

ACADEMIC CURRICULUM VITAE

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EDUCATION & TRAINING

- 2012 Ph.D. Telematics and Information Technology
University of Twente, Enschede, Netherlands
Dissertation title: Impact of e-infrastructure stimulus on the biodiversity science
discipline: an empirical investigation
Graduate Advisor: Kuldeep Kumar
- 1995 M.S. Computer Science
School of Computer and Information Science
Florida International University (FIU), Miami, FL
Thesis Title: Ethernet Modeling - Simulation Tool
- 1983 B.S. Computer Science
School of Computer and Information Science
Florida International University (FIU), Miami, FL

APPOINTMENTS

- 2021 – present Research Professor: Knight Foundation School of Computer Science in the
College of Engineering and Computing (KFSCIS) at Florida International
University (FIU). Specializing in advanced cyberinfrastructure, distributed
systems, and data-intensive research. Leads collaborative research initiatives
that support national and international scientific communities through
innovative networking and computing technologies. Develops and oversees
high-impact projects that enhance research capabilities, accelerate scientific
discovery, and strengthen partnerships across academia, government, and
industry.
- 2008 – present Assistant Vice President Technology Augmented Research: Center for
Internet Augmented Research and Assessment (CIARA)
School: Florida International University, Division of Information Technology
Description: Responsible for furthering the mission of CIARA to contribute to
the pace and the quality of research at FIU through the application of
advanced Cyberinfrastructure. He is responsible for strategic planning and
development of advanced research networking services, including the
development and management of the AMPATH International Exchange Point

for Research and Education networks.

- 2005 – 2008 Executive Director: Center for Internet Augmented Research and Assessment (CIARA)
School: Florida International University, Division of Information Technology
Description: Co-founded CIARA as a State of Florida Type II research center in 2003. CIARA fosters a domain-specific tailoring of Internet technologies to support faculty research, and in the process improve graduate education. CIARA assesses and measures FIU's effectiveness in the use of technology to augment the rate of discovery for domain researchers.
- 2002 – 2005 Director at Center for Internet Augmented Research and Assessment (CIARA) School: Florida International University, Division of Information Technology
- 1998 – 2002 Director: Network Engineering and Telecommunications
School: Florida International University, Division of Information Technology
Description: Developed the AMPATH International Exchange Point in Miami for Research and Education Networking in collaboration with H. Morgan.
- 1994 – 1998 Associate Director: Department of Telecommunications
School: Florida International University, Division of Information Technology
Description: Responsible for the strategic planning and development of networking and telecommunications services of the FIU.
- 1989 – 1994 Assistant Director: Department of Telecommunications
School: Florida International University, Division of Information Technology
Description: Provided cyberinfrastructure leadership in support for education, research and development.

DISSERTATION

Title: Impact of e-infrastructure stimulus on the biodiversity science discipline: an empirical investigation

Abstract: This research examined the phenomenon of e-Infrastructure development and its impact on scientific discovery. Using an interpretive grounded theory research approach to study the Long-Term Ecology Research (LTER) Network a particular community of science in the biodiversity-ecology discipline we found that increases in scientific discovery as a result of significant investments in e-Infrastructure development were at best mixed. Reframing our research objective to focus on scientific progress and using the IT Productivity Paradox variables to observe “scientific productivity,” we found results that appeared promising. Although the findings of this exploratory study were mixed, they raised awareness of potential research in several areas outlined previously in section 10.4. We hope that this study will provide a stimulus to future research of the phenomenon of e-Infrastructure and its impact on the different Aspects of a Science Discipline and scientific discovery.

Committee Chair (Promotor): Prof. Dr. Kuldeep Kumar

TEACHING EXPERIENCE

2014 – 2021 Adjunct Professor: School of Computer and Information Science
School: Florida International University, Division of Information Technology
Description: Advance special topics in Computer and Information Sciences

RELEVANT WORK EXPERIENCE

1988 – 1989 System Coordinator: University Computer Services
School: Florida International University, Division of Information Technology
Description: Managed the microcomputer support group for the University Computer Services.

1984 – 1988 System Coordinator: Academic Computer Services
School: Florida International University, Division of Information Technology
Description: Responsible for providing microcomputer support services to faculty and staff from academic departments, and students in the University's computer lab.

1983 – 1984 Scientific Programmer: Academic Computer Services
School: Florida International University, Division of Information Technology
Description: Responsible for user support services and departmental programing on the UNIVAC 1100-81A mainframe.

1982 – 1983 Computer Programmer II: Academic Computer Services
School: Florida International University, Division of Information Technology
Description: Responsible for the management of the University's computer laboratories.

FEDERAL GRANTS AWARDED

Active Grants:

2026 – 2028 Award# OAC-2530965, \$600,00, **CICI: RSSD: LLMDaL: LLM-Driven Data Labeling for Training ML Models**, [Co-PI].

2025 – 2030 Award# OAC-2537489, \$9,000,000, **AmLight: The Next Frontier Towards Discovery in the Americas and Africa**, [PI].

2023 – 2026 Award# OAC-2322308, \$599,999.00, **CC* Storage: EnviStor: A Repository for Supporting Collaborative Interdisciplinary Research on South Florida's Built and Natural Environments**, [Co-PI].

2023 – 2027 Award# OAC-2232864, \$599,647.00, **CICI: RSSD: LaSIC: Labeled Security Information Capture**, [Co-PI].

2020 – 2026 Award# OAC-2029278, \$6,352,130, **IRNC:Core Improvement: AtlanticWave-SDX: a distributed experimental SDX supporting research, experimental deployments, and interoperability testing on global scales**, [PI].

2020 – 2026 Award# OAC-2029283, \$3,864,685, **IRNC: Core Improvement: Americas-Africa Lightpaths Express and Protect (AmLight-ExP)**, [PI].

Previous Grants:

2021 – 2024 Award# OAC-2126253, \$416,000,, **CC* Compute: RAPTOR - Reconfigurable Advanced Platform for Transdisciplinary Open Research** [Co-PI]

2020 – 2022 Award# OAC-2018754, \$760,000, **CC* Integration-Large: Q-Factor: A Framework to Enable Ultra High-Speed Data Transfer Optimization based on Real-Time Network State Information provided by Programmable Data Planes** [Co-PI]

2019 – 2023 Award# OAC-1935966, \$300,000, **FABRIC-Adaptive programmable network Research Infrastructure for Computer science.**

2018 – 2023 Award# OAC-1924154, \$1,000,000, **CyberTraining: Implementation: Medium: Advanced Cyber Infrastructure Training in Policy Informatics**, [Co-PI].

2015 - 2021 Sub-award under # AST-1202910, \$17,158,000, **LSST Construction: Construction of the Large Synoptic Survey Telescope (LSST)** [PI] FIU awarded for AMLIGHT to provide an Advanced International Network for the Large Synoptic Survey Telescope (LSST) through 2031 with AMLIGHT's long-term support for a high-speed network, linking LSST to the U.S. Data Facility at SLAC, through a sub-award from the Association of Universities for Research in Astronomy (AURA).

2015 - 2021 Award# OAC-1451018, \$10,509,151, **IRNC: Backbone: AmLight Express and Protect (ExP)**, [PI] AmLight ExP will be a reliable, leading-edge infrastructure for research and education. Total production bandwidth provided by AmLight ExP between the U.S. and South America will grow to more than 680G over the next five years.

2015 - 2022 Award# OAC-1451024, \$4,220,502, **IRNC: RXP: AtlanticWave-Software defined Exchange: A Distributed Intercontinental Experimental Software Defined exchange (SDX)** [PI.] A distributed experimental SDX will provide an environment for development and prototyping of functions and services essential towards advancing knowledge to support end-to-end services, capable of spanning multiple SDN domains.

2016 - 2018 Award# OAC-1638990, \$400,000, **IRNC: Backbone: Americas Africa Research and eduCation Lightpaths (AARCLight)** [PI] The planning project is largely based on the planned availability of submarine cable spectrum for use by research and education communities. It creates an unprecedented opportunity for the stakeholders in the U.S., Africa, and Brazil to coordinate planning efforts to strategically make use of the offered spectrum towards serving the broadest communities of interest in research and education.

2017 - 2018 Award# CISE-1724805, \$49,999, **GENI Engineering Conference 25** [PI] This project supports hosting the 25th edition of the GENI Engineering conference (GEC-25). The GEC

meeting and Demo sessions provide graduate students with both an opportunity to demonstrate and explain their work to the GENI community prior to formal publication. It is a key part of helping new graduate students understand what is being done with GENI and who among their peers at other institutions might be valuable resources. It also supports outreach to new community members, including the emerging US Ignite community.

2016 - 2018 Award# ACI-1541402, \$400,000, **CC*DNI Engineer: ACI Engineer Lead for a Hybrid Campus Network** [PI] The diversity in CI accessible to researchers at FIU has created an environment with the potential to stimulate collaborative research opportunities. Simultaneously, this diversity in CI has added new forms of complexity and challenges to the networks and applications, both on- and off campus. The C-CIEL would guide researchers and the campus IT staff in leveraging CI resources to improve the environment and increase capacity towards discovery.

2014 - 2018 Award# CNS-1443285, \$200,000, EAGER: **SwitchOn - Exploring and Strengthening US-Brazil Collaborations in Future Internet Research**, [Co PI] This project funds the U.S. side of an exploration of potential collaborations between the U.S. and Brazil on Future Internet Architectures and the GENI project.

2010 - 2018 Award# ACI-0963053, \$7,744,790, **IRNC-ProNet: Americas Lightpaths: Increasing the Rate of Discovery and Enhancing Education across the Americas**, [PI] **AmLight** enables research and education amongst the people of the Americas through the operation of production infrastructure for communication and collaboration between the US and Western Hemisphere science and engineering research and education communities.

2014 - 2016 Award# ACI- 1440728, \$300,000, **CC*IIE IAM: Secure Access for Everyone (SAFE)**, [PI] Secure Access for Everyone (SAFE) creates an Identity and Access Management (IAM) infrastructure that facilitates easy access to campus Cyberinfrastructure (CI) resources for local, state, regional and national researchers.

2013 - 2014 Award# ACI-1357928, \$49,000, **Big Data, Big Networks: Big Opportunities for Collaboration between Mexico and the United States**, [PI]. The Research and Education communities of the U.S. and Mexico have a long history of cross-border collaborations. Given the proximity and the breadth of research taking place at institutions in California and Mexico, the opportunity for enhancing network-dependent cross-border science research and education collaborations holds great promise. This grant funded a series of workshops at Mexico's Center for Scientific Research and Higher Education (CICESE) and the University of California San Diego (UCSD).

2012 - 2014 Award# ACI-1246185, \$500,000, **CC-NIE Network Infrastructure: FlowSurge: Supporting Science Data Flows Towards Discovery, Innovation and Education**, [PI]. The FlowSurge project leverages cyberinfrastructure (CI) resources for Software Defined Networking (SDN) on the FIU campus network, at the AMPATH International Exchange Point, regional, national and international multi-organizations to enhance support for end-to-end Science flows from a researcher's laboratory FlowSurge's major research contribution is a science network and Science DMZ at FIU tailored to support high-performance science applications and data-intensive flows.

2009 - 2013 Subaward under # CNS- 0714770, \$502,000, **PrimoGENI--Developing GENI Aggregates for Real-time Large-scale Network Simulation (through Raytheon/GENI Project**

Office) [Co-PI] The major objective of GENI (Global Environment for Network Innovation), a virtual laboratory for exploring future internets at scale, is to create major new opportunities to understand, innovate and transform global networks and their interactions with society. Dynamic and adaptive, GENI opens up new areas of research at the frontiers of network science and engineering and increases the opportunity for significant socio economic impact.

2006 - 2009 Award# ACI- 0636031, \$791,273, **CI-TEAM Implementation Project: Global CyberBridges (GCB); A Model Global Collaboration Infrastructure for e-Science between US and International Partners** [Co-PI] The Center for Internet Augmented Research and Assessment project 'Global CyberBridges' is a new model for the research workforce to develop competency in using CI. International partners included the Chinese Academy of Sciences Networking Center and several Brazilian universities.

2003 - 2009 Award# PHY-0312038, \$7,388,467, **CHEPREO: An Inter-Regional Grid Enabled Center for High Energy Physics Research & Educational Outreach at FIU**, [PI and grant proposal coordinator] Florida International University (FIU), in collaboration with partners at Florida State University (FSU), the University of Florida (UF), and the California Institute of Technology (Caltech), in cooperation with the National Science Foundation, are creating and operating an interregional Grid-enabled Center for High-Energy Physics Research and Educational Outreach (CHEPREO) at FIU, encompassing an integrated program of research, network infrastructure development, and education and outreach at one of the largest minority schools in the US.

2005 - 2007 Award# ACI- 0537464, \$224,700, **CI-Team: CyberBridges** [Co-PI]. The Center for Internet Augmented Research and Assessment pilot project 'CyberBridges' is a new model for the research workforce to develop competency in using CI.

2005 - 2010 Award# ACI- 0441095, \$5,402,255, **SCI/IRNC: WHREN (Western Hemisphere Research and Education Networks): Increasing the Rate of Discovery and Enhancing Education across the Americas**, [PI]. WHREN addressed the existing and future needs for improved North American (especially U.S.)-South American connectivity. This proposal specifically focuses on the need for connectivity through new links, LILA (Links Interconnecting Latin America).

2005 - 2006 Award# IIA- 0418366, \$119,196, **PASI on Advanced Networking Technologies Leveraged for Physics and Astronomy; Mendoza, Argentina**, [PI] The Pan-American Advanced Studies Institutes (PASI) award, jointly supported by the NSF and the Department of Energy (DOE), took place in Mendoza, Argentina in January 2005 on the topic of Advanced Networking Technologies leveraged for Physics and Astronomy.

2005 - 2007 Award# IIA- 0549456, \$40,000, **Americas Program Workshop: Cyberinfrastructure for International Biodiversity Research Collaboration** [PI]. The workshop was held in Panama City, early in January 2006 and explored opportunities and breakthrough activities with the aim of promoting future collaborations in biodiversity informatics and research.

2005 - 2006 Award# ACI- 0231844, \$482,679, **STI: AMPATH Collaborative Research and Education Operational and Functional Support** [PI]. This project in advanced networking infrastructure and an international exchange point for research and education is based in Miami, Florida at Florida International University (FIU). The project will connect at least 10 countries' National or Regional Research and Education Networks (NRENS) and will provide advanced networking connectivity to US e-Science applications and major instrumentation interests in Latin

America and the Caribbean.

2002 - 2003 Award# CNS- 0215434, \$49,152, **AMPATH StarLight Rio Grid Workshop**, [Co-PI]. This funding allowed Florida International University (FIU) to contribute a key technology component to the 2002 AMPATH StarLight Rio Grid Workshop in Brazil.

2002 - 2003 Award# ACI- 0305876, \$44,575, **AMPATH Workshop: Fostering Collaborations and Next Generation Infrastructure**, [PI]. The main objective of the workshop is to create an environment for AMPATH participants, potential participants and those with a regional, hemispheric or international interest in the project to exchange ideas, form new and solidify existing collaborations and articulate specific Network Infrastructure needs.

2002 Award# CNS- 0220176, \$57,935, **First AMPATH International Conference: Valdivia, Chile**, [PI]. The conference continued the work of identifying the universities and research centers in the AMPATH service area who require, or would take advantage of, high-performance connectivity to research institutions in the U.S. and worldwide if it were available.

2001 Award# CNS-0123388, \$53,679, **FIU AMPATH Workshop to Identify Areas of Scientific Collaboration between the US and the AMPATH Service Area**, [PI]. A workshop was conducted by Florida International University (FIU) to discuss the current and future needs and activities of researchers needing a high-performance network for their research projects associated with activities and projects in South and Central America, Mexico and the Caribbean.

HONOR AWARDS AND ACHIEVEMENTS

2017 35 Year Service Award from Florida International University
2012 30 Year Service Award from Florida International University
2012 CENIC Award for High Performance Research Applications
2011 Operational Excellence Award from Florida International University
1992 10 Years Employee Service Recognition Award from Florida International University
1986 Administrative and Professional Senate Award from Florida International University

PEER REVIEWED PUBLICATIONS AND POSTERS

Morgan, H., et al. 2025. NRE-0118: Cryo-EM Without Borders: Empowering Distributed Research via AmLight and Collaborative (Human) Networks, Supercomputing Conference (SC25), St. Louis, MO.

Sada, M., et al. 2025. NRE-121: Real-Time In-Network Machine Learning and P4 Testbed Deployment on FPGA SmartNICs, DPUs, and Switches, Supercomputing Conference (SC25), St. Louis, MO.

Newman, H., et al. 2025. NRE-125: A Next Generation Multi-Terabit/sec Campus and Global Network System for Data Intensive Sciences, The Global Network Advancement Group

Data Intensive Science and AutoGOLE/SENSE Working Groups, Supercomputing Conference (SC25), St. Louis, MO.

Schwarz, M., et al. 2025. NRE-126: GP4L – Global Platform For Labs, Supercomputing

Conference (SC25), St. Louis, MO.

Ruggiero, C.A., et al. 2025. NRE-128: High Performance Networking with the Sao Paulo Backbone SP Linking 8 Universities and the Bella Link, Supercomputing Conference (SC25), St. Louis, MO.

Ruggiero, C.A., et al. 2025. NRE-129: University of Sao Paulo (USP) High Performance Dark Fiber Infrastructure, Supercomputing Conference (SC25), St. Louis, MO.

Martinello, M. 2025. NRE-130: A Case Study for Data-Intensive Traffic from Vera Rubin Observatory Supported by Path Aware PolKA Network, Supercomputing Conference (SC25), St. Louis, MO.

Bezerra, J. 2025. NRE-132: AmLight 2.0: Flexible control, deep visibility, and programmability @ Tbps!, Supercomputing Conference (SC25), St. Louis, MO.

Sahin, H., Bezerra, J., Brito, I., Frez, R., Chergarova, V., Lopez, L.F., and Ibarra, J. "Leveraging In-band Network Telemetry for Automated DDoS Detection in Production Programmable Networks: The AmLight Use Case". *INDIS Workshop at Supercomputing Conference (SC24)* 2024.

Newman, H., et al. 2024. NRE-013: A Next Generation Multi-Terabit/sec Campus and Global Network System for Data Intensive Sciences, The Global Network Advancement Group Data Intensive Science and AutoGOLE/SENSE Working Groups, Supercomputing Conference (SC24), Atlanta, GA.

Yamanaka, K., et al. 2024. NRE-014: MMCFTP's Data Transfer Experiment Using Ten 100 Gbps Lines Between JAPAN and USA, Supercomputing Conference (SC24), Atlanta, GA.

Pillay, K., et al. 2024. NRE-015: High-Speed Data Transfers from South Africa to USA!, Supercomputing Conference (SC24), Atlanta, GA.

Addleman, H., et al. 2024. NRE-016: NA REX Demonstration, Supercomputing Conference (SC24), Atlanta, GA.

Lehman, T., et al. 2024. NRE-022: AutoGOLE/SENSE: Edge Site Resource Integration with Network Services, Supercomputing Conference (SC24), Atlanta, GA.

Ruth, P., et al. 2024. NRE-024: FABRIC, Supercomputing Conference (SC24), Atlanta, GA.

Kiran, M., et al. 2024. NRE-025: HECATE Merges with PolKA AI-enabled Traffic Engineering for Data-intensive Science, Supercomputing Conference (SC24), Atlanta, GA.

Graham, J., et al. 2024. NRE-029: Multi Domain Experiments Using ESnet SENSE on the National Research Platform / PacWave / FABRIC, Supercomputing Conference (SC24), Atlanta, GA.

- Schwarz, M., et al. 2024. NRE-030: GP4L – Global Platform for Lab, Supercomputing Conference (SC24), Atlanta, GA.
- Ruggiero, C.A., et al. 2024. NRE-031: High Performance Networking with the Sao Paulo Backbone SP Linking 8 Universities and the Bella Link, Supercomputing Conference (SC24), Atlanta, GA.
- Martinello, M., et al. 2024. NRE-032: PolKA Routing Approach to Support Traffic Steering for Data-intensive Science, Supercomputing Conference (SC24), Atlanta, GA.
- Addleman, H., et al. 2024. NRE-036 PDF: Streaming Event Horizon Telescope Data to MIT-Haystack, Supercomputing Conference (SC24), Atlanta, GA.
- Morgan, H., Ibarra, J., Bezerra, J., Lopez, L.F., Chergarova, V., Cox III, D.A.C., Alvarez, G.E., Hazin, A., Pillay, K., Makan, A.K. Greaves, D.Shariff, A., and Sullivan, P. “AmLight-Maximizing Technological Advancements in Research and Education; Network Connectivity for Open Science between South Africa, the US, and South America”. *Ubuntunet Connect Conference 2024*.
- Bezerra, J., Da Silva Brito, I.V., Arcanjo, V., Ibarra, J., Frez, R., Motitsuki, R., Morgan, H., Chergarova, V., Baldim, B., Bernardes, M.C., Ferreira, J.E., Newman, H.. 2023. NRE-019: AmLight 2.0: Flexible control, deep visibility, and programmability @ Tbps! *Supercomputing Conference (SC23), Denver, CO*.
- Lehman, T., and GNA-G AutoGOLE/ SENSE WG Members. 2023. NRE-014: AutoGOLE/SENSE: End-to-End Network Services and Workflow Integration, *Supercomputing Conference (SC23), Denver, CO*.
- Newman, H., et al. 2023. NRE-013: The Global Network Advancement Group: A Next Generation System for Data Intensive Sciences, *Supercomputing Conference (SC23), Denver, CO*.
- Newman, H., et al. 2023. NRE-013: Turbocharging 100G Link: A High-Speed Data Filling Demo from South Africa to Denver! *Supercomputing Conference (SC23), Denver, CO*.
- Schwarz, M., et al. NRE-020: Global P4 Lab, *Supercomputing Conference (SC23), Denver, CO*.
- Bezerra, J., Brito, I., Frez, R., & Ibarra, J. (2023, May). An adaptive and efficient approach to detect microbursts leveraging per-packet telemetry in a production network. In *NOMS 2023-2023 IEEE/IFIP Network Operations and Management Symposium* (pp. 1-6). IEEE.
- Cevik, M., Stealey, M., Wang, C., Bezerra, J., Ibarra, J., Chergarova, V., Morgan, H. & Xin, Y. (2022, July). Towards Production Deployment of a SDX Control Framework. In *2022 International Conference on Computer Communications and Networks (ICCCN)* (pp. 1-10). IEEE.
- Bezerra, J., Ibarra, J., Morgan, H., Torres, A.Q., Chergarova, V., Brito I.V.D, LeClerc, M., Kerl, B., " AmLight In-band telemetry within the NoviFlow switches ", *Future of Information and*

Communication Conference 2022 (FICC2022), Virtual Conference, August 10-14, 2022.

Bezerra, J., Cadenas, L.C., Chergarova, V., Cox D.A., Greaves, D., Grizendi, E., Hazin A., Ibarra, J., Lopez, L.F., Lotz, L., Mammen, S., Morgan, H., Stanton, M., Teixeira, M., Wiener, S., "Introducing new technologies, innovations, and collaborations in R&E Networking between Africa, Latin America, Europe and the US through new international projects", WACREN 21, Virtual Conference, March 15-19, 2021.

Yu, Y., Ibarra, J.E., Kumar, K. and Chergarova, V., "Coevolution of cyberinfrastructure development and scientific progress", Technovation, p.102180, 2020

Chergarova, V., Ibarra, J., D'Cunha, C., Kirgan, M., Cabrera, R., Rotella, D., Bezerra, J., Rottella, R., Morgan, H "Accelerating FIU's science research and education towards discovery and innovation by leveraging FIU's Science DMZ", The annual Americas Conference on Information Systems (AMCIS), Virtual Conference, August 10-14, 2020.

Lu, Q., Zhang, L., Wu, W., DeMar, P., Chen, J., Mambretti, J., Guok, C., Monga, I., Lehman, T., Yang, X., Kim, J., Cho, B., Ibarra, J., Morgan, H., Bezerra, J., Chergarova, V., Zahir, A., and Malenstein, G. V. 2019. "NRE-011: Big Data Express: A Scalable and High-Performance Data Transfer Platform," Supercomputing Conference (SC19), Denver, CO.

Newman, H., Balcas, J., Sirvinskaskas, R., Iordache, C., Chiu, J., Anderson, S., Barayoga, J., Chang, J., Boyd, D., Watanabe, L., Williams, D. S., Mughal, A., Kantor, J., Kollross, M., Ibarra, J., Bezerra, J., Zahir, A., Morgan, H., Yang, R., Xiang, Q., Zhang, J., Wang, X. T., Guo, D., Yu, D., Wang, M., Leet, C., Chen, S., Le, F., Lim, Y.-s., Pourbaix, Y. d., Mishra, V., Yang, X., Lehman, T., Duarte, J., deFanti, T., Smarr, L., Graham, J., Hutton, T., Wuerthwein, F., Papadopoulos, P., Harris, P., Monga, I., Chin Guok, MacAuley, J., Sim, A., Hazen, D., Sim, A., Novaes, S., Iope, R., Leal, B., Gomes, M., Beruchi, A., Mambretti, J., Chen, J., Szalay, A., Malenstein, G. v., Demar, P., Winkler, L., McKee, S., Yeh, E., RanLi, Wu, Y., Papadopoulos, C., Fan, C., Shannigrahi, S., Zhang, L., Jashal, B., Mazumdar, K., Hess, J., Fox, L., Lopez, L., Stanton, M., Moura, A., Jaque, S., Astudillo, A., Lyonnais, M., Wilson, R., Wilby, N., and Williford, L. 2019a. "NRE-019: Global Petascale to Exascale Workflows for Data Intensive Science Accelerated by Next Generation Programmable Sdn Architectures and Machine Learning Applications," Supercomputing Conference (SC19), Denver, CO.

Newman, H., Lehman, T., Ibarra, J., Bezerra, J., Zahir, A., Chergarova, V., Morgan, H., Clark, R., Donovan, S., Novaes, S., Iope, R., Leal, B., Lopez, L., Stanton, M., Lima, R. F. d., and Astudillo, A. 2019b. "NRE-023: International Data Transfer over Amlight Express and Protect (Exp)," Supercomputing Conference (SC19), Denver, CO.

Morgan, H., Ibarra, J., Bezerra, J., Lopez, L. F., Chergarova, V., Cox, D. A., Stanton, M., Hazin, A., Lotz, L., and Mammen, S. 2019. "Collaborating to Leverage R&E Network Infrastructures between Africa, Brazil, and the U.S.," in: UbuntuNet-Connect 2019. Antananarivo, Madagascar: UbuntuNet Connect Alliance.

Chergarova, V., Morgan, H., Ibarra, J., Bezerra, J., "Factors influencing the adoption of Software Defined Networking by Research and Educational Networks", The annual Americas Conference on Information Systems (AMCIS), Cancun, Mexico, August 15-17,

- Chung, J., Donovan, S., Bezerra, J., Morgan, H., Ibarra, J., Clark, R., and Owen, H. 2019. "Novel Network Services for Supporting Big Data Science Research," *Future Generation Computer Systems* (98), pp. 512-521, Paper, <https://www.sciencedirect.com/science/article/pii/S0167739X18314651>
- Bezerra, J., Ibarra, J., Boertjes, D., Santillo, F., Williford, L., Morgan, H., Cox, C., and Lopez, L. 2019. "Mitigating Soft Failures Using Network Analytics and SDN to Support Distributed Bandwidth-Intensive Scientific Instruments over International Networks," in: *SubOptic Conference 2019*. New Orleans, LA.
- Morgan, H., Ibarra, J., Bezerra, J., Lopez, L.F., Chergarova, V., Cox III, D.A., Alvarez, G.E., Stanton, M., Hazin, A., Lotz, L. and Mammen, S., "AARCLight–New opportunities for South Atlantic R&E Network collaboration between Africa, Brazil, and the US". Presented at UbuntuNet-Connect Conference 2018 Zanzibar, Tanzania, November 22-23, 2018. <https://events.ubuntunet.net/event/16/contributions/149/>
- Newman, H., Balcas, J., Putaswamy, S., Vlimant, J.-R., Pata, J., Iordache, C., Anderson, S., Chang, J., Boyd, D., Watanabe, L., Williams, D. S., Anderson, C., Mughal, A., Kantor, J., Kollross, M., Ibarra, J., Bezerra, J., Arcanjo, V., Zahir, A., Morgan, H., Yang, R., Xiang, Q., Zhang, J., Wang, X. T., Guo, D., Yu, D., Wang, M., Leet, C., Chen, S., Le, F., Lim, Y.-S., Pourbaix, Y. D., Mishra, V., Lehman, T., Yang, X., Defanti, T., Smarr, L., Graham, J., Hutton, T., Wuerthwein, F., Papadopoulos, P., Monga, I., Guok, C., Macauley, J., Sim, A., Hazen, D., Novaes, S., Iope, R., Leal, B., Gomes, M., Beruchi, A., Mambretti, J., Chen, J., Szalay, A., Malenstein, G. V., Demar, P., Winkler, L., Mckee, S., Yeh, E., Ranliu, Papadopoulos, C., Shannigrahi, S., Zhang, L., Jashal, B., Mazumdar, K., Reese, D., John Hess, L. F., Lopez, L., Stanton, M., Moura, A., Jaque, S., Astudillo, A., Lyonnais, M., Wilson, R., Wilby, N. & Williford, L. "NRE-16: Global Petascale to Exascale Science Workflows Accelerated by Next Generation SDN Architectures and Applications". Demonstration at Supercomputing Conference 2018 (SC18). Dallas, TX, November 12-15, 2018. <https://sc18.supercomputing.org/experience/scinet/network-research-exhibition/>
- Newman, H., Balcas, J., Putaswamy, S., Vlimant, J.-R., Pata, J., Lordache, C., Anderson, S., Anderson, C., Mughal, A., Kantor, J., Ibarra, J., Bezerra, J., Arcanjo, V., Zahir, A., Morgan, H., Defanti, T., Smarr, L., Graham, J., Hutton, T., Wuerthwein, F., Papadopoulos, P., Monga, I., Guok, C., Macauley, J., Novaes, S., Iope, R., Leal, B., Gomes, M., Beruchi, A., Mambretti, J., Reese, D., Hess, J., Fox, L., Lopez, L., Stanton, M., Moura, A., Jaque, S., Astudillo, A., Lyonnais, M., Wilson, R., Wilby, N. & Williford, L., "NRE-17: Large Synoptic Survey Telescope (LSST) Real Time Low Latency Transfers for Scientific Processing Demonstrations". Demonstration at Supercomputing Conference 2018 (SC18). Dallas, TX, November 12-15, 2018. <https://sc18.supercomputing.org/experience/scinet/network-research-exhibition/>
- Newman, H., Morgan, H., Ibarra, J., Cox, D., & Bezerra, J., "NRE-18: Americas Lightpaths Express and Protect Enhances Infrastructure for Research and Education". Demonstration at Supercomputing Conference 2018 (SC18). Dallas, TX, November 12-15, 2018. Paper <https://sc18.supercomputing.org/experience/scinet/network-research-exhibition/>
- Chung, J., Donovan, S., Bezerra, J., Morgan, H., Ibarra, J., Clark, R., & Owen, H., "Novel

Network Services for Supporting Big Data Science Research". Presented at Gateways 2017, University of Michigan, Ann Arbor, MI, October 23-25, 2017.
<https://gateways2017.figshare.com/>, Paper

Chung, J., Donovan, S., Bezerra, J., Morgan, H., Ibarra, J., Clark, R., & Owen, H., "Novel Network Services for Supporting Big Data Science Research". Presented at Gateways 2017, University of Michigan, Ann Arbor, MI, October 23-25, 2017.
<https://gateways2017.figshare.com/>, Poster

Bezerra, J., Arcanjo, V., Ibarra, J., Kantor, J., Lambert, R., Kollross, M., Astudillo, A., Sobhani, S., Jaque, S., Petravick, D., Morgan, H., Lopez, L., "International Networking in support of Extremely Large Astronomical Data-centric Operations". Presented at Astronomical Data Analysis Software and Systems (ADASS XXVII) conference, Santiago, Chile, October 22-26, 2017. <http://www.adass.org/>

Bezerra, J., Ibarra, J., Schwarz, M., Freitas, H., Morgan, H., "Mitigating the Risks of Supporting Multiple Control Plans in a Production SDN Network: A Use Case", In Anais do SBRC/WPEIF 2017, Belem, PA, Brazil, (p.34-37)

Galiza, H., Schwarz, M., Bezerra, J. and Ibarra, J., "Moving an IP network to SDN: a global use case deployment experience at AmLight". Brazilian Symposium on Computer Networks and Distributed Systems (SBRC) Workshop on Future Internet Research and Experimentation (WPEIF), pages 15-18, Salvador Bahia Brazil, June 2016

Bezerra, J., Galiza, H., Ibarra, J. and Schwarz, M., "AmLight's OpenFlow Sniffer dissected: Troubleshooting production networks", Brazilian Symposium on Computer Networks and Distributed Systems (SBRC) Workshop on Future Internet Research and Experimentation (WPEIF), pages 33-36, Salvador Bahia Brazil, June 2016

J. Chung, J. Cox, J. Ibarra, J. Bezerra, H. Morgan, R. Clark, and H. Owen, "AtlanticWave-SDX: An International SDX to Support Science Data Applications", Software Defined Networking (SDN) for Scientific Networking Workshop, Nov. 2015, pp. 1-7.

J. Ibarra, J. Bezerra, H. Morgan, D. A. Cox, III, M. Stanton, I. Machado, and E. Grizendi, "Benefits brought by the use of OpenFlow/SDN in the AmLight intercontinental research and education network", IM 2015 - 14th IFIP/IEEE Symposium on Integrated Network and Service Management, Ottawa, Canada, 11-15 May, 2015

H. L. Alvarez, D. A. Cox, J. E. Ibarra, "Openwave: Collaboration Between Industry and Government", Managing Critical Infrastructure in a Changing Natural and Socio-Economic Environment, 2014 ICPC Plenary Meeting, Dubai, 18-20 March, 2014

C. Zhang, B. Liu, X. Su, H. Alvarez and J. Ibarra, "An Experimental Approach to Integrating NetFlow Flow-level Records and NLANR Packet-level Traces", Proceedings of the 2nd International Conference on Internet Monitoring and Protection (IEEE Computer Society Press), Silicon Valley, July 2007.

H. Alvarez, D. Chatfield, D. Cox, E. Crumpler, C. DCunha, R. Gutierrez, J. Ibarra, E. Johnson, K. Kumar, T. Milledge, G. Narasimhan, M. Sadjadi, and C. Zhang, "Cyberbridges: A Model Collaboration Infrastructure for e-Science", Proceedings of the 7th IEEE International Symposium on Cluster Computing and the Grid (CCGrid), Rio de Janeiro, Brazil, May

2007.

- H. Alvarez, J. Ibarra, K. Kumar, C. Zhang, et. al., "CyberBridges: Integrating Advanced Grid Infrastructure with Science and Engineering", Proceedings of the TeraGrid Conference, Madison, Wisconsin, June 2007.
- E. Rubi, X. Su, I. Legrand, H. Alvarez, J. Ibarra, "Anatomy of an International Exchange Point: Distributed Network Monitoring Using MonALISA and NetFlow", InterWorking 2006 Conference, Santiago, Chile.
- H. Alvarez, J. Ibarra, "Experiences with the Digital Divide in Latin America", 2003 Round Table on Developing Countries Access to Scientific Knowledge, The Abdus Salam ICTP, Trieste, Italy, <http://www.ejds.org/meeting2003/>

STUDENT MENTORING

- 2025 Arria, Luis, Southwest Miami Senior High School
Summer Youth Internship Program (SYIP) in collaboration with the Talent Development Network (TDN) managed through the Office of Engagement and Miami-Dade County Public Schools
- Luna, Heriberto; Degree seeking BS Florida International University
Smith, Alex; Degree seeking BS Florida International University
Del Toral, Cesar; Degree seeking BS Florida International University
Federal Work Study Program
- 2024 Aziz, Muhammad; Degree seeking BS Florida International University
Enugala, Krishna; Degree seeking BS Florida International University
FIU Graduate Assistantship
- Brletic, Eric; Degree seeking BS Florida International University
Uwate, Austin; Degree seeking BS Florida International University
NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone:
AtlanticWave SDX project with a concentration in Software Defined Networking
- 2023 Romo, Pedro: Degree seeking BS Florida International University
Serna, Ruben; Degree seeking BS Florida International University
Alfonso, Enrique; Degree seeking BS Florida International University
Alvarez, Christopher; Degree seeking BS Florida International University
FIU VIP Graduates Project: Create JavaScript UI components for to request and display the trace results

Aziz, Muhammad; Degree seeking BS Florida International University
Enugala, Krishna; Degree seeking BS Florida International University
FIU Graduate Assistantship

Brletic, Eric; Degree seeking BS Florida International University
Uwate, Austin; Degree seeking BS Florida International University
NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone:
AmLight Exp project with a concentration in Software Defined Networking

Lolich, Tallia; Degree seeking BS Florida International University
Atwell, Jalen; Degree seeking BS Florida International University
Perez, Alejandro; Degree seeking BS Florida International University
RAPTOR Research Experiences for Undergraduates (REU) project Internship

Luna, Heriberto; Degree seeking BS Florida International University
Alkhammal, Hafsah; Degree seeking BS Florida International University
Federal Work Study Program

Perez, Melissa; High School - Coral Reef Senior High School
Summer Youth Internship Program (SYIP) in collaboration with the Talent Development
Network (TDN) managed through the Office of Engagement and Miami-Dade County
Public Schools

2022 Bradshaw, Jamal; Degree seeking BS Florida International University
Ramirez, Gabriela; Degree seeking BS Florida International University
Uribe, Juan; Degree seeking BS Florida International University
Afonin, Kenny; Degree seeking BS Florida International University
FIU VIP Graduates Project: AMPATH web interface

Aziz, Muhammad; Degree seeking BS Florida International University
Enugala, Krishna; Degree seeking BS Florida International University
FIU Graduate Assistantship

Fuentes, Andro; High School - Coral Reef Senior High School
Summer Youth Internship Program (SYIP) in collaboration with the Talent Development
Network (TDN) managed through the Office of Engagement and Miami-Dade County
Public Schools

Lolich, Tallia; Degree seeking BS Florida International University
E Martinez, Carolina; Degree seeking BS Florida International University
Perez, Alejandro; Degree seeking BS Florida International University
RAPTOR Research Experiences for Undergraduates (REU) project Internship

Scarlett, Athena; Degree seeking BS Florida International University
Mora, Karina; Degree seeking BS Florida International University
Mader, Mia; Degree seeking BS Florida International University
Amasay, Sagev; Degree seeking BS Florida International University
Sprinters Research Experiences for Undergraduates (REU)

2021 Walid Jabour, Southwest Miami Senior High School
Andrew Petit-Pha, North Miami Beach Senior High
Brandon Rodriguez, G. Holmes Braddock Senior High
Summer Youth Internship Program (SYIP) in collaboration with the Talent Development Network (TDN) managed through the Office of Engagement and Miami-Dade County Public Schools.

2020 Torres, Marvin; Degree seeking BS Florida International University
Ramirez, David; Degree seeking BS Florida International University
NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone:
AmLight ExP project with a concentration in Software Defined Networking.

Tajeda, Mariana; Degree seeking BS Florida International University
Ulloa, Anthony; Degree seeking BS Florida International University
Federal work-study internship program.

Piedra, Liz; Degree seeking BS Florida International University
Ruiz, Jozelin; Degree seeking BS Florida International University
Lopez, Gabriel; Degree seeking BS Florida International University
Cardona, Anthony; Degree seeking BS Florida International University
Castaneda, Emmanuel; Degree seeking BS Florida International University
Camarda, Carolina; Degree seeking BS Florida International University
Morgan, Carrel; Degree seeking BS Florida International University
Paul, Frantz; Degree seeking BS Florida International University
Guzman, Ignacio; Degree seeking BS Florida International University
FIU VIP Graduates Project: AMPATH web interface.

Chang, HeKenia; Degree seeking BS Florida International University
Perez, Cindy; Degree seeking BS Florida International University
Mercado, Jose; Degree seeking BS Florida International University
Leng, Yuyang; Degree seeking BS Florida International University
Bruce, Daniel; Degree seeking BS Florida International University
Manso, Daniel; Degree seeking BS Florida International University
Baniqued, Jessela Mae; Degree seeking BS Florida International University
Quevedo, Zachary; Degree seeking BS Florida International University
FIU VIP Graduates Project: AmLight ExP project with a concentration in Software Defined Networking.

Duran, Celia; Degree seeking BS Florida International University
Pietroluongo, Joseph; Degree seeking BS Florida International University
Diaz, Bryan; Degree seeking BS Florida International University
FIU VIP Graduates Project: SDN Cyber security and vulnerability assessment in SDN components.

Joseph, Jordan; Degree seeking BS Florida International University
Leiva, Paul; Degree seeking BS Florida International University
Quant, Ernest; Degree seeking BS Florida International University
Martinez, Giuseppe; Degree seeking BS Florida International University
FIU VIP Graduates Project: Enabling software security validations in a CI/CD pipeline.

- 2019 Torranzo, Daniela; Degree seeking BS Florida International University
IT Internship with a concentration in Software Defined Networking.
Aparicio, George; Degree seeking BS Florida International University
Padmore, Tony; Degree seeking BS Florida International University
FIU VIP Graduates Project: AmLight ExP project with a concentration in Software Defined Networking.
Carrero, Anthony; High School - Barbara Goleman Senior High School
Atencio, Tomas; High School - Coral Reef Senior High School
Summer Youth Internship Program (SYIP) in collaboration with the Talent Development Network (TDN) managed through the Office of Engagement and Miami-Dade County Public Schools
- 2018 Gonzalez, Roicxy; Degree seeking BS Florida International University
Gonzalez, Luis; Degree seeking BS Florida International University
NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone:
AmLight ExP project with a concentration in Software Defined Networking.
Hajikhani, Mehdi; Degree seeking BS Florida International University
FIU VIP Graduates Project: AmLight ExP project with a concentration in Software Defined Networking.
- 2017 Pierre, Ashley; Degree seeking BS Florida International University
Garcia, Daniel; Degree seeking BS Florida International University
Wiseman, Charles; Degree seeking BS Florida International University
NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone: AmLight ExP project with a concentration in Software Defined Networking (poster, paper)
- 2017 Suri, Nalin; Degree seeking BS Florida International University
NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone: AmLight ExP project with a concentration in Software Defined Networking (presentation, dashboard)

- 2016 Medina, Juan: Degree seeking BS Florida International University
 Gamatan, Steven; Degree seeking BS Florida International University
 Lazarre, Jahkell: Graduate Student MS Florida International University
 Lyons, Steven: Graduate Student Ph. D. Florida International University
 An agile FIU VIP project “Learning OpenFlow/SDN network for research and experimentation” (posters, report)
- 2016 Alcoccer, Pablo; Degree seeking BS Florida International University NSF
 Research Experience for Undergrads (REU) supplement to IRNC Backbone:
 AmLight ExP project with a concentration in Software Defined Networking
 (report)
- 2015 Cruz, Jose; Degree seeking BS Florida International University
 Feldbeine, Zeev; Degree seeking BS Florida International University
 NSF Research Experience for Undergrads (REU) supplement to IRNC Backbone:
 AmLight ExP project with a concentration in Software Defined Networking (report,
 presentation)
- 2013 Chegarova, Vasilka; MS Florida International University - Open Science Data
 Cloud Automate Provisioning' TERENA Networking Conference (TNC),
 Maastricht, Netherlands, 2013 (presentation)
- 2012 Marin, Marcelo; Degree seeking MS Florida International University Mcnab,
 Dwayne; Degree seeking BS Florida International University
 NSF Research Experience for Undergrads (REU) supplement to IRNC
 Backbone: AmLight project (report)

PRESENTATIONS AND POSTER SESSIONS AT TECHNICAL AND SCIENTIFIC MEETINGS

- J. Bezerra, L.C. Cadenas, V. Chergarova, D.A. Cox, D. Greaves, E. Grizendi, A. Hazin, J. Ibarra, L.F. Lopez, L. Lotz, S. Mammen, H. Morgan, M., Stanton, M., Teixeira, S. Wiener, “Introducing new technologies, innovations, and collaborations in R&E Networking between Africa, Latin America, Europe, and the US through new international projects”, WACREN Conference, March 2021
- J. Ibarra, J. Bezerra, V. Chergarova, H. Morgan, G. Papadimitriou Y. Xin, M. Cevik, C. Wang, M. Stealey R. Clark, “AtlanticWave-SDX demonstration”, Supercomputing Conference SC20, November 2020
- H. Morgan, A. Hazin, L. Lotz, L. E. Cadenas, J. Ibarra, J. Bezerra, L. F. Lopez, V. Chergarova, D. A. Cox, S. Mammen, M. Stanton “Advances in Collaboration in R&E Networking between Africa, Latin America, and the U.S.”, UbuntuNet Connect Conference, November 2020
- J. Bezerra, J. Ibarra, R. Cziva. “Q-Factor: A Framework to Enable Ultra High-Speed Data Transfer Optimization”, FABRIC Workshop, November 2020

- J. Bezerra J. Ibarra, H. Morgan, C. Cox. "AmLight-ExP: International Links", SAACC Meeting, Virtual, April 2020
- J. Ibarra, H. Morgan, J. Bezerra. "AtlanticWave-SDX: Motivation, Goals, Status, Activities", GRP Workshop, San Diego, CA, Sep 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra, J. Bezerra. "Americas Research Platform (AmRP)", GRP Workshop, San Diego, CA, September 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra, J. Bezerra. "The Global Research Platform Workshop", GRP Workshop, San Diego, CA, September 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra, J. Bezerra. "Americas Summit of Academic Networks", TICAL2019, Cancun, Mexico, September 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra, J. Bezerra. "LSST Workshop: AmLight-ExP updates", LSST Workshop, Cancun, Mexico, September 2019
- V. Chergarova, J. Ibarra, H. Morgan, J. Bezerra, J. Bezerra. "Factors influencing the adoption of Software Defined Networking by Research and Educational Networks", AMCIS2019, Cancun, Mexico, August 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. "AmLight: AmLight-ExP Links, Express route activation, In-band network telemetry", SAACC Meeting, Santiago, Chile, April 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. 'AmLight: AmLight-ExP Links, Express route activation, In-band network telemetry'. SAACC Meeting, Santiago, Chile. April 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. 'Global 100G: ANA-100G, GÉANT, RedCLARA/RNP, SINET Push for Greater Connectivity Around the Globe'. 2019 Internet2 Global Summit, Washington, D.C. March 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. 'Americas Summit of Academic Networks. Americas Summit of Academic Networks', Mexico City, Mexico. January 2019
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. 'AmLight Express and Protect (AmLight-ExP): Enabling Research and Education in the Americas via cooperation and collaboration'. TICAL2018, Cartagena de Indias, Colombia. July 2018
- J. Ibarra, H. Morgan, C. Cox, L. Lopez. 'Regional Networks, Communities, and Ecosystems Americas Africa Research and eduCation Lightpaths (AARCLight) Study: Year 1 findings. TERENA Network Conference (TNC18), Trondheim, Norway. " June 2018
- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. 'AmLight Express and Protect (AmLight-ExP). Internet2 Global Summit', San Diego, CA. May 2018
- J. Ibarra, H. Morgan, C. Cox, L. Lopez. IRNC PI Meeting, AARCLight Internet2 Global Summit.

Internet2 Global Summit, San Diego, CA. " May 2018

- J. Ibarra, H. Morgan, C. Cox, J. Bezerra. 'South American Astronomy Coordination Committee (SAACC) Meeting'. SAACC Meeting (virtual). May 2018
- J. Bezerra, V. Arcanjo. 'AmLight SDN/SDX: Updates SAACC 2018'. SAACC Meeting (virtual). May 2018
- J. Chung, S. Donovan, J. Bezerra, H. Morgan, J. Ibarra, R. Clark, H. Owen. 'Novel Network Services for Supporting Big Data Science Research'. 12th Gateway Computing Environments Conference, Ann Harbor, MI. October 2017
- J. Bezerra, J. Kantor, S. Jaque, L. Corral, V. Arcanjo, J. Ibarra, R. Lambert, M. Kollross, A. Astudillo, S. Sobhani, D. Petravick, H. Morgan and L. Lopez. 'International Networking in support of Extremely Large Astronomical Data-centric Operations'. ADASS 2017, Santiago, Chile. " October 2017
- J. Ibarra, H.Morgan, J. Bezerra, S. Donovan, R. Clark, H. Owen, J. Chung 'Novel Network Services for Supporting Big Data Science Research' 12th Gateway Computing Environments Conference, Ann Harbor, MI, October 2017
- J. Ibarra, H. Morgan, J. Bezerra, J. Kantor, S. Jaque, L. Corral, V. Arcanjo, R. Lambert, M. Kollross, A. Astudillo, S. Sobhani, D. Petravick, L. Lopez 'International Networking in support of Extremely Large Astronomical Data-centric Operations' ADASS 2017, Santiago, Chile, October 2017
- J. Ibarra, H. Morgan, J. Bezerra, H. Galiza, M. Schwarz 'Mitigating the Risks of Supporting Multiple Control Planes in a Production SDN Network: A Use Case' WPEIF 2017, Belem, Brazil, May 2017
- J. Ibarra, J. Bezerra, S. Donovan, R. Clark 'Design and Demo of AtlantiWave/SDX' Supercomputing Conference (SC16), Salt Lake City, UT November 2016
- J. Ibarra, J. Bezerra, S. Donovan, R. Clark 'Challenges When Designing A Distributed SDX' Princeton University, NJ October 2016
- J. Ibarra, H. Morgan, J. Bezerra, D. Cox 'AmLight backbone transition to SDN: Celebrating the second anniversary' GLIF 2016, Miami, FL September 2016
- J. Ibarra, H. Morgan, D. Cox, J. Bezerra 'Creating new opportunities for U.S-Latin America research and education collaborations through the development of an intercontinental 100G optical network infrastructure' Internet2 Technology Exchange, Miami, FL September 2016
- J. Ibarra, J. Bezerra, H. Galiza, M. Shwarz 'Deploying SDN experiments in Latin America: the ONOS and SDN-IP application use case at AMmLight' TICAL 2016 Conference, Buenos Aires, Argentina September 2016
- J. Ibarra, J. Bezerra, H. Galiza, M. Schwarz 'Moving an IP network to SDN: A global use case deployment experience at AmLight' SBRC/WPEIF 2016, Salvador, Brazil June 2016
- J. Ibarra, J. Bezerra, H. Galiza, M. Schwarz 'AmLight's OpenFlow Sniffer dissected: Troubleshooting production networks' SBRC/WPEIF 2016, Salvador, Brazil June 2016

- J. Ibarra 'Further Defining a Global Network Architecture' Internet2 Global Summit 2016, Chicago, IL May 2016
- J. Ibarra, H. Morgan, D. Cox, J. Bezerra 'International Research Network Connections IRNC PI Meeting' Internet2 Global Summit 2016, Chicago, IL May 2016
- J. Ibarra, H. Morgan, D. Cox, J. Bezerra 'SDN Optimized Advanced Network Services for Experiments' Internet2 Global Summit 2016, Chicago, IL May 2016
- J. Ibarra 'Introduction to USA-South America Software Defined Research & Education Networks' CENTRA Kickoff Meeting 2016, Taichung City, Taiwan April 2016
- J. Ibarra, H. Morgan, D. Cox, L. Fox 'OpenWave: U.S.-Brazil 100G Experimental Alien Wave' Super Computing Conference Sc15, Austin, TX November 2015
- J. Ibarra, J. Bezerra 'AmLight ExP & AtlanticWave-SDX' WPEIF2015 Sao Paulo, Brazil May 2015
- J. Ibarra, H. Morgan, J. Bezerra ' Use of SDN in the AmLight intercontinental research and education network' TERENA Networking Conference (TNC), Porto, Portugal 2015.
- H. Morgan, J. Ibarra and J. Bezerra, 'Network Testbeds at AmLight: Eight Months Later', Internet2 Global Summit, Washington, DC, 2015.
- H. Morgan and J. Ibarra, 'RNP's Infrastructure and new services for collaboration support', CineGrid International Workshop 2014, Sao Paulo, Brazil, 2014.
- H. Morgan and J. Ibarra, 'Internet2 US-China Collaboration Initiative', CANS 2014, New York, NY, 2014.
- H. Morgan, J. Ibarra, D. Cox and L. Fox, 'NSF Contributions to Cross-border Collaborations: AmLight Project, Big Data Big Networks Workshop', BDBN Workshop, La Jolla, CA, 2014.
- H. Morgan and J. Ibarra, 'International exchange point in Miami operated by Florida International University', GLIF and AIST Tokyo Meeting, Singapore, 2013.
- H. Morgan, J. Ibarra and L. Fox, 'Big Data, Big Networks Workshop Center for Scientific Research and Higher Education (CICESE)', BDBN Workshop, Ensenada, Mexico, 2013.
- H. Alvarez, J. Ibarra and D. Cox, 'South American Astronomy Coordination Committee Meeting', SAACC Meeting, 2012.
- H. Alvarez and J. Ibarra, 'New and ongoing work and provide a venue for making connections and forming new collaborations', I2 Member Meeting, 2012.
- H. Alvarez and J. Ibarra, 'Creating the Future: Collaborations and Connections', Fall 2011 Internet2 Member Meeting, Raleigh, NC, 2011.
- H. Alvarez and J. Ibarra, 'International Research Network Connections: Americas Lightpaths', GLIF 10th Annual Global LambdaGrid Workshop, Geneva, Switzerland, 2010.
- J. Ibarra, H. Alvarez, C. Cox, J. Silvester ' WHREN-LILA project: US - Latin America Connectivity ' NSF IRNC Program Kickoff, Washington, DC, 2005

- H. Alvarez, J. Ibarra, P. Avery, X. Su ' CHEPREO: Description of Cyberinfrastructure ' Summer Physics Modeling Workshops, Florida International University, Miami, FL, 2004.
- H. Alvarez, J. Ibarra ' An Inter-Regional Grid-Enabled Center for High-Energy Physics Research Education and Outreach (CHEPREO) ' Digital Divide and HEPGRID Workshop UERJ-Rio de Janeiro, Brazil, 2004.
- H. Alvarez, J. Ibarra 'CHEPREO: Cyberinfrastructure Update' QuarkNet Workshop, Florida International University, Miami, FL 2004.
- H. Alvarez, J. Ibarra 'Experiences with the Digital Divide in Latin America; 2003 Round Table on Developing Countries Access to Scientific Knowledge' The Abdus Salam ICTP, Trieste, Italy, 2003.
- H. Alvarez, J. Ibarra 'AMPATH Scientific Applications Collaboration Update' First Int'l AMPATH Conference, Valdivia, Chile, 2002.
- H. Alvarez, J. Ibarra 'AMPATH; Network of the Americas' LISHEP Grid Workshop, UERJ, Rio de Janeiro, Brazil, Feb 7-8, 2002.
- H. Alvarez, J. Ibarra 'AMPATH Scientific Applications Overview' AMPATH Workshop, Miami, Florida, 2001.
- H. Alvarez, J. Ibarra 'AmericasPATH' STAR TAP Annual Meeting, INET 2001, Stockholm, Sweden, 2001.
- H. Alvarez, J. Ibarra 'AMPATH; International Connectivity Issues' Internet2 Fall Members Meeting, Atlanta, Georgia, 2001.

PROFESSIONAL ASSOCIATIONS

Association of Computing Machinery (ACM) Member, since 1986.

IEEE Member, since 2003.

Chairperson: South American Astronomy Coordination Committee (SAACC).

Served on the Governor's IT Florida Task Force subcommittee on Infrastructure and Technology Development.

REFERENCES

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