Agence Universitaire de la Francophonie, BMO
Lebanon

American University of the Middle East
Kuwait

IEEE Power & Energy Chapter
Lebanon

Lebanese Mine Action Center
Lebanon

National Council for Scientific Research -
Lebanon

Petroleum - Gas University of PLOIEŞTI
Romania

Politecnico Di Torino
Italy

The Third International Conference on Electrical and
Electronic Engineering, Telecommunication
Engineering and Mechatronics

The Fourth International Conference on Computer
Science, Computer Engineering, and Education
Technologies

The First International Conference on Energy,
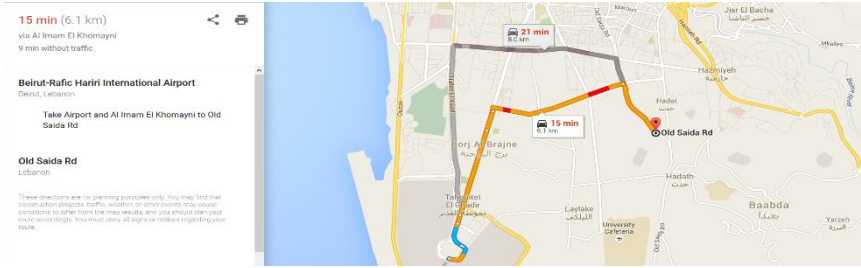Power, Petroleum and Petrochemical Engineering

The First International Conference on Landmine:
Detection, Clearance and Legistlations

April 26-28, 2017

Faculty of Engineering - Lebanese University

Rafic Hariri Campus - Hadath

Beirut - Lebanon

Nearest Airport
Beirut-Rafic Hariri International Airport

Host Country
Lebanon

Participating Countries
Australia, Canada, China, Denmark, Egypt, France, Germany, Iraq, Italy, Jordan, Malaysia, Norway, Palestine, Romania, Saudi Arabia, Slovenia, South Africa, Switzerland, Syria, Thailand, Turkey, UAE, USA

Note:

The time of each presentation including questions is 15 minutes.

Schedule of the Conferences

Date	Time	Activity
April 26, 2017 (Wednesday)	8:30 am – 9:15 am	Registration
	9:15 am – 10:00 am	**E3PE, EEETEM & CSCEET Opening Ceremony**
	10:00 am –10:15 am	Coffee Break
	10:15 am – 11:00 am	Keynote Presentation by: **Mérouane Debbah, Mohamed Benbouzid & Jan Verstraete**
	11:00 am – 1:00 pm	Session 1
	1:00 pm – 2:00 pm	Lunch Break
	2:00 pm – 2:45 pm	Keynote Presentation by: **Nada Amin & Corrado Schenone**
	2:45 pm – 4:15 pm	Session 2
	4:15 pm – 4:30 pm	Coffee Break
	4:30 pm – 5:30 pm	Session 3
	8:00 pm – 11:00 pm	Gala Dinner
April 27, 2017 (Thursday)	8:30 am – 9:15 am	Registration
	9:15 am – 10:00 am	**LDCL Opening Ceremony**
	10:00 am – 10:15 am	Coffee Break
	10h15 am – 11h00 am	Keynote Presentation by: **Massimo Zucchetti & Mohamad Badra**
	11:00 am – 1:00 pm	Session 4
	1:00 pm – 2:00 pm	Lunch Break
	2:00 pm – 2:45 pm	Keynote Presentation by: **Maki Habib & Raziq Yaqub**
	2:45 pm – 5:15 pm	Session 5
	5:15 pm – 5:30 pm	**Closing Ceremony**
April 28, 2017 (Friday)	8:00 am – 12:00 pm	Tour

DETAILED PROGRAM
Parallel Sessions

April 26, 2017 (Wednesday)

Title	Keynote Presentation
Time	10:15 am – 11:00 am

Room	Auditorium
Chair	Abed Ellatif Samhat
Speaker	Mérouane Debbah
Presentation Title	5G: Will we make it by 2020?

Room	Room A
Chair	Maged Najjar
Speaker	Mohamed Benbouzid
Presentation Title	Advanced Signal Processing Techniques for Condition Monitoring of Electric Machines and Drives

Room	Room B
Chair	Wael Hamd
Speaker	Jan Verstraete
Presentation Title	Insights from Modeling and Simulation during Hydroconversion of Residue Fractions

April 26, 2017 (Wednesday)

Time	11:00 – 1:00 pm

Room	Auditorium
Chair	Mérouane Debbah

187 - Blind Source Separation-based Full-Duplex Cognitive Radio (Abbass Nasser - France)

155 - DEVICE-TO-DEVICE COMMUNICATION IN 5G: TOWARDS EFFICIENT SCHEDULING (Jana Fayek - AUSTRALIA)

180 - ENERGY-AWARE ROUTING FOR CUBESAT SWARMS (Mohamad Raad - AUSTRALIA)

145 - RADIO RESOURCE ALLOCATION IN PD-NOMA BASED HCN SYSTEM CONSIDERING COMP TECHNOLOGY (ALI MOKDAD - IRAN)

133 - FAULT DETECTION AND EXCLUSION FOR FAULTY GPS OBSERVATIONS USING INFORMATION FORM OF RAIM METHOD AND THE OBSERVATIONS PROJECTION ON INFORMATION SPACE (Mahmoud Kaddour - LEBANON)

170 - APPLYING PARTIAL RECONFIGURATION TECHNIQUE ON ARM-FPGA SYSTEMS IN CONTEXT OF VERTICAL HANDOVER IN WIRELESS HETEROGENEOUS NETWORKS (MOHAMAD-AL-FADL RIHANI - LEBANON)

144 - AXES-BASED KEY CRYPTOGRAPHY PRIME AND NOPRIME ALGORITHMS (IMANE HAIDAR - LEBANON)

175 - QOS/QOE BASED HANDOVER DECISION IN MULTI-TIER LTE NETWORKS (NADINE AKKARI - SAUDI ARABIA)

Room	Room A
Chair	Ali Assi

117 - ECONOMIC AND TECHNICAL IMPACT OF THE BATTERY POWER PROFILE WHILE CHARGING PEVS (CLAUDE EL-BAYEH - CANADA)

154 - THERMAL AND ELECTRICAL LOAD MANAGEMENT IN SMART HOME BASED ON DEMAND RESPONSE AND RENEWABLE ENERGY RESOURCES (FADY Y. MELHEM - FRANCE)

149 - TRANSIENT STABILITY ANALYSIS OF SINGLE MACHINE INFINITE BUS WITH DIFFERENT POWER SYSTEM STABILIZERS (Michella Fahim - LEBANON)

150 - VOLTAGE STABILITY INDICES AND MAXIMUM MVAR LOADABILITY (Nadim Semaan - LEBANON)

167 - EFFECT OF LINE OUTAGES ON CYBER PHYSICAL POWER SYSTEM (HAFIZ SALEEM - LEBANON)

179 - DIFFERENT VIRTUAL IMPEDANCE LOOPS FOR POWER SHARING ENHANCEMENT IN ISLANDED MICROGRID (Hassan Moussa- LEBANON)

157- POWER EFFICIENT GURUMUKHI UNICODE READER DESIGN AND IMPLEMENTATION ON FPGA (DIL MUHAMMAD AKBAR HUSSAIN- DENMARK)

123 - AN IMPROVED ACTIVE DISTURBANCE REJECTION CONTROL FOR A DIFFERENTIAL DRIVE MOBILE ROBOT WITH MISMATCHED DISTURBANCES AND UNCERTAINTIES (IBRAHEEM KASIM IBRAHEEM - IRAQ)

Room	Room B
Chair	Jan Verstraete

Energy Conversion and Conservation

819 - COOLING PERFORMANCE OF HEAT SINKS USED IN ELECTRONIC DEVICES (Hussein Farhat - LEBANON)

Process Petrochemical Technologies and Products

816 - EFFECT OF PORE GEOMETRY OF MESOPOROUS SUPPORTS ON CATALYTIC PERFORMANCES IN METHANE REFORMING (NISSRINE EL HASSAN - LEBANON)

Downstream Technologies

826 - ULTRASOUND AND IONIC LIQUID-ENHANCED EXTRACTIVE DESULFURIZATION OF DIESEL (PAUL NANCARROW - UNITED ARAB EMIRATES)

Enhanced Oil Recovery

825- EVALUATION OF POLYMER ALTERNATING WATERFLOODING IN MULTILAYERED HETEROGENEOUS WATERFLOODED RESERVOIR (WARUT TUNCHAROEN- THAILAND)

844- EFFECTS OF FORMATION BRINE COMPOSITIONS ON EFFECTIVENESS OF LOW SALINITY BRINE INJECTION IN CARBONATE RESERVOIR(SUTHIDA MEEKANGWAL- THAILAND)

Chemical Industry Technologies and Products

845- TRANSFORMING INDUSTRIAL COMBUSTION WASTE BY-PRODUCTS INTO A 'GREEN' CONSTRUCTION CEMENT (ALI ABBAS- AUSTRALIA)

823- INFLUENCE OF SYNTHESIS PARAMETERS OF MESOCELLULAR SILICA FOAMS DOPED BY NICKEL ON METHANE REFORMING BY CO_2 (OSCAR DAOURA- LEBANON)

814 - INFLUENCE OF PROCESSING PARAMETERS ON THE TENSILE STRENGTH OF PA-W/MLLDPE COMPOSITE FILMS PRODUCED BY BLOWN FILM EXTRUSION (NANCY ZGHEIB – LEBANON)

Room	Room C
Chair	Bilal Ghazal

401 - AN APPROACH TO AUTHENTICATE MAGNETIC STRIPE BANK CARD TRANSACTIONS AT POS TERMINALS (KISHOR KRISHNAN NAIR - SOUTH AFRICA)

430 - IMPROVING THE SPATIAL BIAS CORRECTION ALGORITHM IN THE SMOS LEVEL 1 IMAGE RECONSTRUCTION PROCESSOR (ALI KHAZAAL - FRANCE)

419 - COMBINED DCT-HAAR TRANSFORMS FOR IMAGE COMPRESSION (MIREILLE SALIBA - LEBANON)

402 - A NEW PROPOSE MODEL FOR VIRTUAL MACHINE MIGRATION USING SOFTWARE DEFINED NETWORKING (KASHIF NISAR - MALAYSIA)

450 - BACKGROUND SUBTRACTION UNDER UNCERTAINTY USING A TYPE-{2} FUZZY SET GAUSSIAN MIXTURE MODEL (ALI DARWICH - LEBANON)

438- EFFICIENT NAVIGATION SYSTEM OF MOBILE ROBOT WITH THERMOGRAPHY IMAGE PROCESSING SYSTEM AND MAPPING OF QUADCOPTER (MOUSTAFA KURDI-LEBANON)

445- CLASSIFICATION OF CONTRAST ULTRASOUND IMAGES: IMPROVEMENT OF THE GMM USING GAUSSIAN FILTER (BILAL GHAZAL-LEBANON)

April 26, 2017 (Wednesday)

Title	Keynote Presentation
Time	2:00 pm – 2:45 pm

Room	Auditorium
Chair	Mohamad Badra
Speaker	Nada Amin
Presentation Title	Generative Programming and Verification

Room	Room A
Chair	Walid Kamali
Speaker	Corrado Schenone
Presentation Title	Covenant of Mayors initiative and the Sustainable Energy Action Plan

April 26, 2017 (Wednesday)

Time	2:45 – 4:15 pm

Room	Auditorium
Chair	Nada Amin

Computer engineering

439- TOWARDS PROVIDING MEMORY ON-ACCESS SCANNERS (MOHAMMED AL-SALEH-JORDAN)

409 - RESOURCE SHARING IN 5G MULTI-OPERATOR WIRELESS (SOHA FARHAT - LEBANON)

436 - A STUDY OF MULTI-OPERATOR RESOURCE SHARING USING MARKOV CHAIN MODEL (ABED ELLATIF SAMHAT - LEBANON)

447 - AN EXPERIMENTAL PLATFORM FOR QOE STUDIES OF WEBRTC-BASED MULTI-PARTY VIDEO COMMUNICATION (DOREID AMMAR - NORWAY)

441 - ONTOLOGY BASED REASONING TO SOLVE CONTAINER TERMINALS PROBLEMS (CTP) (HAYDER HENDI - FRANCE)

424 - CLASSIFICATION OF ROUTING ALGORITHMS IN INTERCONNECTION NETWORKS (LULUAH ALSHOGAIR - KSA)

Room	Room A
Chair	Mohamed Benbouzid & Rayan Slim

Renewable Energy

807 - Innovating Algorithms of Integration of Renewable Energy and Energy Efficiency in the Industrial, Commercial and Residential Sectors (Georges El-Jamal - Lebanon)

841- Optimization of Energy Management of a Microgrid Based on Solar-Diesel-Battery Hybrid System (Mazen Ghandour – Lebanon)

Electrical Engineering

106 - EARLY WARNING OF CYBER SECURITY RISK MONITORING AND REMOTE MANAGEMENT FOR SUBSTATION (JUN LI - CHINA)

171 - MULTIOBJECTIVE PREDICTIVE CONTROL FOR THREE-LEVEL NPC GRID CONNECTED CONVERTER (LEA RIACHY - FRANCE)

146 - TRUST IN REAL-TIME DISTRIBUTED SYSTEMS: TIRS VS. ENHANCED ROWA PROTOCOLS (Grace Khayat - LEBANON)

109 - GAZA GOVERNORATE ELECTRICAL POWER DISTRIBUTION GRID REDUCTION IN POWER LOSSES AND VOLTAGE DROP THROUGH CABLE SIZING AND REACTIVE POWER COMPENSATION (HUSSAM AWWAD - PALESTINE)

Room	Room B
Chair	Clovis Francis & Joyce Kheir

E3PE Workshop I

GOPELC "Gas and Oil Processing, a European Lebanese Cooperation" by C. Francis, R. Harkous, W. Hamd, S. Nasserddine and M. Al-Charif.

Room	Room C
Chair	Mohammad Ashraf Ottom & Hassan Najadat

Signal Processing

141 - SPEAKER IDENTIFICATION BASED ON VOCAL CORDS' VIBRATIONS' SIGNAL: EFFECT OF THE WINDOW (DANY ISHAK - LEBANON)

147 - A BINARY SPARSE SIGNAL PRUNING RECOVERY ALGORITHM (ELIE ATALLAH - USA)

Data Mining

451- COMPUTER AIDED DIAGNOSIS FOR CHRONIC KIDNEY DISEASE USING DATA MINING (MOHAMMAD ASHRAF OTTOM-JORDAN)

443- EFFICIENCY ANALYSIS OF HEALTH CARE CENTERS USING DATA ENVELOPMENT ANALYSIS (QUTAIBAH ALTHEBYAN-JORDAN)

453- DATA MINING CLASSIFICATION APPROACHES FOR MALICIOUS EXECUTABLE FILE DETECTION (HASSAN NAJADAT-JORDAN)

442- PREDICTION OF BODY CONTOURING RESPONSE TO ULTRASOUND CAVITATION USING ARTIFICIAL NEURAL NETWORK (SOHA LABIB-EGYPT)

-8-

April 26, 2017 (Wednesday)

Time	4:30 – 5:30 pm

Room	Auditorium
Chair	Michel Owayjan & Maher El Rafei

Modeling and Design

137 - DESIGN A PETRI NET MODEL FOR A SMART HOSPITAL SYSTEM (SASAN HARIFI - IRAQ)

Mechatronics

128 - UKF AND ADAPTIVE OPTIMAL CONTROL-BASED LOCALIZATION ENHANCEMENT OF 4-WDDMR ROS FRAMWORK-BASED DESIGN AND IMPLEMENTATION (Dalia Kass Hanna - SYRIA)

189 - INTERACTIVE FACE ROBOT (MICHEL OWAYJAN - LEBANON)

164 - SOLVING MAZE PROBLEM USING NEWLY MODIFIED TREMAUX'S ALGORITHM WITH THE BEES ALGORITHM (Mariam Kashkash - SYRIA)

Room	Room A
Chair	Mazen Ghandour

Electrical Engineering

178 - TRANSIENT ANALYSIS DUE TO SHORT CIRCUIT FAULTS IN WIND HYBRID SYSTEMS (FARHANA UMER - TURKEY)

152 - HYBRID POWER GENERATION: THERMAL POWER AND PHOTOVOLTAIC UNITS IN LEBANON (HASSAN OSSEILY - LEBANON)

192 - CONTROL AND OPTIMIZATION OF ENERGY FLOWS: NOTES ON IMPLEMENTATION OF THE CHARGING AND DISCHARGING OF ELECTRIC VEHICLES TECHNOLOGIES (Ghimar Merhy- LEBANON)

Preventive maintenance

121 - MINIMIZING THE EXPECTED MAKESPAN ON A SINGLE MACHINE BY INTEGRATED PREVENTIVE MAINTENANCE PLAN AND PRODUCTION SCHEDULE (ELMABROK ABDELRAHIM - TURKEY)

Room	Room B
Chair	Sorina Mortada

Ecology and Environmental Technologies

824- Carbon Dioxide Emissions Monitoring in Romania in the Context of Greenhouse Gasses Reduction (Lazar Avram – Romania)

E3PE Workshop II
Biofuel
By Tarek-Antoine Rahi and Nader Kabbara

Room	Room C
Chair	Hassan Amoud

Image Processing

425- Content Based Image Retrieval using Multimodal Data based on CCA (ISMAIL EL SAYAD- LEBANON)

426- A NEW VISUAL VOCABULARY FOR OBJECT RECOGNITION (ISMAIL EL SAYAD- LEBANON)

E- Learning

422- CONTROL SYSTEM OF FOREIGN LANGUAGE TRAINING BASED ON STRUCTURAL-VISUAL TECHNIQUES (IMAD TAHINI-LEBANON)

April 27, 2017 (Thursday)

Title	Keynote Presentation
Time	10:15 am – 11:00 am

Room	Auditorium
Chair	Maki Habib
Speaker	Massimo Zucchetti
Presentation Title	Landmines. Crisis, legacy, international and local action

Room	Room A
Chair	Ali Haidar
Speaker	Mohamad Badra
Presentation Title	Privacy in IoT: Issues and Solutions

Time	11:00 – 1:00 pm

Room	Auditorium
Chair	Mohammed Husseini & Clovis Francis

301- CLASSIFICATION ALGORITHMS FOR LANDMINE DETECTION USING HYPERSPECTRAL IMAGING (Ihab Makki- ITALY)

305- QUARTZ CRYSTAL MICROBALANCE (QCM) FOR THE DETECTION OF EXPLOSIVE VAPOR – MEASUREMENTS AND SIMULATIONS (IMAD MOUGHARBEL- LEBANON)

309- ON DRONE GROUND PENETRATING RADAR FOR LANDMINE DETECTION (DANIJEL ŠIPOŠ- SLOVENIA)

311 COORDINATED MULTI ROBOTIC SYSTEM FOR HUMANITARIAN DEMINING (MAKI K. HABIB- EGYPT)

312 WIRELESS ROBO-PI FOR LANDMINE DETECTION (MAJD GHAREEB- LEBANON)

Room	Room A
Chair	Ali Mohsen & Moussa Kafal

Electrical Engineering

148 - TWO–DIMENSIONAL ANALYTICAL MODELING OF PERMANET MAGNET INDUCTION GENERATOR (PMIG) (MOHAMAD ARNAOUT - LEBANON)

Circuits and Electronics

191 - LOW NOISE POWER AMPLIFIER IN 28-NM UTBB FDSOI TECHNOLOGY WITH FORWARD BODY BIAS (Ali Mohsen - LEBANON)

114 - EIGEN FREQUENCIES AND DIRECTIVITY PATTERNS OF A SPHERICAL ACOUSTIC TRANSDUCER (DAHER DIAB - FRANCE)

172 - A LOW PHASE NOISE MULTI-GIGAHERTZ RING BASED VOLTAGE-CONTROLLED-OSCILLATOR IN 0.13 MM CMOS TECHNOLOGY (Hussein Bazzi - LEBANON)

139 - BASELINING: A CRITICAL APPROACH USED FOR SOFT FAULT DETECTION IN WIRE NETWORKS (MOUSSA KAFAL - FRANCE)

183 - SOFT FAULT DIAGNOSIS IN WIRE NETWORKS USING TIME REVERSAL CONCEPT AND SUBSPACE METHODS (MOUSSA KAFAL - FRANCE)

193 - WIDE RANGE ANALOG CMOS MULTIPLIER FOR NEURAL NETWORK APPLICATION (Hassan Jouni - LEBANON)

Energy Management Systems/ Energy Infrastructure / Ecology and Environmental Technologies

806- ANALYTICAL MODEL FOR THE ENERGY HARVESTING OF A SPHERICAL SENSOR FROM AMBIENT VIBRATIONS (DAHER DIAB-FRANCE)

Room	Room B
Chair	Henry EL Zakhem & Charbel Bou-Mosleh

Renewable Energy Sources and Technology

829- Enhancing Photovoltaic solar panel (Marie-Thérèse MOUFAREJ ABOU JAOUDE, Lebanon)

842- Performance Index: A Simple Selection Method of Appropriate Energy Storage for Specific Application System (Mazen Ghandour – Lebanon)

805 - STAND ALONE PV HOUSE DESIGN FOR MAXIMUM POWER OUTPUT IN SYDNEY AUSTRALIA METROPOLITAN AREA (MOHAMAD NASSEREDDINE - AUSTRALIA)

833- A NOVEL DESIGN OF WATER-FLOW BASED ELECTRICAL GENERATOR AS AN ENERGY HARVESTING DEVICE (HAMDY ZIEDAN-EGYPT)

837- DESIGN OF A HYBRID PHOTOVOLTAIC THERMAL SYSTEM (CHARBEL BOU-MOSLEH- LEBANON)

843- Feasibility Study of Hybrid Wind-Diesel-Battery Power Generating Systems: Parametric and Sensitivity Analysis (Mazen Ghandour – Lebanon)

Energy Infrastructure

809 - HIDDEN HIGH VOLTAGE SAFETY RISKS FOR PARALLEL HIGH VOLTAGE TRANSMISSION LINES (MOHAMAD NASSEREDDINE - AUSTRALIA)

839- INVESTIGATION OF THE IMPACT OF PHOTOVOLTAIC SIZING AND SITING MODELING ON MICRO-GRIDS ENERGY MANAGEMENT OPTIMIZATION (MARWA ABUELNASR- EGYPT)

Room	Room C
Chair	Ali Hayek & Atef Harb

Information and Data Management

435 - INFLUENCE OF PROJECT CONTROL SYSTEMS ON PROJECTS PERFORMANCE AND OUTCOMES: CASE OF ICT ORGANIZATIONS (ATEF HARB - LEBANON)

455- SEMANTIC WIKIS DISTRIBUTED ON STRUCTURED PEER-TO-PEER NETWORKS (CHARBEL RAHHAL-LEBANON)

444- A STUDY OF THE EFFECTS OF HEARTBLEED VULNERABILITY IN BANGLADESH (Tanjila Farah- Bangladesh)

Computer Engineering

420- CONTROL OF A POWERPOINT PRESENTATION USING EYE MOVEMENTS (ROY ABI ZEID DAOU - GERMANY)

457- TRUST MODEL FOR GROUP LEADER SELECTION IN VANET (HAMSSA HASROUNY - LEBANON)

456- A STUDY ON PRIORITY-BASED CENTRALIZED TDMA SLOT SCHEDULING ALGORITHM FOR VEHICULAR AD HOC NETWORKS (ANIS LAOUITI-FRANCE)

458- RASPBERRY PI BASED DISTRIBUTED IN-WARD PATIENTS' MONITORING SYSTEM (Abdul Rahman Al-Ahda - SAUDI ARABIA)

April 27, 2017 (Thursday)

Title	Keynote Presentation
Time	2:00 pm – 2:45 pm

Room	Auditorium
Chair	Massimo Zucchetti
Speaker	Maki Habib
Presentation Title	Humanitarian Demining: The Problem and the Challenge of Technology

Room	Room A
Chair	Rima Abdallah
Speaker	Raziq Yaqub
Presentation Title	Why is Cyber Security for SCADA Such a Big Problem?

Time	2:45 pm – 5:15 pm

Room	Auditorium
Chair	Imad Mougharbel
LDCL Workshop "Current Practices and Ongoing Research in Humanitarian Demining"	

Room	Room A
Chair	Gilbert Habib

Fiber Optics and Fiber Devices

124 - ORIGINAL ALL-SOLID APERIODIC VERY LARGE-MODE-AREA FIBER FOR INFRARED LASER (DIA DARWICH - FRANCE)

156 - SIMULATING IMAGE COMMUNICATION OVER MULTI-HOP WIRELESS SENSOR NETWORKS USING TOSSIM (GILBERT HABIB - LEBANON)

Information and Data Management

449- SMARTPHONE-BASED APPLICATION FOR INDOOR LOCALIZATION USING MEASURED WI-FI SIGNALS (HIKMAT ADHAMI- CANADA)

Room	Room C
Chair	Raziq Yaqub

Tutorial

Multimedia Cloud Computing using Open Source Implementation of Map Reduce Programming Model
by
Rashed Mustafa