Time	Convention Centre	Room 1	Room 2
Tuesday, November 25			
15:30	**W1:** Convention Opening Ceremony		
19:00	**W2:** Convention Welcome Celebration		
Wednesday, November 26			
09:00	**K1:** Convention Keynote 1		
10:00	**B1:** Morning Tea 1		
10:30		**AK1:** ATNAC Keynote Session 1	
11:30		**S1:** Session 1: General	
12:30	**B4:** Lunch 1		
13:30		**S2:** Session 2: Internet Technologies	
15:30	**B7:** Afternoon Tea 1		
16:00		**S3:** Session 3: IPv6 Mobility, Vehicular and Wireless Networks	
Thursday, November 27			
09:00	**K2:** Convetion Keynote 2		
10:00	**B2:** Morning Tea 2		
10:30		**AK2:** ATNAC Keynote Session 2	
11:30		**S4:** Session 4: Mobile Cellular and Wireless Networks	
12:30	**B5:** Lunch 2		
13:30		**S5:** Session 5: Cellular, Wireless and Wireless Sensor Networks	
15:30	**B8:** Afternoon Tea 2		
16:00		**S6:** Session 6: Applications and Management	
19:00	**D1:** ATNAC Dinner		
Friday, November 28			
09:00	**K3:** Convention Keynote 3		
10:00	**B3:** Morning Tea 3		
10:30		**AK3:** ATNAC Keynote Session 3	
11:30		**T1:** National Broadband Network	
12:30	**B6:** Lunch 3		
13:30		**S7:** Session 7: Cellular, Wireless and Wireless Sensor Networks	**S8:** Session 8: Cellular, Wireless and Wireless Sensor Networks
15:30	**B9:** Afternoon Tea 3		
16:00		**S9:** Session 9: General	**S10:** Session 10: General

Tuesday, November 25

15:30 - 18:00

W1: Convention Opening Ceremony

Room: Convention Centre

19:00 - 22:00

W2: Convention Welcome Celebration

Room: Convention Centre

Wednesday, November 26

09:00 - 10:00

K1: Convention Keynote 1

Room: Convention Centre

10:00 - 10:30

B1: Morning Tea 1

Room: Convention Centre

10:30 - 11:30

AK1: ATNAC Keynote Session 1

Software Defined Networking - applicability to Cloud, Data Centres and Data Centre Interconnect Networks
Mr Al Da Silva

Room: Room 1
Chair: Mark A. Gregory (RMIT University, Australia)

Whether you're building the next generation public cloud service, enabling value added services for customers or simply refreshing the data centre network, SDN and its applicability in a wide variety of use cases, is an unavoidable consideration. The future of networking will undoubtedly have a place for SDN and the advantages it brings as an enabler for highly agile networks, orchestration and network functions virtualisation (NFV) among others. However, the physical network continues to play a critical role in the success of SDN implementations. For example, traffic flows that occur between devices in a Data Centre (often referred to as East-West traffic) are increasing and SDN overlay networks will add to that. If the underlay physical network design is not optimised for those flows, unpredictable and performance affecting behaviours will be exhibited in the overlay network. This presentation will define what SDN is and what it is not as it delves into the some of the most common use cases for SDN and what Juniper Networks is doing to ensure customers have a simple, open and smart network architecture to support it. The challenge for network builders is the ability to manage the SDN network overlays and map those to the physical underlay as well as the integration to upstream orchestration and automation systems. A look into Juniper's Junos Space Network Director will be presented to demonstrate how these challenges are being addressed. Is your network SDN ready?

11:30 – 12:30

S1: Session 1: General

Room: Room 1
Chair: Mark A. Gregory (RMIT University, Australia)

11:30 *Experience with Large-scale End User Measurement Techniques*
George Geoffrey Michaelson (Asia Pacific Network Information Centre, Australia); Geoff Huston (Asia Pacific Network Information Centre (APNIC), Australia)
pp. 1-6

11:50 *A Dynamic Cell Range Expansion Scheme based on Fuzzy Logic System in LTE-Advanced Heterogeneous Networks*
Ameneh Daeinabi (University of Technology Sydney, Australia); Kumbesan Sandy Sandrasegaran (University of Technology, Sydney, Australia); Pantha Ghosal (University of Technology, Sydney & Centre for Real-Time Information Networks, Australia)
pp. 6-11

12:10 *Inflicting Cascade of Failures in Interdependent Networks*
Sotharith Tauch (AUT University, New Zealand); William Liu and Russel Pears (Auckland University of Technology, New Zealand)
pp. 12-16

12:30 – 13:30

B4: Lunch 1

Room: Convention Centre

13:30 – 15:30

S2: Session 2: Internet Technologies

Room: Room 1
Chair: Khandakar Ahmed (RMIT University & Dept. of Computer Science & Engineering., Shahjalal University of Science & Techonology, Australia)

13:30 *Putting SHIM6 into Practice*
Habib Naderi (University of Auckland, New Zealand); Brian E Carpenter (The University of Auckland, New Zealand)
pp. 17-22

14:00 *Performance Analysis of Physical Layer Security over Independent/Correlated Log-normal Fading Channels*
Xv Zhang (Southwest University, P.R. China); Gaofeng Pan (Southwest Univiersity, P.R. China); Chaoqing Tang and Tingting Li (SWU, P.R. China); Ying Weng (Bangor University, United Kingdom)
pp. 23-27

14:30 *Towards Fine-grained Traffic Classification for Web Applications*
Po-Ching Lin and Shian-Yi Chen (National Chung Cheng University, Taiwan); Chih-Hung Lin (Institute for Information Industry, Taiwan)
pp. 28-33

15:00 *Measuring cascade effects in coupled networks using algebraic connectivity*
Sotharith Tauch, William Liu and Russel Pears (Auckland University of Technology, New Zealand)
pp. 34-39

15:30 – 16:00

B7: Afternoon Tea 1

Room: Convention Centre

16:00 - 18:30

S3: Session 3: IPv6 Mobility, Vehicular and Wireless Networks

Room: Room 1
Chair: Robert Hunjet (DSTO, Australia)

16:00 *Robust Cooperation in Mobile Ad Hoc Networks*
Anthony Krzesinski (University of Stellenbosch, South Africa)
pp. 40-45

16:25 *An Intelligent Hybrid Spread Spectrum MAC Protocol for Increasing the Transmission Capacity of Wireless Ad-hoc Networks*
Sana Ajmal (Centre For Advanced Studies in Engineering & University of Engineering and Technology Taxila, Pakistan); Samra Jabeen (National University of Sciences and Technology Pakistan, Pakistan); Asim Rasheed (Muhammad Ali Jinnah University, Pakistan); Aamir Hasan (IAA - Air University, Pakistan)
pp. 46-51

16:50 *Novel Vehicle Information Acquisition Method using Vehicle Code For Automotive Infrared Laser Radar*
Yusuke Shikiji (Kansai University, Japan); Keita Watari (Graduate School of Kansai University, Japan); Kentaro Tsudaka, Tomotaka Wada and Hiromi Okada (Kansai University, Japan)
pp. 52-57

17:15 *Doppler and Pathloss Characterization for Vehicle-to-Vehicle communications at 5.8 GHz*
Okechukwu J Onubogu (Queensland University of Technology, Australia); Karla Ziri-Castro (QUT, Australia); Dhammika Jayalath and Sebastien Demmel (Queensland University of Technology, Australia); Hajime Suzuki (CSIRO, Australia)
pp. 58-64

17:40 *An Enhanced Coding and Decoding method for Raptor Codes over Fading Channels*
Lingyi Han (Beijing University of Posts and Telecommunications, P.R. China); Yuexing Peng (Beijing University of Posts & Telecoms, P.R. China); Hui Zhao (Beijing University of Posts and Telecommunications, P.R. China)
pp. 65-69

18:05 *Performance analysis of Amplify-and-Forward Cognitive Relay Networks under Transmit Power Constraint and Interference Power Constraint*
Ting Feng and Xiaoxiao Zhang (University of Electronic Science and Technology of China, P.R. China); WanBin Tang (University of Electronic Science & Technology of China, P.R. China); Yantao Guo (Information Transmission and Dissemination in Communication Networks Laboratory, P.R. China); Jianquan Wang (University of Electronic Science and Technology of China, P.R. China)
pp. 70-74

Thursday, November 27

09:00 - 10:00

K2: Convetion Keynote 2

Room: Convention Centre

10:00 - 10:30

B2: Morning Tea 2

Room: Convention Centre

10:30 - 11:30

AK2: ATNAC Keynote Session 2

Teletraffic Insights for Network Design
Professor Moshe Zukerman

Room: Room 1
Chair: Harsha R Sirisena (University of Canterbury, New Zealand)

Teletraffic models and analyses have been applied for over a century to planning and design of telecommunication networks including the telephone network and the Internet. The general aim has been to minimize cost subject to meeting quality of service and reliability requirements. This talk will address a range of topical networking research questions that for which teletraffic models and analyses can provide useful answers. We will present an application of a multilayer network model that considers stochastic traffic composed of heavy tailed flows for optimizing traffic engineering, network design and evolution prediction. It will enable decisions on flow size dependent routing and the choice of dynamic optical circuit switching. In addition, we will discuss recently developed models and related performance analyses of optical networks that lead to an efficient optical burst switching strategy and enable evaluation of the trade-off between capacity dimensioning and wavelength conversion.

11:30 - 12:30

S4: Session 4: Mobile Cellular and Wireless Networks

Room: Room 1
Chair: Horace King (VIctoria University, Australia)

11:30 *Increasing the Capacity of Ad-hoc Networks*
Robert Hunjet (DSTO, Australia); Andrew Coyle (University of Adelaide, Australia)
pp. 75-81

11:50 *Interference Analysis in Digital TV Reception with LTE Systems In Adjacent Bands In Australian Context*
Shubhekshya Basnet, Upul Gunawardana, Ranjith Liyanapathirana and Shashika Biyanwilage (University of Western Sydney, Australia)
pp. 82-86

12:10 *Interference Cancellation in OFDMA Femtocells: Issues and Approaches*
Pantha Ghosal (University of Technology, Sydney & Centre for Real-Time Information Networks, Australia); Kumbesan Sandy Sandrasegaran (University of Technology, Sydney, Australia); Ameneh Daeinabi and Shouman Barua (University of Technology Sydney, Australia); Farhana Afroz (University of Technology, Sydney, Australia)
pp. 87-92

12:30 – 13:30

B5: Lunch 2

Room: Convention Centre

13:30 – 15:30

S5: Session 5: Cellular, Wireless and Wireless Sensor Networks

Room: Room 1
Chair: Harsha R Sirisena (University of Canterbury, New Zealand)

13:30 *Performance Analysis of PF, M-LWDF and EXP/PF Packet Scheduling Algorithms in 3GPP LTE Downlink*
Farhana Afroz and Kumbesan Sandy Sandrasegaran (University of Technology, Sydney, Australia); Pantha Ghosal (University of Technology, Sydney & Centre for Real-Time Information Networks, Australia)
pp. 93-98

13:54 *Adaptive Channel Untilisation In IEEE 802.15.4 Wireless Body Sensor Networks: Continuous Hopping Approach*
Amirhossein Moravejosharieh, Ehsan Tabatabaei Yazdi and Andreas Willig (University of Canterbury, New Zealand); Krzysztof Pawlikowski (University of Canterbury & University of Canterbury, New Zealand)
pp. 99-103

14:18 *Cluster Based Femtocell Efficiency Evaluation*
Mark A. Gregory and Abdullah Omar Arafat (RMIT University, Australia)
pp. 105-110

14:42 *Coupling Power and Frequency Adaptation for Interference Mitigation in IEEE 802.15.4-Based Mobile Body Sensor Networks: Part II*
Ehsan Tabatabaei Yazdi, Amirhossein Moravejosharieh and Andreas Willig (University of Canterbury, New Zealand); Krzysztof Pawlikowski (University of Canterbury & University of Canterbury, New Zealand)
pp. 111-116

15:30 – 16:00

B8: Afternoon Tea 2

Room: Convention Centre

16:00 – 18:30

S6: Session 6: Applications and Management

Room: Room 1
Chair: William Liu (Auckland University of Technology, New Zealand)

16:00 *The Challenges of Deploying a Software Defined Network*
Paul Zanna, Sepehr Hosseini, Pj Radcliffe and Benjamin O'Neill (RMIT University, Australia)
pp. 117-122

16:25 *Fog computing: A cloud to the ground support for smart things and machine-to-machine network*
Ivan Stojmenovic (University of Ottawa, Canada)
pp. 123-128

16:50 *Improving Video Quality in Congested Networks through Deferred Discard*
Dennis Ong and Tim Moors (University of New South Wales, Australia)
pp. 129-134

17:15 *An Enterprise Security Architecture for Accessing SaaS Cloud Services with BYOD*
Sayan Kumar Ray and Rizwan Ahmad (Manukau Institute of Technology, New Zealand); Semir Daskapan (Telecom NZ, New Zealand); Vasileios Samaras (Delft University, Greece)
pp. 135-140

17:40 *A Predictive Road Traffic Management System Based on Vehicular Ad-hoc Network*
Nazmus Shaker Nafi (RMIT University, Australia); Reduan H Khan and Jamil Y Khan (The University of Newcastle, Australia); Mark A. Gregory (RMIT University, Australia)
pp. 141-146

18:05 *Effectiveness Of Enhanced Tight Finite Scheme In Quantum Key Distribution Protocol For Network Communication*
Roszelinda Khalid (Universiti Putra Malaysia, Malaysia); Zuriati Ahmad Zukarnain (UPM, Malaysia)
pp. 147-152

19:00 – 22:00

D1: ATNAC Dinner

Room: Convention Centre
Chair: Mark A. Gregory (RMIT University, Australia)

Friday, November 28

09:00 – 10:00

K3: Convention Keynote 3

Room: Convention Centre

10:00 – 10:30

B3: Morning Tea 3

Room: Convention Centre

10:30 - 11:30

AK3: ATNAC Keynote Session 3

SDN Innovations with Virtual Application Networks. Simplifying, Scaling and Automating the Network
Mr Wojtek Malewski

Room: Room 1
Chair: Harsha R Sirisena (University of Canterbury, New Zealand)

Software-defined Networking (SDN) is changing the way networks are managed, maintained, and secured. This emerging paradigm in computer networking will be the focus of the presentation. HP is a founding member of the Open Network Foundation the standards body for SDN. Today HP provide the most advanced, mature and complete SDN offering in the market including: • Infrastructure i.e. switches/routers/wireless access points. • SDN Controllers, • Application development community, • Management and orchestration suit. HP's SDN Vision, strategy and architecture is inclusive of all aspects of the network infrastructure from cloud to branch office. Over the last 6 years HP have developed a strong portfolio of SDN use cases to demonstrate the technology today with substantial benefits to business outcomes. Please join the session to better understand HP's SDN strategy and vision and explore practical SDN use cases for data centre, cloud and enterprise solutions. During the session HP will share local customer case studies and discuss common migration strategies to accelerated SDN deployments.

11:30 - 13:00

T1: National Broadband Network

Room: Room 1
Chair: Mark A. Gregory (RMIT University, Australia)

12:30 - 13:30

B6: Lunch 3

Room: Convention Centre

13:30 - 15:30

S7: Session 7: Cellular, Wireless and Wireless Sensor Networks

Room: Room 1
Chair: Shui Yu (Deakin University, Australia)

13:30 *A Novel Zigbee based Pilot Protection scheme for Smart Distribution Grid*
Nazmus Shaker Nafi (RMIT University, Australia); Khandakar Ahmed (RMIT University & Dept. of Computer Science & Engineering., Shahjalal University of Science & Techonology, Australia); Mark A. Gregory and Manoj Datta (RMIT University, Australia)
pp. 152-157

14:00 *Access Point Location and Trajectory Tracking Method based on the Weight Update*
Lin Chen, Yun Lan, Mengsheng Shi, Gang Li and Xiangyu Su (National University of Defense Technology, P.R. China)
pp. 158-162

14:30 *Cache Node Determination, Allocation and Distribution in Cognitive Networks using Game Theory*
Ankur Omar (BITS- Pilani K. K. Birla Goa Campus, India)
pp. 163-168

15:00 *Dynamic Transmitter Gain Management Approach for Mitigating Co-tier Interference in Femtocell Network*
Hossain Mohammad Mahbub, Chowdhury Alamgir, Atiqur Rahman, Shovon Pal and Shifath Shams (North South University, Bangladesh)
pp. 169-174

S8: Session 8: Cellular, Wireless and Wireless Sensor Networks

Room: Room 2
Chair: Robert Hunjet (DSTO, Australia)

13:30 *System Level Simulation for Femtocellular Networks*
Pantha Ghosal (University of Technology, Sydney & Centre for Real-Time Information Networks, Australia); Shiqi Xing and Kumbesan Sandy Sandrasegaran (University of Technology, Sydney, Australia); Ameneh Daeinabi (University of Technology Sydney, Australia)
pp. 175-180

14:00 *Performance of Massive MIMO V-BLAST with Channel Correlation and Imperfect CSI*
Khawla Alnajjar (University of Canterbury, New Zealand); Peter J Smith (The University of Canterbury, New Zealand); Graeme K Woodward (University of Canterbury, New Zealand)
pp. 181-186

14:30 *Frame based Back-off for Q-learning RACH access in LTE networks*
Lawal Mohammed Bello, Paul Mitchell and David Grace (University of York, United Kingdom)
pp. 187-192

15:00 *Three Dimensional View of Role Based Access Control*
Muhammad Asif Habib (National Textile University, Pakistan); Nasir Mahmood (NTU, Pakistan); Muhammad Shahid (National Textile University, Pakistan); Umar Aftab (NTU, Pakistan)
pp. 193-196

15:30 - 16:00

B9: Afternoon Tea 3

Room: Convention Centre

16:00 - 18:30

S10: Session 10: General

Room: Room 2
Chair: Shui Yu (Deakin University, Australia)

16:00 *A Novel Evacuation Route Search Algorithm for Route Distribution of Evacuees Groups in Fire Disasters*
Hiroki Murotsu and Manato Fujimoto (Kansai University, Japan); Tatsuya Suzuki (Kansai university, Japan); Hiroyuki Ebara, Tomotaka Wada and Hiromi Okada (Kansai University, Japan)
pp. 199-205

16:25 *An Efficient Modulation Technique to Mitigate Nonlinearities in Optical OFDM*
Muhammad Towfiqur Rahman (International Islamic University Malaysia & IIUM, Malaysia); Khaizuran Abdullah (International Islamic University Malaysia, Malaysia); Muhammad Sobrun Jamil Jamal (International Islamic University of Malaysia (IIUM), Malaysia); Md Rafiqul Islam and Md. Alam (International Islamic University Malaysia, Malaysia); Aizura Abdullah (International Islamic University of Malaysia (IIUM), Malaysia)

16:50 *Performance Analysis of Stimulated Raman Scattering-Aware Algorithm For Routing and Wavelength Assignment*
Tan Saw Chin, Wai Seng Sim and Zulfadzli Yusoff (Multimedia University, Malaysia)

17:15 *EPON Link Data Acquisition System: Design and Implementation*
Behzod Mukhiddinov (Chongqing University of Posts and Telecommunication, P.R. China)
pp. 219-222

17:40 *Design of delay-line buffers for asynchronous optical packet switched networks*
Shuna Yang (ITEM, Norwegian University of Science and Technology, Norway); Norvald Stol (Norwegian University of Science and Technology, Norway)
pp. 223-228

S9: Session 9: General

Room: Room 1
Chair: Horace King (VIctoria University, Australia)

16:00 *A Novel Protocol Enables DIY Home Automation*
Salma Nasrin (Royal Melbourne Institute of Technology (RMIT), Australia); Pj Radcliffe (RMIT University, Australia)
pp. 229-234

16:25 *No More Hidden Backoff: Advertise Backoff in Frequency Domain*
Sheeraz A. Alvi (University of Engineering & Technology, Lahore & Al-Khawarizmi Institute of Computer Science, Pakistan); Adeel Baig (National University of Sciences and Technology, Pakistan)
pp. 234-239

16:50 *ESPAR Based Antenna System Designing & Simulation*
Ahmed Umar (National University of Science and Technology Islamabad, Pakistan); Abid Hussain Cheema (AT Labs Inc, Pakistan)
pp. 240-243

17:15 *Sparse Bayesian Learning-Based Data-Aided Channel Estimation in STTC MIMO Systems*
Amrita Mishra (IIT Kanpur, India); Arnab Pal (Indian Institute of Technology, Kanpur, India); Aditya K Jagannatham and Ketan Rajawat (Indian Institute of Technology Kanpur, India)
pp. 244-248

17:40 *BER Performance of OFDM System with the Effect of Error Control Code*
Muhammad Sobrun Jamil Jamal and Aizura Abdullah (International Islamic University of Malaysia (IIUM), Malaysia); Muhammad Towfiqur Rahman (International Islamic University Malaysia & IIUM, Malaysia); Khaizuran Abdullah, Ahmad Fadzil Ismail and Huda Adibah Mohd Ramli (International Islamic University Malaysia, Malaysia)
pp. 249-254