibiu
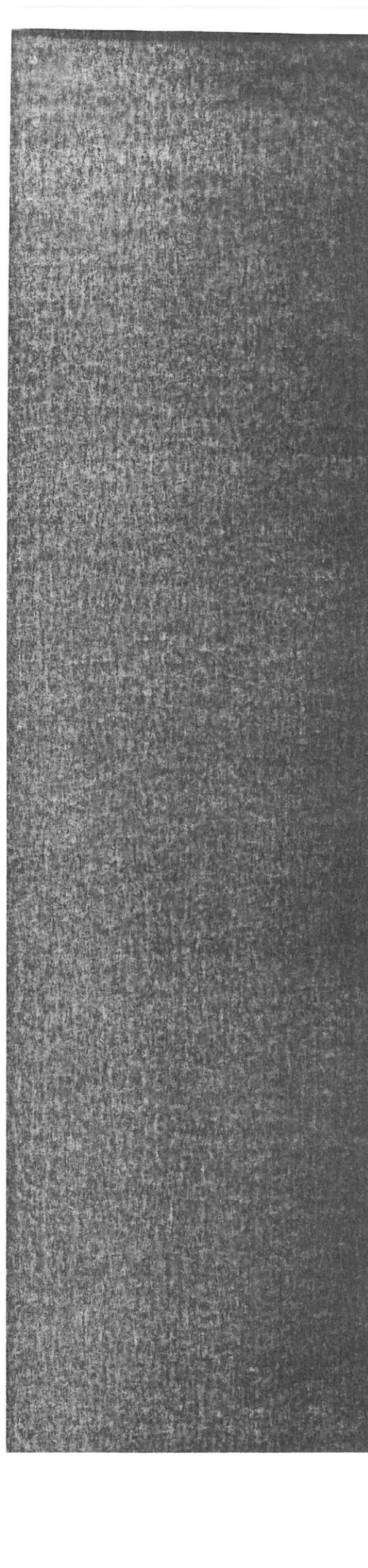Army Officer Training
September 1988 - June 1989 (10 months)
Sibiu County, Romania

http://www.cissb.ro/

Education

Télécom SudParis
Doctor of Philosophy (PhD), Electrical and Computer
Engineering · (1995 - 1998)

UVSQ Université de Versailles Saint-Quentin-en-Yvelines
Master of Science (MSc), Computer Methods of Industrial
Systems · (1994 - 1995)

University POLITEHNICA of Bucharest
Master of Science (MSc), Electronics & Telecommunications · (1989 - 1994)