LANCOMM Workshop

Fostering Latin-American Research in Data Communication Networks

ACM SIGCOMM 2016 Workshop Proposal

ABSTRACT

The goal of the LANCOMM workshop is to foster a higher representation and better integration of Latin American researchers in current and future SIGCOMM venues, as well as bridging local Latin American research groups, by encouraging and supporting large local participation, lively discussion and networking.

Keywords

Latin American research, SIGCOMM research community, data communication networks, local participation, extended abstracts, networking and collaboration, inclusive workshop.

1. LANCOMM IN A NUTSHELL

- full-day workshop
- extended abstract submissions (3-pages, two-column 10pt ACM format)
- priority given to Latin American papers
- short talks and interactive discussion
- expected number of submissions: 25-35
- expected number of participants: 40

2. MOTIVATION AND RATIONALE

Data communications research in Latin America is generally loosely connected to the SIGCOMM research community, and besides exceptional cases such as some Brazilian research groups, it has historically had a low visibility and impact on the data communications domain worldwide. Indeed, for many different reasons (e.g., government strategic agendas, specific funding sources, socio-cultural differences, landscape geography, lack of infrastructure, underdevelopment of the domain itself, geographic distribution of population, strong asymmetry in terms of content generation and location, etc.), the research on data communications performed in Latin America is generally quite different from - and in most cases far behind - the research performed in the US, Europe or Asia.

Paradoxically, the development of data communications in some Latin American cities is beyond the average in developed countries (e.g, the city of Montevideo is one of the first worldwide to have fully deployed and full coverage FTTH and LTE networks), offering as such a highly interesting scenario for research in future Internet data communications.

At the same time, research in different Latin American countries is mostly dissimilar, and synergies among Latin American groups are rather limited. Latin American research groups have in general more fluent collaborations with research groups in the US and Europe than with neighboring countries, which unfortunately translates in the practice in an important brain-drain of Latin American researchers going abroad for better research opportunities,

Since the early days of the SIGCOMM conference, the participation and involvement of Latin American research groups has been very limited, namely inexistent for most of the venues. Taking the chance of having, for the very first time, the main SIGCOMM conference hosted in Latin America, the LANCOMM workshop aims to approach the Latin American research community to the SIGCOMM community, increasing its active participation and fostering a cross-community mutual dialog. As part of its objectives, LANCOMM also targets a better integration and synergies among Latin American research groups, offering a meeting point for local researchers, encouraging large local participation, and stimulating lively discussion and networking.

Wrapping up, we expect that LANCOMM would serve to approach Latin American researchers in computer communications to the SIGCOMM community, as well as to foster a stronger synergy among Latin American research groups. While we believe that the main benefits of LANCOMM would be for the Latin American research community, we are convinced that the SIGCOMM community as a whole would also highly benefit from an increased presence of Latin American researchers. In particular. SIGCOMM participants would have the chance to get more in touch with the problems relevant to Latin America, an emerging and full of challenges (and opportunities) region. Next section describes the envisioned workshop format to achieve the proposed objectives.

3. WORKSHOP FORMAT

Achieving the aforementioned goals requires a large participation of Latin American researchers to LANCOMM. An additional challenge for this is to identify a common list of research topics that would attract many submissions from the region. Given the aforementioned dissimilarities in Latin American research agendas, and to maximize participation, we decided to follow a format similar to the one employed in the recent IRTF & ISOC RAIM workshop (`https:`

//irtf.org/raim-2015), which we found was particularly appealing and successful in achieving large participation and lively discussion between partially mismatching networking communities.

RAIM's main objective was to increase collaboration between industry and academia in the field of network measurements. Its CfP targeted both short submissions of position papers as well as previously published academic papers on a broad set of topics related to Internet measurements. Following the rationale behind RAIM (inclusion, large participation and interaction), we would solicit original, unpublished – we would exclude already published work – extended abstracts (3-pages, two-column 10pt ACM format) on the topics covered by the SIGCOMM CfP, slightly extended to include particularly relevant topics to he region (e.g., delay-tolerant networks, satellite networks, power grids, etc.). Extended abstracts are more appealing when targeting large participation and inclusion, as these are (in principle) much easier to prepare, specially when considering work-in-progress, novel and disruptive ideas, or position papers. From our experience, the 3-pages length format is good enough to present ideas as well as concrete content and primarily results. Similar to RAIM, we will structure the workshop into themed sessions based on the submitted papers, enhancing coherence and discussion. We expect that this approach would also allow us to identify common topics for the local research on data communications, giving valuable input to better shape future LANCOMM venues.

We are proposing a full-day workshop, where authors of accepted papers will present their work in the form of short talks, targeting the maximization of free time for interactive (and structured) discussions. While inclusion and large participation of Latin American researchers form the core of LANCOMM, we are targeting a good quality workshop; the PC will select papers based on their technical contribution, originality and novelty, as well as their relevance to problems of particular interest in Latin America. To increase and stimulate the participation of Latin American researchers, the PC will give preference to papers coming from Latin American research groups, which shall be explicitly mention in the LANCOMM CfP.

Given that this is the first time we are proposing a workshop at SIGCOMM focused on Latin American research, it is hard to accurately predict the number of submissions and number of participants. Still, based on statistics drawn from other Latin American conferences in networking (e.g., ACM LANC, IEEE LatinCom, LANOMS), and considering the envisioned submissions' format, we expect in the order of 25 to 35 submissions and about 40 participants.

For the moment we leave open the possibility of adding keynotes, as well as the chance to annex later on a full-day student's workshop or similar event on Sunday (assuming LANCOMM takes place on Monday), organized at the local university premises - UFBA (10' walk from the hotel where the main conference takes place) to avoid any extra costs and logistics issues.

Finally, based on the high technical quality of the SIGCOMM program and the participation of key researchers and experts from all over the world, we expect that LANCOMM participants would also actively participate to the SIGCOMM main conference. To facilitate local participation we would ask the support from SIGCOMM through its travel grant program, for example targeting geo-diversity grants, or grants reducing registration fees for the main conference for those attending LANCOMM.

4. WORKSHOP ORGANIZERS

With the aim of boosting Latin American participation, we have assembled an organization committee spanning four different Latin American countries, complemented by a European institution, and with the advice of an expert in technical and organizational details related to SIGCOMM. The LANCOMM workshop is co-organized by the Universidade Federal do Rio de Janeiro in Brazil (Rosa M. M. Leão), the Universidad ORT Uruguay (Fernando Paganini), the Universidad de Chile & NICLabs (Javier Bustos-Jiménez), the Universidad de Buenos Aires in Argentina (J. Ignacio Alvarez-Hamelin), and the Austrian Institute of Technology (Pedro Casas). Renata Cruz Teixeira (INRIA – France) supports the LANCOMM proposal as expert advisor.

Rosa M. M. Leão received the B.Sc. degree in Computer Science from the Federal University of Rio de Janeiro in 1983, the M.Sc. degree in Computer Science from PUC-Rio in 1990, and the PhD degree in Computer Science from the Paul Sabatier University (LAAS) in 1994. Currently she is an Associate Professor in the Systems Engineering and Computer Science Department at the Federal University of Rio de Janeiro. Her research interests include modeling and analysis of computer and communication systems, computer networks, machine learning, P2P systems and information-centric networking.

Fernando Paganini received his Electrical Engineering and Mathematics degrees from Universidad de la República, Uruguay, in 1990, and his M.S. (1992) and PhD (1996) degrees in Electrical Engineering from Caltech, Pasadena, CA. From 1996 to 1997 he was a postdoctoral associate at MIT. From 1997 to 2005 he was on the Faculty at the UCLA Electrical Engineering Department, reaching the rank of Associate Professor. Since 2005 he is Professor of Engineering at Universidad ORT, Uruguay. Prof. Paganini is the recipient of the 1995 O. Hugo Schuck best paper award, the Caltech 1996 Wilts and Clauser Prizes for his PhD Thesis, the 1999 NSF CAREER Award, the 1999 Packard Fellowship, the 2004 George S. Axelby Award, and the 2010 Elsevier Scopus Prize. He has held editorial positions in the IEEE/ACM Transactions on Networking, the IEEE Transactions on Automatic Control, and the IEEE Transactions on Network Science and Engineering. He is a member of the Uruguayan National Academy of Sciences and a Fellow of the IEEE. His research interests are control and networks.

Javier Bustos-Jiménez is a Computer Science Engineer from University of Chile (2001) and PhD in Informatics from Université de Nice-Sophia Antipolis, France (2006). He participated in several innovative projects, and leaded the project of building the chilean infrastructure for mobile QoS measuring. He is adjoint professor at the Faculty of Engineering Universidad de Chile since 2007, and since 2012 he is the Director of NIC Chile's Research Laboratory (NICLabs). He has served as chair in the Workshop of Distributed Systems and Parallelism, the first chilean conference on Computer-Human Interfaces (ChileCHI), as committee member in numerous IEEE/ACM conferences; and as

reviewer for many conferences and journals including IEEE Transactions on Parallel and Distributed Systems, Elsevier's Future Generation Computer Systems Journal, and IEEE Reg9 Magazine; being Guest Editor of the latter two. He is an ACM SIGCOMM and SIGMETRICS member and he is the USENIX Campus Representative for Universidad de Chile.

J. Ignacio Alvarez-Hamelin is Researcher of CONICET and the Universidad de Buenos Aires, Facultad de Ingeniería. Prior he was a postdoctoral fellow at Université Paris-Sud, where he also obtained his PhD in Informatics, in 2002. He is also the head of CoNexDat group, which has research interest on Complex Networks, Internet Topology and visualization, routing, statistical analysis of traffic, ad-hoc networks, and network related algorithm. Interdisciplinary works include analysis of social networks aiming to find communities. Several tools, implemented as open source ones, are accessible from the CoNexDat web page (`http://cnet.fi.uba.ar/en/`). **Website**: `http://cnet.fi.uba.ar/ignacio.alvarez-hamelin/`

Pedro Casas is Researcher at the Austrian Institute of Technology in Vienna, as well as member of the ARTES research group at Universidad de la República in Montevideo. Prior he was Senior Researcher at the Telecommunications Research Center - FTW Vienna, postdoctoral fellow at the CNRS-LAAS research lab in Toulouse, and research and teaching assistant at the Engineering Faculty of Universidad de la República in Montevideo. He received a PhD in Computer Science from Télécom Bretagne and Universidad de la República in 2010. His research topics are on the statistical characterization and analysis of network traffic, big data analytics and platforms, QoE assessment and monitoring, and machine-learning and data mining based approaches for Networking. He is co-author of more than 80 papers published in major journals and conferences, and has received 8 best paper and best workshop awards in the last 7 years. He is the chair of the International Workshop on TRaffic Analysis and Characterization (TRAC) series. **Website**: `http://userver.ftw.at/~pcasas/`

5. CALL FOR PAPERS

The ACM Latin American Workshop on Data Communication Networks – LANCOMM – aims to foster a higher representation of Latin American researchers working in data communication networks at SIGCOMM, as well as bridging Latin American research groups. LANCOMM serves as a meeting point for Latin American researchers to share new ideas and experiences and to discuss the challenges linked to the development of data communication networks in Latin America.

We solicit stimulating, original, previously unpublished ideas on completed work, position papers, and/or work-in-progress papers in the form of extended abstracts. We further encourage papers that propose new research directions or could generate lively debate at the workshop. We invite submissions on a wide range of networking research topics, including, but not limited to:

- Network architectures and algorithms
- Experimental results from operational networks or network applications
- Energy-aware communication
- Network management
- Network security and privacy
- Network, transport, and application-layer protocols
- Fault-tolerance, reliability, and troubleshooting
- P2P, overlay, and content distribution networks
- Resource management, QoS, and signaling
- Routing, traffic engineering, switching, and addressing
- Wireless, mobile, and sensor networks
- Delay tolerant networks, satellite networks
- Big data analytics and platforms in networking
- Data mining, statistical modeling, and machine learning in networking
- Innovative uses of network data beyond communication, IoT, and power grids
- SDN, NFV and network programming

To foster participation of Latin American researchers at LANCOMM, we will give preference to papers coming from Latin American research groups, or addressing problems related to data communication networks of particular interest in Latin America.

5.1 Submission Instructions

Submitted extended abstracts must be in the form of a single PDF file of three (3) pages long (two-column 10pt ACM format), including figures, tables, and references. Papers must include author names and affiliations for single-blind peer reviewing by the PC. Authors of accepted papers are expected to present their papers at the workshop. Submissions must be original, unpublished work. Accepted papers will be published in the ACM Digital Library. Publication at LANCOMM does not preclude later publication.

6. WORKSHOP DEADLINES

External deadlines:

- Paper registration deadline: 18th March 2016
- Paper submission deadline: 25th March 2016
- Paper acceptance notifications: 29th April 2016
- Camera ready due: 20th May 2016
- Workshop date: 22 August 2016

Internal deadlines:

- Workshop CFP announced: 21st December 2015
- Workshop CFP online: 21st December 2015
- Reviews due: 18th April 2016
- Discussion phase (remote): 20th-27th April 2016
- List of accepted papers: 28th April 2016
- Final program online: 13th June 2016
- List of organization details: 15th June 2016

7. COMMITTEES

Workshop Chairs:

- Rosa M. M. Leão, Universidade Federal do Rio de Janeiro (Brazil)
- Fernando Paganini, Universidad ORT Uruguay (Uruguay)
- Javier Bustos-Jiménez, Universidad de Chile & NICLabs (Chile)
- J. Ignacio Alvarez-Hamelin, Universidad de Buenos Aires (Argentina)
- Pedro Casas, Austrian Institute of Technology & Grupo ARTES (Austria & Uruguay)

Advisor:

- Renata Cruz Teixeira, INRIA (France)

Program Committee ([†]confirmed):

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- Federico La Roca[†], Universidad de la República, Uruguay
- Marco Mellia[†], Politecnico di Torino, Italy
- Daniel Menasché[†], Federal University of Rio de Janeiro, Brazil
- Antonio Rocha[†], Federal Fluminense University of Rio de Janeiro, Brazil
- Erika Rosas[†], Universidad de Santiago, Chile
- Ana Paula Silva[†], Federal University of Minas Gerais, Brazil

8. ADDITIONAL DETAILS

8.1 Targeted Communities

LANCOMM targets explicitly the Latin American research communities working in the various perspectives of data communication networks. As we said before, being large participation of Latin American researchers a major goal to LANCOMM, we will give preference to papers coming from Latin American research groups. We would also welcome papers coming from non-Latin American groups, but only in those cases where the is a clear connection to the research relevant to the region, addressing problems related to data communication networks of particular interest in Latin America.

8.2 Relation to Other Venues

There are other efforts similar to LANCOMM which seek to stimulate the development of networking research conducted in Latin America. Worth mentioning are the IEEE Latin American Conference on Communications (LatinCom), the ACM Latin America Networking Conference (LANC), and the Latin American Network Operations and Management Symposium (LANOMS). Even if these events represent a great opportunity to further develop Latin American research in networking, to date they have not resulted in an appreciable increased visibility and impact on the international research community.

The main difference of LANCOMM with all these venues is that we are targeting for the very first time an explicit integration of Latin American researchers into the highly selective and high quality SIGCOMM conference, which is considered to be the leading conference in data communications and networking in the world.

8.3 Dissemination Plans

To foster a large dissemination of the LANCOMM workshop and CfP, we shall rely on multiple communication channels:

- Targeted mailing lists in Latin America and abroad.
- Direct contact of the organization committee members to their local contact networks, including both research and industrial communities.
- Point-to-point dissemination through the PC members and their respective research groups.
- Publication of the CFP in relevant web sites and blogs, such as the well-known WikiCFP (`http://www.wikicfp.com/`) and targeted social networks (LinkedIN groups posting such as ACM SIGCOMM group).
- Flyers at conferences and workshops where the organization committee is active.