

**Smart Grids and Ambient Intelligence: Scalable,  
Robust and Secure Systems (SMART)**

**PI: Célio Albuquerque, IC/UFF**

# SMART PRINT Team

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# SMART PRINT Team @ WhatsApp


✕ Dados do grupo



**Profs Smart PRINT**  
Criado em 19/03/2019 às 09:22

**Descrição**  
Adicionar descrição ao grupo

**Arquivos de mídia, links e documentos**



**Silenciar**



Convidar para o grupo via link



**Eu**

Admin do grupo

Hey there! I am using WhatsApp.



**Daniel Mosse**

pake: person who is frugal, who will not make a purcha...



**Debora Saade**

Hello!



**Diego Passos**

Disponível



**Igor Moraes**

Não posso falar, somente WhatsApp



**Katia Obraczka**

Hey there!

# SMART Context

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**Goal:** Investigation on scalability, robustness and security fault-tolerance and reliability for Smart Grids and Ambient Intelligence communications.

**Impact:** Better quality of life and better services.

**Environment:** Smart cities, smart homes and smart buildings, in special in Smart Power Grids. measure temperature, humidity

**Main challenges:** large scale, high density of such networks and cyber attacks make meeting the goals a challenge.

# PVE Missions



# Daniel Mossé (PVE)

- 2 PVE Missions (PITT => UFF)
  - August, 2019
  - October, 2021
- Talks @ PGC Winter School, Aug. 7th 2019, on Embedded Systems, Internet of Things and Beyond.
- Frequent meetings at MídiaCom with several students
- Deeper interaction with Ph.D. Student **Silvio Quincozes** resulted in 7+ papers and PDSE supervision.



# Katia Obraczka (PVE)

- 2 PVE Missions (UCSC => UFF)
  - August, 2019
  - February, 2022
- Talk @ PGC Seminars, Wed. Aug. 14th 2019, on Towards the Internets of the Future.
- Frequent meetings at MídiaCom with several students
- Deeper interaction with Ph.D. Student **Fabiano Bhering** resulted in 3+ papers and PDSE supervision.



# Silvio Quincozes (PDSE)

- 10-month PDSE @ PITT: 01/03/2021 a 31/12/2021
- Graduated: D.SC. Defense on 11/02/2022
- 7+ Papers in collaboration with PITT:
  - Quincozes, Silvio E.; Passos, Diego ; Albuquerque, Célio ; Mossé, Daniel ; Ochi, Luiz Satoru . An extended assessment of metaheuristics-based feature selection for intrusion detection in CPS perception layer. **Annals of Telecommunications**, v. 1, p. 1, 2022.
  - Quincozes, Silvio E.; Albuquerque, Célio ; Passos, Diego ; Mossé, Daniel . A survey on intrusion detection and prevention systems in digital substations. **Computer Networks**, v. 184, p. 107679, 2021.
  - Quincozes, Silvio; Mossé, Daniel ; Albuquerque, C. V. N. ; Passos, D. ; Santos, V. F. . On the Performance of GRASP-Based Feature Selection for CPS Intrusion Detection. **IEEE Transactions on Network and Service Management**, 2021.
  - Quincozes, Silvio E.; Raniery, Carlos ; Ceretta Nunes, Raul ; Albuquerque, Célio ; Passos, Diego ; Mossé, Daniel . Counselors network for intrusion detection. **International Journal of Network Management**, p. e2111, 2020.
  - Uchoa, Luana ; Quincozes, Silvio ; Vieira, Juan Lucas ; Passos, Diego ; Albuquerque, Celio ; Mosse, Daniel . Analysis of Smart Grid Fault Recovery Protocols. In: **IEEE/IFIP Network Operations and Management Symposium**, 2020, Budapest.
  - Quincozes, Silvio E.; Passos, Diego ; Albuquerque, Celio ; Ochi, Luiz Satoru ; Mosse, Daniel . GRASP-based Feature Selection for Intrusion Detection in CPS Perception Layer. In: **4th Conference on Cloud and Internet of Things (CIoT)**, 2020. p. 41.
  - Quincozes, S. E.; Santos, C.; Nunes, R. C. ; Albuquerque, C. V. N. ; Passos, D. ; Mosse, D. . A Counselors-Based Intrusion Detection Architecture. In: **9th Latin American Network Operations and Management Symposium**, 2019. v. 9.



# Fabiano Bhering (PDSE)

- 10-month PDSE @ UCSC: 01/09/2021 a 30/06/2022
- Graduation: D.SC. Defense on 21/10/2022
- 3+ Papers in collaboration with UCSC:
  - Bhering, Fabiano ; Passos, Diego ; Ochi, Luiz Satoru ; Obraczka, Katia ; Albuquerque, Célio . Wireless multipath video transmission: when IoT video applications meet networking-a survey. **Multimedia Systems**, v. 28, p. 831-850, 2022.
  - Bhering, Fabiano ; Albuquerque, Célio ; Passos, Diego ; Obraczka, Katia . IAMVT: Mecanismo de Seleção de Rotas Multicaminhos para Aplicações de Vídeo Monitoramento. In: **XXXIX Simpósio Brasileiro de Redes de Computadores e Sistemas Distribuídos** (SBRC 2021), 2021. v. 1. p. 294-307.
  - F. Bhering, C. Albuquerque, D. Passos, and K. Obrackza, "Network Performance Estimator with Applications to Route Selection for IoT Multimedia Applications", **Simulation: Transactions of the Society for Modeling and Simulation International**, SAGE Journals, 2022. (Under Review)
  - F. Bhering, C. Albuquerque, D. Passos, and K. Obrackza, "FITPATH: Multipath Selection Mechanism for IoT Video Transmission", **Multimedia Systems**, 2022. (To be submitted)
  - F. Bhering, C. Albuquerque, D. Passos, and K. Obrackza, "Efficient Multipath Selection for IoT Video Transmission", **IEEE Global Internet Symposium**, GI/CloudNet, 2022. (Accepted for publication)

# 2023-2024 International Collaboration Plan

- 2 Missões de Trabalho em PITT e UCSC
- 2 bolsas PDSE de 10 meses cada
- 1 bolsa PVE de 1 mês