72nd Meeting of the IFIP 10.4 Working Group on Dependability and Security

June 22 – 25, 2017 Longmont, Colorado

Business Meeting

Business Meeting Agenda

- **IEEE/IFIP DSNs – DSN-2015 wrap-up, DSN 2016**

- **Upcoming events: Future DSNs and other sponsored events …**

- **Awards**

- **Future WG Meetings AND workshops**

- **Workshop ideas**

- **Members only portion**

IEEE/IFIP International Conference on Dependable Systems and Networks

- **Denver, CO, US (2017)**
  - General Chair: Shivakant Misra (University of Colorado, Boulder, US)
  - Program co-Chairs: Evgenia Smirni (College of William and Mary, US), Pascal Felber (Univ. Neuchatel, CH)

DSN 2017

DSN 2017

The 47th IEEE/IFIP International Conference on Dependable Systems and Networks

June 26-29, 2017

Denver, CO, USA

IEEE computer society · ifip · University of Colorado Boulder

- Home
- Call for Contributions
- Committees
- Awards
- Conference Program
- Student Travel Grants
- Keynotes
- Sponsors
- Important Dates
- Workshops
- Tutorials

Upcoming Events

IEEE/IFIP International Conference on Dependable Systems and Networks

- **Luxembourg City, Luxembourg (2018)**
  - General Chair: Paulo Esteves-Veríssimo (University of Luxembourg, Luxembourg)
  - Program co-Chairs: Gilles Muller (LIP6, INRIA, FR), Marco Vieira (Univ. Coimbra, PT)

IEEE/IFIP International Conference on Dependable Systems and Networks

■ **Portland, Oregon, USA (2019)**
  ◆ General Chair: Cristian Constantinescu (AMD, USA)
  ◆ Program co-Chairs: TBD

Other, in-collaboration or related events

■ PRDC 2018, location not final
■ EDCC 2017, Geneva, Switzerland, Sep 4-8, 2017
■ SAFECOMP, Sep 12-15, Trento, Italy, 2017

■ EDCC 2016, Gothenburg, Sweden, September 5-9, 2016
■ PRDC 2017, Christchurch, New Zealand, 22-25 jan 2017
■ LADC 2016, Cali, Colombia, October 19-21, 2016
■ SAFECOMP, Norway, 2016

Award Updates

Award Updates

- **William C. Carter PhD Dissertation Award in Dependable Computing 2017**
  - ◆ **Scope: significant contribution to the field of dependable computing through his or her graduate dissertation research**
  - ◆ **Committee:**
  - ◆ *Christof Fetzer, Chair, Valeria Bertacco, Elmootazbellah (Mootaz) N. Elnozahy, Michael R. Lyu, Richard Schlichting*
- **URL: www.dsn.org**

- **The winner of the DSN 2017 edition was:**
  - ◆ HOMA ALEMZADEH, with the thesis "DATA-DRIVEN RESILIENCY ASSESSMENT OF MEDICAL CYBER-PHYSICAL SYSTEMS"

Award Updates

- **DSN Best paper award (2017)**
  - ◆ Scope: Best paper accepted and presented at DSN.
  - ◆ Committee: joint decision of: PC -> SC -> DSN audience
  - ◆ Selection:
    - ✦ finished
- **URL:** www.dsn.org

- **Winner:**
  - ◆ TBD

Award Updates

- **Jean-Claude Laprie Award in Dependable Computing**
  - ◆ Scope: Outstanding paper(s) have significantly influenced the theory and/or practice of dependable computing.
  - ◆ Committee: appointed by IFIP WG10.4 chair
  - ◆ Selection:
    - ✦ Through winter
- **URL:** http://www.dependability.org/wg10.4/laprie-award.html

Award Updates

- **Jean-Claude Laprie Award in Dependable Computing (2017)**
    - ◆ **Scope:** Outstanding paper(s) have significantly influenced the theory and/or practice of dependable computing.
    - ◆ **Committee:** appointed by IFIP WG10.4
        Henrique Madeira (**Chair**, Univ. of Coimbra (Portugal))
        Roberto Baldoni (Universita di Roma "La Sapienza" (Italy));
        Xavier Defago (Tokyo Institute of Technology (Japan));
        Aad van Moorsel (University of Newcastle upon Tyne (UK));
        Bill Sanders (University of Illinois (USA)).
    - ◆ **Selection:**
        - ✦ finished
- **URL:** http://www.dependability.org/wg10.4/laprie-award.html
- **Winner(s):**
    - ◆ Kuang-Hua Huang and Jacob A. Abraham, "Algorithm Based Fault Tolerance for Matrix Operations", in IEEE Tran's on Computers, Vol. C-33, No. 6, pp. 518-528, June 1984
    - ◆ Richard Schlichting and Fred Schneider "Fail-Stop Processors: An Approach to Designing Fault-Tolerant Computing Systems" in ACM Transactions on Computing Systems, 1(3), Aug. 1983, pp. 222-238.

Future Working Group Meetings

Goa, India
Host: Santonu Sarkar, Ravi Iyer

Workshop: Research Papers

(71) Queenstown, NZ — (winter 17)	(73) Goa, India — (winter 18)
(72) Longmont,CO, US — (summer 17)	(74) Petite Suisse, Luxembourg — (summer 18)

72nd Meeting (summer 2017)

DONE!!!

- Location: Rocky Mountain National Park, Longmont, Colorado, US (DSN17)
- Host: Sami Saydjari and Courtney Lewis
- Dates: before DSN
- Hotels: Best Western Plus Plaza Hotel
- Costs: $119 per night (separate from registration of event)
- Registration: $525
- Registration includes:
    - attendance to the Workshop   (all 4 days)
    - breakfast
    - lunch
    - all day break service for each day
    - charter bus transportation to and from hotel to Rocky Mountain National Park

for   event excursion
    - charter bus from hotel to DSN

Workshop : "Dependable News: Detecting and Countering Deception"

73rd Meeting (winter 2018)

PROPOSAL approved!

Location: Goa, India

Host: Santonu Sarkar (BITS-Pilani, IN), Ravi Iyer (UIUC, USA)

Dates: 18-22 Jan, **OR** 25-29 Jan, 2018

Hotels: Main + backup hotel

Costs: 100-200 USD /night hotel; reg. < ~400 USD

or full costs incl. hotel reg. < ~700 USD

- Hotel Includes
    - Breakfast, WIFI, Several facilities
- Registration Includes:
    - Welcome Reception; lunches and coffee breaks; Excursion; Banquet; Airport pickup and drop

Workshop : Research Papers

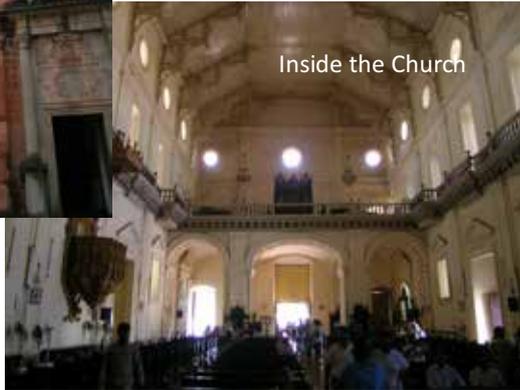# LOCATION PICTURES

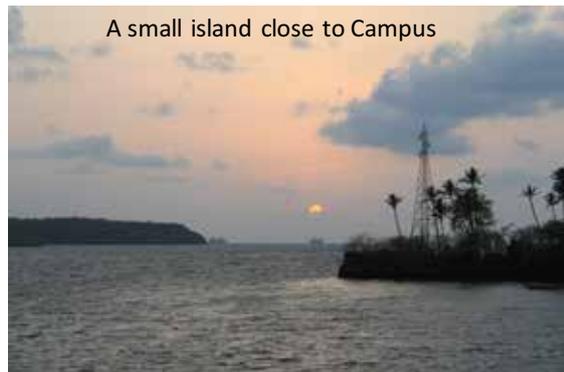Goa Airport

Basilica of Bom Jesus (1594)

Anjuna Beach

Inside the Church

A small island close to Campus

Bogmalo Beach (Nearest to Campus)

BITS Goa Campus

Among the top 20 scenic train journey in India

Travel

- Goa International Airport (Dabolim airport) is quite close to the important cities of Goa
  - 30KM from the state capital Panjim (IFIP WD 10.4 happened in Panjim in 1988)
  - Most of the resorts we are planning will be within 35km from the airport
- Delhi and Mumbai are the two main international airports.
  - Delhi- Goa roughly 3 hours
  - Mumbai- Goa roughly 1.5 hours
  - 15+ domestic flights per day from Delhi to Goa
  - 20+ domestic flights from Mumbai to Goa
- Road
  - Traffic in Goa is a welcome relief from the rest of the country
  - A 10km travel anywhere in Goa (except in downtown of Panjim) shouldn't take more than 25-30 min at any time.

IFIP WG 2018 Meeting

- Hotel locations
  - Prefer Southern part of Goa where many good resorts are present
- We will arrange shuttle services from the airport to the hotel
- Tentatively in resorts like
  - Stonewater Eco Resort (http://www.stonewaterecoresort.com - 5km from airport)
  - Bogmalo beach resort
  - Whispering Palms beach (http://www.whisperingpalms.com/index.html- 37km from airport
  - Coconut Creek (near Bogmalo beach, 6km from airport)
- Cost
  - Can vary from 100$ - 200$ per night with breakfast included and free internet
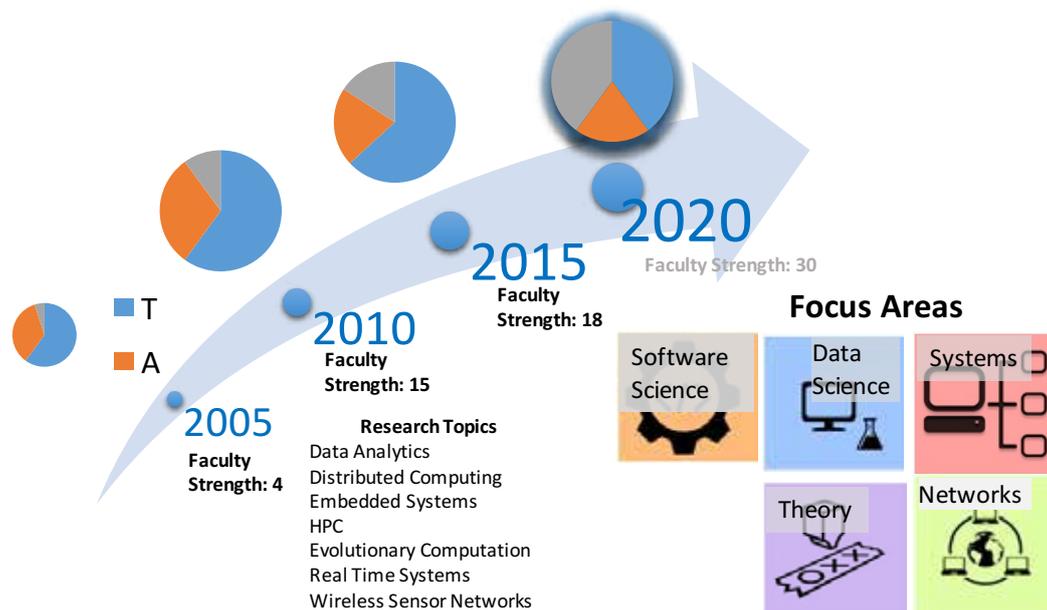
Location Details

- We can have two nearby resorts and have the main working group meeting in one of them, e.g.:
  - Stone water eco resort and coconut creek
    - Stone water has 35 rooms. Some of the rooms have double occupancy.
  - Bogmalo beach resort
    - Can host 40-45 people but gets occupied quickly.
- Both are within 10km from the airport and close to BITS Pilani Goa campus
- We shall contact event management companies to manage the event

Host Institute BITS Pilani Goa Campus

- BITS Pilani
  - About the institute
    - Formed as a regional engineering college in 1929 and became a UGC recognized deemed university in 1956
    - Completely private university, and the best private university in India
    - 5 campuses, total 15 academic departments
    - Offers Bachelors, masters and PhD program
    - Only merit based entry with selection rate of < 5% for undergraduate level program
  - About BITS Pilani Goa campus
    - Established in 2004, 5 km from the airport
    - Nesting in the lap of verdant hills, overlooking the Zuari River, the Campus is spread over an area of 180 acres
    - Among the top 10 most scenic campuses in India

BITS Goa Campus- History and People

T
A

2005
Faculty Strength: 4

2010
Faculty Strength: 15

Research Topics
Data Analytics
Distributed Computing
Embedded Systems
HPC
Evolutionary Computation
Real Time Systems
Wireless Sensor Networks

2015
Faculty Strength: 18

2020
Faculty Strength: 30

Focus Areas

Software Science

Data Science

Systems

Theory

Networks

Goa Campus- Students

Google Summer of Code
- A global program that offers students stipends to contribute to open source projects
- BITS Goa is in top 10 in the world for the past 2 years

Asia Pacific Google Anita Borg Scholarship
- A few in the last 3 years

Professional
- Organizations like Google, Microsoft, Microsoft Research, Apple, and Amazon.

Academic
- Graduates pursue higher studies in Universities like Stanford, UC Berkeley, CMU, UIUC, NUS, ETH Zurich.

Startups (recent)
- NayiDisha
- Cubito

Goa Campus - Academic Activities

Conferences/ Symposia/ Workshops conducted

- Workshop on Data Analytics & Applications Indo-Chile Workshop on Big Data
- 16th ICDCN-at BITS Goa campus, 2015
- ACM India Annual Event at BITS Goa campus 2015
- 9th ISEC at BITS Goa campus and Persistent Goa, 2016
- SEM4HPC, collocated with 25th HPDC at Kyoto 2016

Collaboration/Interactions
Industry
GAIL
Siemens
Accenture Research
Persistent
TCS Research
IBM Research
Xerox Research labs

Academic
Manchester, UK
UNSW, Australia
Buffalo, US
Malaerdalen, Sweden

74th Meeting (summer 2018)

PROPOSAL approved

Location: Petite Suisse, Luxembourg (after DSN18)

Host: Paulo Esteves-Veríssimo

Dates: 28jun-1jul, after DSN

Hotels: hotel in Echternach (town) or Mullertahl (forest)

Costs: ~ 150-200 USD /night hotel; < ~ 500 USD reg.

- **Hotel Includes**
  - Breakfast, WIFI, Several facilities

- **Registration Includes:**
  - Welcome Reception; lunches and coffee breaks; Excursion; Banquet; charter bus from DSN

Workshop (proposal!): Technological and societal challenges to blockchain dependability and security, org. Paulo Veríssimo, Jiangshan Yu (U. Luxembourg, LU)

IFIP 2018
La Petite Suisse, Luxembourg

Prof. Paulo Esteves-Veríssimo

Interdisciplinary Centre for Security, Reliability and Trust / SnT
University of Luxembourg

- 28 June: Those already at the DSN Conference will leave the Hotel Parc Alvisse at around 15:00. At 19:00 there will be welcome drinks and a cocktail dinner
- 29 June: Normal conference day with lunch at the venue. In the evening, attendees will be free to explore the local restaurants. Conférence – en U + matériel – lunch sur site inclus (option alcool) – après-midi activités (randonnées ou autres)
- 30 June: An excursion starting at 15:00, followed by the gala dinner
- 1 July : The conference will finish after lunch

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La Petite Suisse

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securityandtrust.lu

IFIP 2018
Thursday 28 June – Sunday 1 July 2018

Situated at 30 kilometers north-east of Luxembourg City and often referred to as the **Little Switzerland of Luxembourg** lies **Mullerthal** - or Mëllerdall in Luxembourgish; it owes its name to its rocky, hilly landscape reminiscent of Switzerland. The **Mullerthal** is above all characterized by rock formations that are as beguiling as they are surprising. It is the unique composition of the rock and soil erosion that have contributed to the creation of this landscape so typical of **Little Switzerland**

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Echternach – Luxembourg's oldest city

uni.lu | SnT
securityandtrust.lu

IFIP 2018
Thursday 28 June – Sunday 1 July 2018

Capital of the Mullerthal region

Echternach is the oldest town in Luxembourg and considered as historic hotspot and capital of the whole region. It is a cultural city par excellence and was in 2008 rewarded by the European Commission as "European destination of excellence".

Access by plane:
From Luxembourg City Airport:
Bus to Luxembourg City, then bus to Echternach

Access by bus:
Regular bus connections exist between Echternach and the railway station of Luxembourg City. Bus lines 110 and 111

For those attending following the DSN conference transport will be arranged

Echternach

Beaufort Castle

Echternach and Mullerthal Region

Mullerthal - Schiessentumpel

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1) Trifolion - Cultural, Tourist and Congress Center

The Trifolion is a new centre for culture, society and conventions in Echternach. It houses a concert hall, an auditorium, galleries and additional space for seminars and workshops.
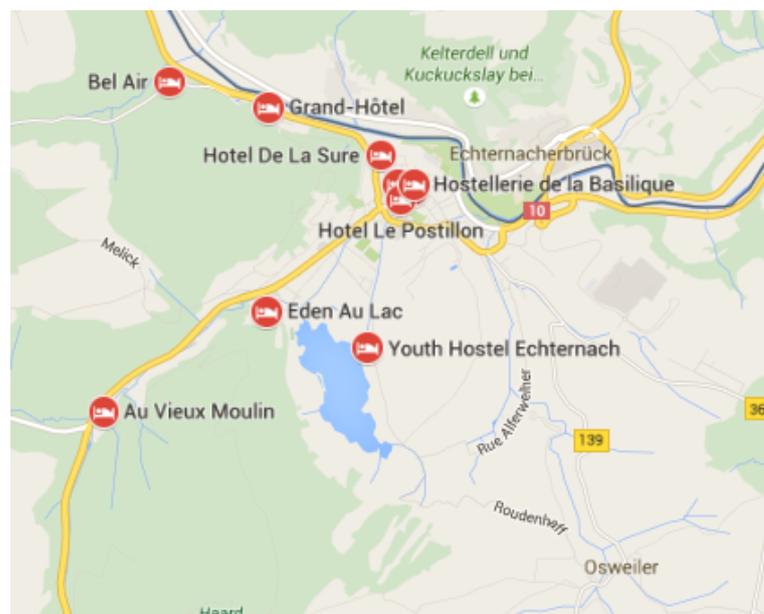
2) Hotel Bel Air

This hotel, five minutes from Echternach, looks out onto the beautiful Sûre Valley.

The hotel features 38 rooms, two meeting rooms of 75 m2 each, and another of 130m2.

- Grand Hotel 4*
- Eden au Lac 5*
- Hostellerie de la Basilique 4*
- Au Vieux Moulin 4*
- Hotel Brimer 4*
- Hotel Meyer 4*
- Hotel Bel Air 4*
- And many more…

3) Herringer-Millen

A converted mill right in the middle of the Mullerthal valey. On the top floor, the former granary has been fully equipped as a modern convention space for 45 people (U formation).

This would be the rural option par-excellence, although there are only two hotels within walking distance. Otherwise, this is a 20 minute drive from Echternach or other nearby towns.

1) Discover Echternach – a guided tour of the historic town

As Luxembourg's oldest town, Echternach has no shortage of stunning historical sights, including city walls dating from the 14th century, a 13th century gothic house, a medieval market square, a Roman Villa, and much more. Explore these on foot with an expert guide.

2) Hiking

Mullerthal boasts hundreds of beautiful hiking routes with a range of difficulty levels. Enjoy the region's stunning valleys, rock formations and picturesque villages up-close.

Another option would be to explore the region by bike or canoe.

3) Castle Visit

Luxembourg is a kingdom of castles, and Mullerthal is no exception. Explore one of the region's stunning fortresses: Beaufort, Borglinster or Larochette.

Interdisciplinary Centre for Security, Reliability and Trust

34 Partners | four spin-offs | 14 Proof of Concept projects | over 50 EU & ESA projects

75th Meeting (winter 2019)

PROPOSALS WELCOME !

Location: TBD

Host: TBD

Dates: TBD

Hotels: TBD

Costs: ~ TBD /night hotel; ~ TBD reg.

- **Hotel Includes**
  - **Breakfast, Several facilities, WiFi**

Workshop : Workshop ideas TBD

76th Meeting (summer 2019)

Location: near Portland, Oregon, after DSN 2019

Host: TBD

Dates: TBD

Hotels: TBD

Costs: ~ TBD /night hotel; ~ TBD reg.

- **Hotel Includes**
  - Breakfast, Several facilities, WiFi

Organizer: WANTED!!

Workshop : Workshop ideas TBD

Major Workshop Topics

distributed computing, parallel computing, real-time systems, certification of dependable systems, specification methods, design diversity, specification and validation of hard dependability requirements, methodologies for experiments, VLSI testing and fault tolerance, hardware- and-software testing and validation, fault tolerance in new architectures, communication networks, algorithms for distributed agreement, cars and computers, accidental *vs.* intentional faults, robotics and dependability, limits in dependability, avionics and dependability, dependability issues in medical computing, security and dependability, tools for dependable system design and evaluation, railway safety, safety cases, dependability in automotive electronics, computer systems benchmarking with applications to dependability, time and dependability, dependability, survivability, and integrity in e-commerce transactions and infrastructure, dependability benchmarking, utilization of formal methods in dependable systems, challenges and directions for dependable computing, dependability and survivability, middleware for adaptivity and dependability, measuring assurance in cyberspace + hardware design and dependability, open source and dependability, human computer interaction and dependability, autonomic web computing, grid computing and dependability, nomadic computing and dependability, infrastructure security and operational challenges of service provider networks, critical infrastructure protection, achieving and assessing safety, cps dependability, dependability in cloud systems, security assessment: metrics and methods, electrical smart grids sec&dep, science of cyber security, Autonomous and Cooperative Intelligent Vehicles, Systems Dependability in the Internet of Things (IoT), Smart Factories: Challenges for Depend. and Sec. Computing, Dependable News: Detecting and Countering Deception

Dependability and Security research and its outlets: present and future

■ **We are in a crucial moment of the development of our community, and its major outlets, DSN as the flagship conference**

■ **In the near future, it would be appropriate to foster some discussion about the topic in headline.**

Workshops outlook

■ Winter 2016 (Snowmass, US))
  - Systems Dependability in the Internet of Things (IoT), DONE
■ Summer 2016 (Sorèze, France)
  - Smart Factories: Challenges for Depend. and Sec. Computing, DONE
■ Winter 2017 (Queenstown, NZ)
  - Research-papers workshop, DONE
■ Summer 2017 (Logmont, US)
  - Dependable News: Detecting and Countering Deception

■ **Winter 2018 (Goa, India)**
  - **Research Papers ?**
■ **Summer 2018 (Mullertahl, LUX)**
  - **Technological and societal challenges to blockchain dependability and security**

Workshop ideas
(FUTURE ideas circulated recently)

- Safety vs. Security in Autonomous vehicle ecosystems, cooperative robots, etc.
- Safety-security co-engineering of (intelligent) systems
- Medical systems (assisted living, health informatics, applied biomedical engineering)
- Socio-technical issues of security research and training (ethics, "ethical hacking", awareness)
- Economics of security and/or dependability
- Liability and dependability
- Foundations of Dep & Sec, Terminology 3.0
- Present and future of Dep & Sec research and its presence in relevant outlets
- Role of technologies in the Resilience of society
- Scaling down to <10nm: dependability challenges and opportunities
- Reliability of big data
- Reliability of forensic processes
- Use of machine learning for accidental and malicious error detection
- Electronic voting

Members please consider organizing a workshop, even if not the next, it's good to have a few lined-up!
You may do it with the assistance of non-member colleagues.
Please contact me (PJV)

Members Only, Sorry!