出國報告（出國類別：其他: 國際會議）

參加 2015 DEPEND 國際會議之出國報告

服務機關：國立雲林科技大學
姓名職稱：朱宗賢 助理教授
派赴國家：義大利
出國期間：2015.8.21－2015.8.30
報告日期：2015.10.15

摘要

此次行程目的在參與 DEPEND 2015 大會，並發表論文 “Dependability of Active Emergency Response Systems” ，今年 DEPEND2015 與數個國際會議合辦，包含 SENSORCOMM 2015、SENSORDEVICES 2105、SECURWARE 2015 等，討論面向除包括學術研究成果，也包含業界發展趨勢。很榮幸經大會審查，本次在 DEPEND 2015 所發表之論文，獲最佳論文獎! 此外，透過與會學者建議，思考各種可能之未來研究方向，包括系統模擬方式、感測器佈建方法、通訊模式、資料安全等等，可以為將來系統延伸研究的參考。最後，從研討會的專業課程、專題演講、論文發表之中，皆顯示資訊安全在未來資訊社會中，扮演重要腳色，建議加快相關基礎建設與強化民眾資安教育。

目次

一、 目的

此次行程目的在參與 DEPEND 2015 大會，並發表論文 “Dependability of Active Emergency Response Systems” ，DEPEND 2015 是由 IARIA (International Academy, Research, and Industry Association) 主辦，主題包括 Dependability facets、Adaptability and (self)adaptability 、Adaptability and dependability 、Big Data and dependability、Dependability and security、Trust and system dependability、Dependability and new technologies 等等，今年 DEPEND2015 與數個國際會議合辦，包含 SENSORCOMM 2015、SENSORDEVICES 2105、SECURWARE 2015 等，討論面向除包括學術研究成果，也包含業界發展趨勢。很榮幸經大會審查，本次在 DEPEND 2015 所發表之論文，獲最佳論文獎。DEPEND 2015 大會網址為 http://www.iaria.org/conferences2015/DEPEND15.html

二、 過程

● 行程

2015.8.21 – 2015.8.22 飛往義大利
2015.8.23 – 2015.8.27 參加 DEPEND 2015 國際會議(完整議程如附件四)
2015.8.28 私人行程
2015.8.29 – 30 飛回台灣

● 個人發表內容摘要

題目: Dependability of Active Emergency Response Systems
講者: 朱宗賢助理教授，國立雲林科技大學資訊工程系
摘要: 隨著物聯網技術與行動通訊應用的發達，相關智慧建築與智慧生活環境之基礎建設，日漸成熟，我們已經可以運用嵌入式智能設備，在災害來臨的時候，啟動相關保護措施，以減少生命財產之損失，本文稱此種系統為主動防救災系統，例如，在地震來臨的時候，可以透過室內之感測與制動裝置，自動控制電梯、門窗、電氣、瓦斯等，增強我們的準備生活環境，防止常見的自然和人為災害，本論文首先討論了環境智能裝置之配置的問題，並接著討論維修性和安全性之議題，最後展示一個災害模擬器之使用介面，說明如何確保主動防救災系統之安全性與可靠性。報告完畢之後，現場討論相當熱烈，現場提問與討論條列如下:

1. How does iGaDs communicate with each other?
2. Have you considered the reliability of hardware board?
3. Will you simulate the safety of the AERS? How?
4. Will iGaDs embed inside a building?

5. What's the new idea of AERS? What is the difference between existing warning systems and AERS?
6. Have you considered the security issue of CAP? How?
7. Can AERS be applied to different disasters? How?

● 會議內容重點整理

1. Tutorial I (專業課程) 2015/8/23

題目: Smart Sensor Systems Design for Smartphones, Tablets and IoT: New Advanced Design Approach

講者: Dr. Sergey Yurish, Excelera, S. L., Spain

演講摘要: 演講者 Sergey Yurish 是感測器與訊號處理之專家 (http://www.iaria.org/speakers/SergeyYYurish.html)，頭銜不少，除了是 IARIA 的院士(Fellow)外，更是兩家公司的創辦人，一家是專門做感測器，另一家是做感測器相關之出版社，例如感測器相關雜誌，期刊。這一場演講從最火紅的物聯網議題講起，說明感測器在互聯網的應用與市場上成長趨勢，特別是搭配智慧型手機後的資料擷取模式，例如，直接將感測器直接內建智慧型手機上，也包括外接感測器模組，透過有線或無線的方式，傳送到與智慧型手機上。其預測，越來越多的智能聯網設備，將更近一步激發全球物聯網的需求，2015 年，預計超過 250 億的設備，將連接到互聯網中，到 2020 年，互聯網上的終端設備，將提升到 500 億，且與環境感知緊密結合。整個演講圍繞在感測器的趨勢與相關規格說明與智慧感測器之方法設計，其設計的概念在於利用通用的感測器，搭配 Universal Sensors and Transducers Interface (USTI-MOB) IC，完成資料的蒐集、訊號處理與傳送，其可以運用於現有的移動設備中，使移動性智慧型設備更聰明，也可整合其他現有無線設備，互成網絡，創造更符合智慧生活需求之新應用。

2. Tutorial II(專業課程) 2015/8/23

題目: The Long Road of Quantum Computing…

講者: Dr. Thierry Ferrus, Hitachi Cambridge Laboratory, UK

演講摘要: 量子計算，從 2000 年開始，量子計算，量子電腦，就逐漸受到重視，特別是密碼學，資訊安全中的應用。講者 Dr. Thierry Ferrus 本身在 Hitachi Cambridge Laboratory 工作，致力量子電腦的相關研究，他指出，目前一些在現有電腦中進行運算上有瓶頸的應用，包含因數分解等，將有機會可以透過量子電腦上，突破該瓶頸，得到大幅的躍進，在這個專業課程中，Dr. Thierry Ferrus 首先講述量子運算與電腦相關研究歷史，與現今是世界上相關研究之重心，接著，更深處講述量子力學和量子信息相關概念，包括 qubit、entanglement、coherence、cloning、measurement、cryptography 等，最後，說明一些可能即將商

品化的應用，與未來可能可以透過量子運算可以解決的問題，包括 long scale communication 等。

3. Keynote (專題演講) 2015/8/24

題目: IT security - Quo Vadis?

講者: Prof. Dr. Hans-Joachim Hof, MuSe - Munich IT Security Research Group, Department for Computer Science and Mathematics, Munich University of Applied Sciences, Germany

Quo vadis

演講摘要: 根據講者描述，Quo vadis 為“Where are you going?”與“what is going to happen next?” 的意思，在演講中，講者依序描述了目前在資訊安全上的現況，問題與未來發展。講者表示，根據統計，在 2014 的非善意之病毒軟體，就近 3 億 1 一千 7 百萬件，有大半的使用者卻不知道這些病毒軟體之存在，而輕忽了相關必須保護措施，特別是隨著行動軟體應用的發達，有越來越多的病毒程式，是針對 mobile app 而設計，其中大部分是針對 Java 應用軟體，同時，現有的防毒軟體公司，其平均會需要花 5 個工作天的時間，才能發布解毒軟體，這讓防毒掃毒的工作，更加困難，其在演講中，條列了許多目前之軟體使用之現狀，包括軟體病毒的攻擊與日俱增，軟體品質沒有相對提升，解毒更新軟體的速度過慢，網路服務系統廠商沒有辦法提供有效，與穩定安全的服務等，我們需要持續發展可靠(Trustworthiness)與安全的軟體，甚至需要政府與相關部分介入網路活動安全保障，目前在德國，這推行相關的軟體認證服務，不僅是對產品本身之資訊安全進行認證，也對軟體開發人員進行證照輔導，同時，在學校也推行相關之資訊安全教育，對於資工系而言，部分學校也將資訊安全列入必修科目。

演講投影片: 參見附件一連結[2]

4. Keynote (專題演講) 2015/8/25

題目: Technology Platforms and Building Blocks: A Key Element for Shorter Time-to-Market of Innovative Micro-sensors

講者: Dipl. Ing. Arndt Steinke, CiS Forschungsinstitut für Mikrosensorik GmbH,

演講摘要: 本講次主要說明一些智慧型感測器與感測網路之應用與發展，講者首先說明了一些智慧型感測器之製造與生產過程，並舉了一些其所屬單位所研發的微型感測性，包括 Particle Sensors, Levelling Sensors, Life Science Sensors, Fluorescence Sensors, Piezoresistive Sensors, Impedimetric Sensors，而這些微型感測器可以運用於一般或專業的儀器中，監控相關訊號，增加系統之穩定度，養者也描出一些他正在進行的一些研究，包括如何整合現有之微型感測器，並提高其工作效率，減少電能消耗，縮小體積，降低成本，減少開發到上市之時間，目前他們是以一個開放平台的模式，將系統架構公開，訊號介接介面標準化，讓不同開發者所研製的微型感測器都可以整合在同一個架構下，加速產品開發的速度，講者舉二氧化碳

偵測系統為例子，說明整個核心的想法與觀念，最後，其說明要能有一個穩定的控制系統平台，需要有好的感測技術與系統平台整合技術。
演講投影片: 參見附件一連結[3]

5. Keynote (專題演講) 2015/8/26
題目: High Speed Imaging
講者: Prof. Dr. Wilfried Uhring, ICube, University of Strasbourg and CNRS, France
演講摘要: 本講次說明了高速攝影發展現況，講者從高速攝影的歷史開始談起，一直到現今的技術，包含 1878 Eadweard Muybridge 所發展之攝影技術，利用 24 個不同的攝影機，完成一連串高速拍攝的動作，也包含 1886 年左右之 multi lens device 與 single lens with stripping film 技術，到目前之 electronic imaging，講者也提到目前 Ultrahigh speed solid state camera，可以做到 5M fps 的攝影速度，在分析物體快速運動中之變化，相當有幫助，但同時，每秒攝影所得的資料量，也高達 35Tbit，講者表示，展望未來，透過 CMOS Streak imaging 之技術，可以作到 GigaFps 之等級，同時 Vacuum tube ultrafast imaging 與 CMOS ultrafast imaging 的相關技術，將蓬勃發展。
演講投影片: 參見附件一連結[4]

6. Tutorial III(專業課程) 2015/8/26
Predicting Reading Comprehension and Dynamic Text Presentation in eLearning Using Eye Gaze
Prof. Dr. Tom Gedeon, Australian National University, Australia
演講摘要: 隨著眼睛注視探測器(Eye Gaze Sensor)變得便宜，其在數位教育上的應用，也越來越受到重視，本專業課程相當有趣，講者描述了一些透過 Eye Gaze Sensor 擷取讀者研究移動方式，判斷其對該文章的了解程度，例如，如果讀者的視線一直停留在某一個焦點上，或在特定的段落中來回移動，這表示該名讀者，很可能在這些地方，產生了疑問，此時，如果可以透過系統，給予適當的輔助，例如，跳出輔助視窗，輔助按鈕等，便可以將快學習者的學習效率。在該專業課程中，講者提出了許多他們實驗的結果，並顯示，閱讀者其視線的移動方式，確實，會於其對該文章了解程度有相關性，這對數位學習系統的設計者，確實是一個有意義的結果，可以幫助他們設計出更好的數位學習系統，來加快讀者的學習曲線，不過，透過學習小幫手的方式，不預期的跳出輔助視窗，是否會對學習產生干擾，是近一步需要研究之處。

7. Keynote (專題演講) 2015/8/27
題目: Industrial Security
講者: Dr. Rainer Falk, Siemens AG, Corporate Technology, Germany

演講摘要: 講者來自德國 Simens 公司，負責 IT 相關技術與安全議題，根據講者之經驗，隨著物聯網之興起，有越來越多安全上之議題需要討論，特別是網路駭客也逐漸增強其在一些重要基礎建設，大眾生活相關系統之攻擊與破壞，所以，我們必須從不同的方向與角度進行研究，包括資訊系統架構，穩定度分析，系統整合應用分析與設計等，而針對工業界的控制系統，講者特別提到在安全控制上的特殊需求，包括 identification and authentication control, use control, system integrity, data confidentiality, restricted data flow, timely response to events, resource availability，不同層面的設計需求，有不同之資料控管與使用權限上的差異。同時，針對無線感測網路，講者也特別提到一些可能之病毒攻擊樣態與情境，包括 manipulation, interception, replay, user privacy, repudiation, DoS, sleep deprivation, routing security 等，其他在未來可能成為攻擊之系統的包括 Smart Grid, eCar charging security system，講者特別強調，安全系統必須在系統設計階段就應該一併考量，而非等到系統完成或佈建之後，再著手規劃，若要有一個穩定與安全的工業控制系統，必須由除了系統專業領域的專家也需要資訊安全的專家。

演講投影片: 參見附件一連結[5]

8. 重要相關論文摘要整理

題目: Measuring Application Server Availability on the NorNet Core

作者: Sune Jakobsson,

摘要: 本文研究探討了 application server 在 NorNet core test-bed 之可行性，依據作者指稱，NorNet core test-bed 是目前全世界針對 multi-homed system 與 application 最大的測試平台，其目前的發展專注在穩定性與可靠性，在這個研究中，作者提出了一個方法，用來評估該平台對於分散式相關應用之可行性。

9. 重要相關論文摘要整理

題目: On Handling Redundancy for Failure Log Analysis of Cluster Systems

作者: Nentawe Gurumdimma, Arshad Jhumka, Maria Liakata, Edward Chuah and James Browne

摘要: 本文研究探討如何有效利用 System event log 來判斷系統問題。傳統而言，因為硬體與軟體的交互作用，System event log 的內容相當龐大且繁雜，而當中，對於系統診斷有用的資訊僅占一部分，用人工的方式進行篩選與分析，非常沒有效率，針對此問題，本文作者提出一個創新的做法，透過不同的子系統，交查驗證可能與系統產生錯誤有關的 System event log，根據作者的實驗結果顯示，他們所提的方法，比傳統之過濾演算法效果佳。

10. 重要相關論文摘要整理

題目: Trust-based Service Management of Mobile Devices in Ad Hoc Networks

作者: Yating Wang, Ing-Ray Chen, and Jin-Hee Cho

摘要: 本研究針對 traditional mobile ad hoc networks (MANETs)之網路環境，進行可靠度分析，特別是針對以下幾種情境，包含 no centralized authority, dynamically changing topology, limited bandwidth and battery power, limited observations, unreliable communication, 與 malicious nodes。講者同時描述了幾個未來研究之重點方向，包含動態偵測，動態學習，即時決策等等。

三、 心得

1. 透過與會學者建議，思考各種可能之研究方向，包括系統模擬方式、感測器布建方法、通訊模式、資料安全等等，可以為將來系統延伸研究的參考。同時，在報告完畢之後，現場討論相當熱烈，也很榮幸能在 DEPEND 2015，獲最佳論文獎。
2. 在會議晚宴時，與來次哥倫比亞的學者們同桌，互相交流研究心得與教學經驗，它們對於我們的研究內容深感興趣，並表示有機會，可以到他校進行請短期訪問研究。

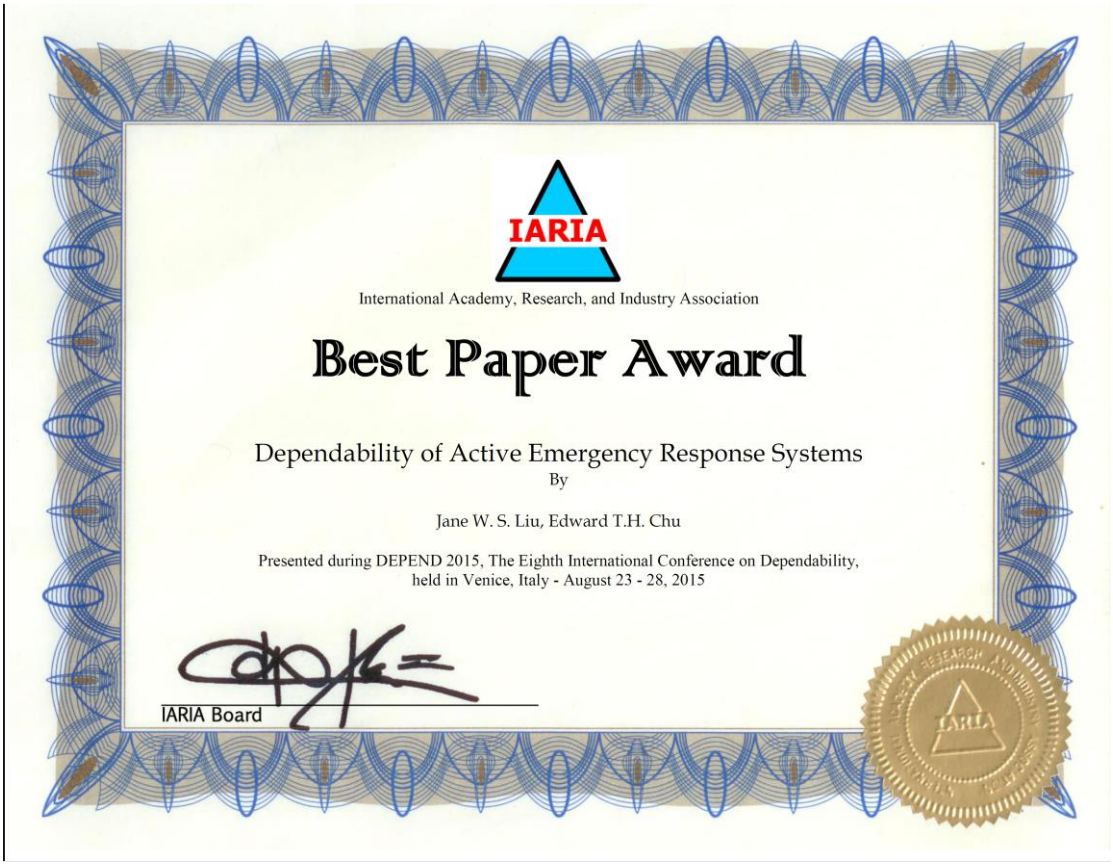
四、 建議事項

1. 從研討會的專業課程、專題演講、論文發表，皆顯示資訊安全在未來資訊社會中，扮演重要腳色，建議加快相關基礎建設與民眾資安教育。
2. 台灣在資訊電機領域的專家學者相當多，建議可以多爭取在台舉辦相關計算機國際會議，以避免旅學者舟車勞頓，並減少經費開銷。
3. 會議中，有許多來自各國的博士研究生參加，大部分的博士研究生，對於台灣的教育環境，並不清楚，建議可以多做宣傳，吸引更多支外籍生前來台灣就讀。

附件一: 會議相關參考資料

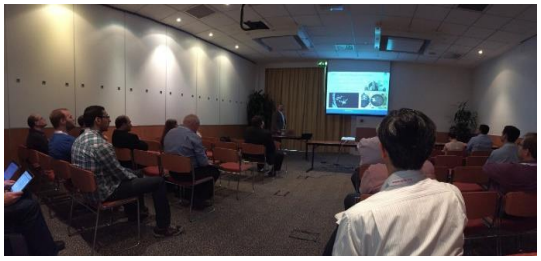
[1]會議論文集
http://www.thinkmind.org/index.php?view=instance&instance=DEPEND+2015
[2] Hans-Joachim Hof, IT security - Quo Vadis?
[3] Arndt Steinke, Technology Platforms and Building Blocks: A Key Element for Shorter Time-to-Market of Innovative Micro-sensors
[4] Wilfried Uhring, High Speed Imaging
[5] Rainer Falk, Industrial Security

附件二: 最佳論文獎獎狀

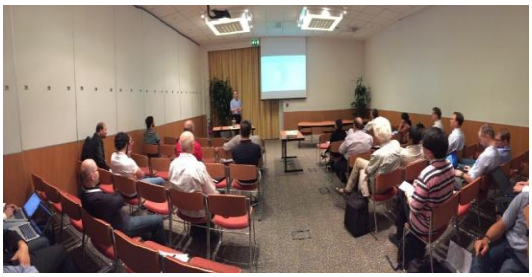


附件三: 活動照片

(a) Dr. Sergey Yurish, Excelera, S. L., Spain 專題演講



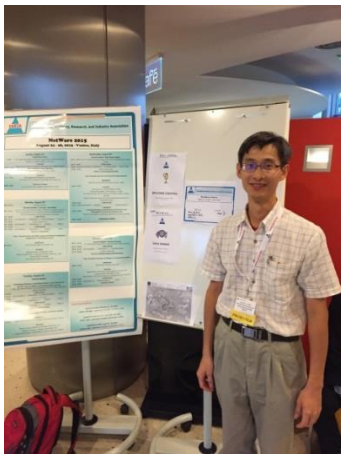
(b) Prof. Dr. Wilfried Uhring, ICube, University of Strasbourg and CNRS, France 專題演講



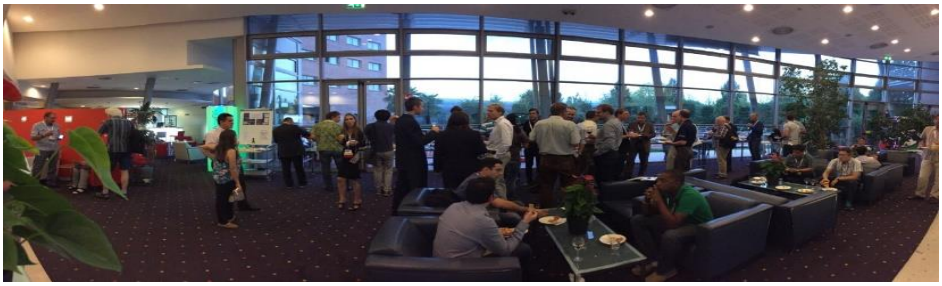
(c) Dr. Rainer Falk, Siemens AG, Corporate Technology, Germany 專題演講

(d) 大會晚宴

(e) 與會相關學者合照



(f) 大會議程看板



(g) 學術交流活動

附件四: 大會議程

The Eighth International Conference on Dependability
DEPEND 2015
August 23 - 28, 2015 - Venice, Italy

Preliminary Program

NetWare 2015
SENSORCOMM 2015 / SENSORDEVICES 2105 / SECURWARE 2015 / AFIN 2015 / DEPEND 2015 / CENICS 2015 / ICQNM 2015 / FASSI 2015
Conference Venue Location
Conference Hotel
NOVOTEL VENEZIA MESTRE CASTELLANA
Via Ceccherini 21
30174 VENEZIA MESTRE
ITALY

Conference rooms Time slots	Room A	Room B	Room C	Room D

Sunday, August 23

12:00	**Registration starts** The registration desk is located in front of the conference rooms Opened during the entire conference
13:30 - 16:00	**Tutorial I** **Smart Sensor Systems Design for Smartphones, Tablets and IoT: New Advanced Design Approach** Dr. Sergey Yurish, Excelera, S. L., Spain
16:00 - 16:15	
16:15 - 18:45	**Tutorial II** **The Long Road of Quantum Computing…** Dr. Thierry Ferrus, Hitachi Cambridge Laboratory, UK
19:00 - 20:00	**Welcome Cocktail** You must have your badge to attend the cocktail

Monday, August 24

09:00 - 09:15	Opening session			
09:15 - 10:15	**Keynote Speaker** **IT security - Quo Vadis?** Prof. Dr. Hans-Joachim Hof, MuSe - Munich IT Security Research Group, Department for Computer Science and Mathematics, Munich University of Applied Sciences, Germany			
10:15 - 10:30	**Coffee Break**			
10:30 - 12:15	SECURWARE 1	SENSORDEV 1	SENSORCOMM 1	CENICS 1
12:15 - 13:45	Lunch on your own			
13:45 - 15:30	SECURWARE 2	SENSORDEV 2	ICQNM 1	FASSI 1
15:30 - 15:45	**Coffee Break**			
15:45 - 17:30	SECURWARE 3	SENSORDEV 3	ICQNM 2	AFIN1
17:30 - 19:15	**Panel on FASSI/AFIN** **Topic: Internet-driven and Web-supported Software Integration: Cooperation in Distributed Teams** **Moderator** Chris Ireland, Open University, UK **Panelists** Mihaela Iridon, Candea LLC, USA Manuel Cabral Reis, University of Trás-os-Montes e Alto Douro/IEETA, Portugal Chris Ireland, Open University, UK			

Tuesday, August 25

09:15 - 10:15	**Keynote Speaker** **Technology Platforms and Building Blocks: A Key Element for Shorter Time-to-Market of Innovative Micro-sensors** Dipl. Ing. Arndt Steinke, CiS Forschungsinstitut für Mikrosensorik GmbH, Germany

10:15 - 10:30	**Coffee Break**			
10:30 - 12:15	SECURWARE 4	SENSORDEV 4	SENSORCOMM 2	FASSI 2
12:15 - 13:45	Lunch on your own			
13:45 - 15:30	DEPEND 1	SENSORDEV 5	ICQNM 3	AFIN 2
15:30 - 15:45	**Coffee Break**			
15:45 - 17:30	SECURWARE 5	SENSORDEV 6	ICQNM4	CENICS 2
17:30 - 19:15	**Panel on ICQNM/CENICS** **Topic: Material Technologies for Mini- and Nano-sensing** **Moderator** Victor Ovchinnikov, MICRONOVA, Aalto University, Finland **Panelists** Thierry Ferrus, Hitachi Cambridge Laboratory, UK Vladimir Privman, Clarkson University, USA Victor Ovchinnikov, MICRONOVA, Aalto University, Finland			

Wednesday, August 26

09:15 - 10:15	**Keynote Speaker** **High Speed Imaging** Prof. Dr. Wilfried Uhring, ICube, University of Strasbourg and CNRS, France			
10:15 - 10:30	**Coffee Break**			
10:30 - 12:15	SECURWARE 6	SENSORDEV 7	SENSORCOMM 3	**Round Table** Quantum: Getting the Momentum?
12:15 - 13:45	Lunch on your own			
13:45 - 15:30	**PANEL on SECURWARE/DEPEND** **Topic: Security and Trust in IoT-based Complex Systems**			

	Moderator Petre Dini, Concordia University, Canada | IARIA **Panelists** Giray Kömürcü, Tubitak-Bilgem, Turkey Vito Santarcangelo, Centro Studi S.r.l., Italia Curtis Busby-Earle, The University of the West Indies at Mona, Jamaica Vladimir Muliukha, Peter the Great St.Petersburg Polytechnic University, Russia			
15:30 - 15:45	**Coffee Break**			
15:45 - 17:30	SECURWARE 7	DEPEND 2		SENSORCOMM 4
17:30 - 19:30	**Tutorial III** **Predicting Reading Comprehension and Dynamic Text Presentation in eLearning Using Eye Gaze** Prof. Dr. Tom Gedeon, Australian National University, Australia			
20:00 - 23:00	**CONFERENCE DINNER**			

Thursday, August 27

09:15 - 10:15	**Keynote Speaker** **Industrial Security** Dr. Rainer Falk, Siemens AG, Corporate Technology, Germany			
10:15 - 10:30	**Coffee Break**			
10:30 - 12:15	SECURWARE 8	SENSORDEV 8	SENSORCOMM 5	
12:15 - 13:45	Lunch on your own			
13:45 - 15:30	**Panel on SENSORCOMM/SENSORDEVICES** **Topic: Sensing Everything: Challenges in Current Environments** **Moderator** David Stork, Rambus Labs, USA			

	Panelists Rupak Kharel, Manchester Metropolitan University, UK Radislav A. Potyrailo, GE Global Research Center, USA Heinz Kohler, Karlsruhe University of Applied Sciences, Germany			
15:30 - 15:45	**Coffee Break**			
15:45 - 17:30	SENSORDEV 9	SENSORCOMM 6	AFIN 3	
17:30 - 18:00	**CLOSING SESSION**			

Friday, August 28

Recommended tourist objectives to be visited on your own:

From: Piazzale Roma
Scuola Grande di San Rocco
Frari Church
Grand Canal by public Vaporetto Lines [from Piazzale Roma]
Rialto Bridge
Food Market of Rialto
Former Financial district of Venice
Fenice Opera House
Church of San Marco
Doges' Palace
San Marco Belltower
San Marco Piazza

DETAILED PROGRAM

Round Table: Quantum: Getting the Momentum?
Thierry Ferrus, Hitachi Cambridge Laboratory, UK
Stefan Schauer, AIT Austrian Institute of Technology GmbH, Austria
Tal Mor, Technion, Israel

AFIN 2015, The Seventh International Conference on Advances in Future Internet

AFIN 1: Internet services and applications I

Session chair: Hiromitsu Shimakawa

The City Tour Service in Mobile Ad-hoc Group
HyunKyung Yoo, YoungMee Shin, Changsup Keum

An Analysis of the Relationship between Human Personality and Favored Location
Ha Yoon Song, Eun Byul Lee
A Web-based System to Manage Primary Students' Homework -- A Case Study for the Teaching of Portuguese
Miguel Candeias, Maria Gentil Reis, Emanuel Peres, Joaquim Escola, Manuel J. C. S. Reis
Embodying Latent Requirements with Unexperienced Attractions through Selection of Travel Point Photographs
Momoko Kato, Kenjo Yasui, Hiromitsu Shimakawa

AFIN 2: Internet services and applications II

Session chair: Mihaela Iridon
Estimating Consumer Inclination for Agricultural Products from Web Browsing History
Riki Tatsuta, Sunao Nakanishi, Yusuke Kajiwara, Hiromitsu Shimakawa
Secure Communication Between OpenFlow Switches and Controllers
Dominik Samociuk
Cloud Assisted Live Video Streaming over DHT Overlay Network
Pheng Un Lim, Hwangkyu Choi

AFIN 3: Internet mechanisms

Session chair: Dominik Samociuk
An Intelligence System based on Social Web Mining and its Application in Health Care in Hong Kong
Kin Keung, Lai, Juan Shi, Gang Chen
Energy- and Priority-Aware Traffic Engineering for Content-Centric Networking
Xu Ling, Yagyu Tomohiko
On Security-Effective Mobility-QoS Management Scheme in Heterogeneous Mobile Networks
Hyeungwoo Lee, Jae-Young Choi, Jongpil Jeong
Delay Constrained ARQ Mechanism for MPEG Media Transport Protocol Based Video Streaming over Internet
Hong-rae Lee, Tae-jun Jung, Kwang-deok Seo, Chang Ki Kim
On Cost-Reduced Channel Changing for Mobile IPTV Services in LTE-Advanced Systems
Hyeungwoo Lee, Jae-Young Choi, Jongpil Jeong

CENICS 2015, The Eighth International Conference on Advances in Circuits, Electronics and Micro-electronics

CENICS 1: Application-oriented electronics

Session chair: Chris Ireland

An Efficient Spike Detection VLSI Architecture Based on Normalized Correlator

Wen-Jyi Hwang, Chun-Fu Lin, Szu-Huai Wang

COTS or Custom Made? Design Decisions for Industrial Control Systems

Falk Salewski

Design Guidelines for Designing High Gain Patch Antenna in the Ku-band

Qasim Umar Khan, Mojeeb Bin Ihsan

Filtering of Magnetic Noise Induced in Magnetometers by Motors of Micro-Rotary Aerial Vehicle

Nathan Unwin, Adam Postula

CENICS 2: Special circuits

Session chair: Falk Salewski

Implementation and Comparison of Conventional and Ordering Based RO-PUFs for Secret Key Generation

Giray Komurcu, Ali Emre Pusane, Gunhan Dundar

Hopf Bifurcation Analysis and Implementation of Single Tunnel Diode Oscillator Circuit

Mustafa Fayez, Mohammad Awwad, Hassan El-Hamouly

Reconfigurable Hyper-Structures for Intrinsic Digital Circuit Evolution

Spyros Kazarlis, John Kalomiros, Vassilios Kalaitzis, Dimitrios Bogas, Paris Mastorokostas, Anastasios Balouktsis, Vassilios Petridis

Design and Implementation of a 94 GHz CMOS Down-Conversion Mixer for Image Radar Sensors

Yo-Sheng Lin, Chien-Chin Wang, Guo-Hao Li, Jay-Min Liu

FORMOSAT-5 PCDU Charge Regulator Circuitry Development [POSTER]

Che Cheng Huang, Jia Jing Yeh, Chien Kai Tseng

DEPEND 2015, The Eighth International Conference on Dependability

DEPEND 1: Dependability facets

Session chair: Eduard Weber

Measuring Application Server Availability on the NorNet Core

Sune Jakobsson

Beyond Integration Readiness Level (IRL): A Multi-Dimensional Framework to Facilitate the Integration of System of Systems

Clarence Eder

On Handling Redundancy for Failure Log Analysis of Cluster Systems
Nentawe Gurumdimma, Arshad Jhumka, Maria Liakata, Edward Chuah, James Browne
An Investigation of the Impact of Double Single Bit-Flip Errors on Program Executions
Fatimah Adamu-Fika, Arshad Jhumka

DEPEND 2: Trust and system dependability

Session chair: Sune Jakobsson
Efficient Simulation of Multiple Faults for Reliability Analysis of Analogue Circuits
Eduard Weber, Klaus Echtle
Reducing the Communication Complexity of Agreement Protocols By Applying A New Signature Scheme called SIGSEAM
Omar Bousbiba
Dependability of Active Emergency Response Systems
Jane W. S. Liu, Edward T.H. Chu
Trust-based Service Management of Mobile Devices in Ad Hoc Networks
Yating Wang, Ing-Ray Chen, Jin-Hee Cho

FASSI 2015, The First International Conference on Fundamentals and Advances in Software Systems Integration

FASSI 1: Process integration

Session chair: Mihaela Iridon
Towards a Metrics Model for DevOps
Jos Trienekens
A Novel Three-layer Architecture for Information System Integration
Kamrul Ahsan, Juha-Miikka Nurmilaakso
Medical Device Software as a Subsystem of an Overall Medical Device: The MDevSPICE® Experience
Fergal McCaffery, Marion Lepmets, Paul Clarke

FASSI 2: Modelling and management

Session chair: Fergal McCaffery
Enterprise Integration Modeling - A Practical Enterprise Data Integration and Synchronization Solution
Mihaela Iridon
Development of the MedITNet Assessment Method Enabling Healthcare Delivery Organisation Self Assessment against IEC 80001-1
Silvana Togneri MacMahon, Fergal McCaffery, Frank Keenan

XML Schema for Implementing Safety Management System in Shipbuilding
Youhee Choi, Byungtae Jang
Acquisition and Analysis Methods of Geographic Space Data from the Internet [PRESENTATION]
Deguo Su, Rong Zhao, Shenghua Xu, Yu Ma, Ximin Cui, Debao Yuan

ICQNM 2015, The Ninth International Conference on Quantum, Nano/Bio, and Micro Technologies

ICQNM 1: Nano technologies

Session chair: Reza Sadr
Naturally Inspired SERS Substrate Properties of Silver Nanoparticles Deposited on TiO2-Coated Insect Wings
Ichiro Tanahashi, Yoshiyuki Harada
Competitive Mechanisms of Resistive Switching in Nanooxide Based Memory Cells
Dmitriy Stremous, Aleksandr Danilyuk, Denis Podryabinkin, Victor Borisenko
Strong Visible Light Emission from Silicon Nanocrystals Embedded into a Silicon Carbide Film
Chul Huh, Tae-Youb Kim, Chang-Geun Ahn, Bong-Kyu Kim

ICQNM 2: Nano and micro materials and properties I

Session chair: Ichiro Tanahashi
Nanoporous Silicon as an Electrode Material for Li-ion Batteries
Andrew Leshok, Dmitriy Sasinovich, Sergey Lazarouk, Victor Borisenko
Challenges in Modeling Delayed Erosion due to Degradation of Novel Polyanhydride Biomaterials
Vladimir Privman, Sergii Domanskyi, Katie Poetz, Devon Shipp
Dependence of Thermal Conductivity of Amorphous Si and Ge Thin Films on Film Thickness and Deposition Conditions [POSTER]
Yibin Xu, Tianzhuo Zhan, Masahiro Goto
Optimization of p, n-type Thermoelectric Properties of Bismuth Telluride Thin Films by Combinatorial Sputter Coating System [POSTER]
Masahiro Goto, Michiko Sasaki, Yibin Xu, Yukihiro Isoda, Masahiro Tosa, Takao Mori
n-PIV Measurement of Nanofluids in the Wall Region [PRESENTATION]
Anoop Kanjirakat, Reza Sadr

ICQNM 3: Nano and micro materials and properties II

Session chair: Vladimir Privman
Reflection from Irregular Array of Silver Nanoparticles on Multilayer Substrate
Victor Ovchinnikov

Clamped-Clamped Microbeam Resonators of Enhanced Higher Order-Modes Response and Wide Bandwidth
Nizar Jaber, Abdallah Ramini, Mohammad Younis
The Studies of Particle Diffusion on One-Dimensional Sawtooth Lattice [PRESENTATION]
Alexander Tarasenko, Lubomir Jastrabik
Synthesis and Characterization of Si2O5 Nanosheet Sol from Kanemite [POSTER]
Dae Sung Kim, Hyun Jin Lee
Density Functional Study of Optical Properties of Titanium Carbide Nanowire [PRESENTATION]
Mahmoud Jafari, Sara Ghanad

ICQNM 4: Quantum security and technologies

Session chair: Petre Dini
On the Robustness of Quantum Key Distribution with Classical Alice (photons-based protocol)
Michel Boyer, Tal Mor
A Protocol for Synchronizing Quantum-Derived Keys in IPsec and its Implementation
Stefan Marksteiner, Oliver Maurhart
BB84 Quantum Key Distribution with Intrinsic Authentication
Stefan Rass, Sandra König, Stefan Schauer
An Improved Hirata Algorithm for Quantum Circuit LNN Conversion.
Angel Amarilla, Joaquin Lima, Benjamín Barán
Charge Qubits in Doped Quantum Dots : Effects on Computation and Coherence
Thierry Ferrus, Tsung-Yeh Yang, Yu Yamaoka, Tomohiro Kambara, Tetsuo Kodera, Shunri Oda, David Arfon Williams
A Parallel Approach to Convert Quantum Circuits to an LNN Architecture
Edgar Meza, Joni Fernández, Benjamín Barán, Joaquín Lima

SECURWARE 2015, The Ninth International Conference on Emerging Security Information, Systems and Technologies

SECURWARE 1: Security management

Session chair: Petr Zacek
Risk Assessment Quantification in Hybrid Cloud Configuration
Shigeaki Tanimoto, Tsutomu Konosu, Motoi Iwashita, Hiroyuki Sato, Atsushi Kanai
Network Security Incident Detection Based on Network Topology Patterns
Juris Viksna, Karlis Freivalds, Mikus Grasmanis, Peteris Rucevskis, Baiba Kaskina, Varis Teivans

Traffic Management and Access Control in Space Experiment “Kontur-2”
Vladimir Muiukha, Vladimir Zaborovsky, Alexander Ilyashenko, Alexander Silinenko
Secure Scrum: Development of Secure Software with Scrum
Christoph Pohl, Hans-Joachim Hof
Personality Typology as Factor Influencing Information Environment of the Security Forces Members [PRESENTATION]
Alena Paduchova, Ludek Lukas

SECURWARE 2: Cryptography

Session chair: Hans-Joachim Hof
Enhanced Authenticated Encryption Scheme
Jamal Azzam
New Directions in Applying Physical Unclonable Functions
Rainer Falk, Steffen Fries
The Random Gate Principle
Sheagan John, Curtis Busby-Earle
Comparison of the PM-DC-LM Mode with the Other Common Block Cipher Modes of Operation
Petr Zacek, Roman Jasek, David Malanik

SECURWARE 3: Metrics

Session chair: Rainer Falk
An Improved Threshold Proxy Signature Scheme
Akanksha Gupta, Prakash D. Vyavahare, Manish Panchal
The Use of Acceptance Test-Driven Development in the Construction of Cryptographic Software
Alexandre Braga, Daniela Schwab, André Vannucci
Secret Sharing Schemes Threshold Determination
Armindo Guerra Jr., Ricardo Felipe Custodio
Enterprise Security Metrics with the ADVISE Meta Model Formalism
Ken Keefe, Brett Feddersen, William Sanders, Carol Muehrcke, Donald Parks, Andrew Crapo, Alfredo Gabaldon, Ravi Palla

SECURWARE 4: Security frameworks, architectures and protocols I

Session chair: Ken Keefe
Implementation Issues in the Construction of an Application Framework for Secure SMS Messages on Android Smartphones
Alexandre Braga, Romulo Zanco Neto, André Vannucci, Ricardo Hiramatsu
A Review and Analysis on Heartbleed on Italian Websites, a Year Later
Vito Santarcangelo, Giuseppe Oddo, Domenico Di Carlo, Fabrizio Valenti, Imran Tariq, Claudio Fornaro

A Detection and Prevention Algorithm for Single and Cooperative Black hole Attacks in AODV MANETs
Seed Khalil, Noureldien Abdelrahman
A Brief Survey of Nonces and Nonce Usage
Geir Køien

SECURWARE 5: Security frameworks, architectures and protocols II

Session chair: Vito Santarcangelo
A Model for Conducting Security Assessment within an Organisation
Nor Fatimah Awang, Azizah Abd Manaf
Cloud Card Compliance Checklist: An Efficient Tool for Securing Deployment Card Solutions on the Cloud
Hassan El Alloussi, Laila Fetjah, Abdelhak Chaichaa
Ceremony Analysis Meets Verifiable Voting: Individual Verifiability in Helios
Taciane Martimiano, Eduardo dos Santos, Maina Olembo, Jean Everson Martina, Ricardo Alexandre Reinaldo de Moraes
Mobile Agent Security Using Reference Monitor-based Security Framework
Sandhya Armoogum, Nawaz Mohamudally, Nimal Nissanke

SECURWARE 6: Malware and anti-malware

Session chair: Taciane Martimiano
An IDS for Browser Hijacking
Diogo Monica, Carlos Ribeiro
Monitoring of Malware Communication Channels
Radovan Holik, Roman Jašek
Organic Principles to Counter Malware in Automotive Environments
Robert Altschaffel, Sven Kuhlmann, Jana Dittmann, Tobias Hoppe
Apate - A Linux Kernel Module for High Interaction Honeypots
Christoph Pohl, Michael Meier, Hans-Joachim Hof

SECURWARE 7: Smart home security

Session chair: Robert Altschaffel
Automatic Human Tracking using Localization of Neighbor Node Calculation
Tappei Yotsumoto, Kozo Tanigawa, Miki Tsuji, Kenichi Takahashi, Takao Kawamura, Kazunori Sugahara
Implementation of a Generic ICT Risk Model using Graph Databases
Stefan Schiebeck, Martin Latzenhofer, Brigitte Palensky, Stefan Schauer, Gerald Quirchmayr, Thomas Benesch, Johannes Göllner, Christian Meurers, Ingo Mayr
Reduction of Neighbor Node Calculations for Automatic Human Tracking System
Miki Tsuji, Tappei Yotsumoto, Kenichi Takahashi, Kozo Tanigawa, Takao Kawamura, Kazunori Sugahara

SECURWARE 8: Information security

Session chair: Stefan Schauer

Overview on Security Approaches in Intelligent Transportation Systems

Christoph Ponikwar, Hans-Joachim Hof

A Novel Financial Instrument to Incentivize Investments in Information Security Controls and Mitigate Residual Risk

Pankaj Pandey, Steven De Haes

You Are Who You Know - Leveraging Webs-of-trust for Authentication in Identity Federations

Bob Hulsebosch, Arnout Van Velzen, Maarten Wegdam, Martijn Oostdijk, Remco Poortinga-van Wijnen, Joost Van Dijk

Different Aproaches to Security Incidents and Proposal of Severity Assessment of Security Incident

Lukas Kralik, Roman Senkerik, Petr Stipek

SENSORCOMM 2015, The Ninth International Conference on Sensor Technologies and Applications

SENSORCOMM 1: Energy, management and control of sensor networks

Session chair: Haytham Elias

A Real-Time Bridge Scouring Monitoring System Based on Accelerometer Sensors

Chih-Chyau Yang, Yi-Jie Hsieh, Ssu-Ying Chen, Wen-Ching Chen, Chih-Ting Kuo, Chen-Chia Chen, Chien-Ming Wu, Chun-Ming Huang

Using Energy Budgets to Reach Lifetime Goals while Compensating Dynamic Effects

André Sieber, Jörg Nolte, Reinhardt Karnapke

An Optimized Temperature Sensing Period for Battery Lifetime in Wireless Sensor Network

Seongman Jang, Keonhee Cho, Tacklim Lee, Byeongkwan Kang, Sehyun Park

Design and Implementation of Indoor Position Estimation System using Drone for Industrial Security

Sanghoon Lee, Seonki Jeon, Myeong-in Choi, Byeongkwan Kang, Sehyun Park

SENSORCOMM 2: Sensor circuits and sensor devices

Session chair: Reinhardt Karnapke

Edge-Based Technique for Ultra-Fast Gating of Large Array Imagers

Octavian Maciu, Wilfried Uhring, Jean-Pierre Le Normand, Jean-Baptiste Kammerer, Foudil Dadouche

Design Methodology of TDC on Low Cost FPGA Targets

Foudil Dadouche, Thimothé Turko, Wilfried Uhring, Imane Malass, Jérémy Bartringer, Jean-Pierre Le Normand

Temperature Sensor for Hydro Generator Bearings using Thermally Regenerated Fiber Bragg Gratings
Erlon Vagner da Silva, Uilian José Dreyer, Kleiton de Moraes Souza, Cicero Martelli, Valmir de Oliveira, Hypolito Kalinowski, Jean Carlos Cardozo da Silva
A Novel Elliptically-Slotted Patch Antenna-based Biosensor Design
Sunday Ekpo, Vijayalakshmi Velusamy, Rupak Kharel
Integrated Smart Glove for Hand Motion Monitoring
Brendan O'Flynn, Javier Torres Sanchez, James Connolly, Joan Condell, Kevin Curran, Philip Gardiner, Barry Downes

SENSORCOMM 3: Architectures, protocols and algorithms of sensor networks

Session chair: Chiu-Kuo Liang
Ultra-miniature, Computationally Efficient Diffractive Visual-bar-position Sensor
Mehjabin Monjur, Leonidas Spinoulas, Patrick R. Gill, David G. Stork
A Distributed Scheduling Algorithm to Improve Lifetime in Wireless Sensor Network based on Geometric Placement of Sensors with Coverage and Connectivity Constraints
Diéry Ngom, Pascal Lorenz, Bamba Gueye
An Algorithm to Evaluate and Build Schedules for a Distributed Sensor System with Respect to Clock Synchronization
Andreas Puhm, Michael Kramer, Martin Horauer
Self-Stabilizing Structures for Data Gathering in Wireless Sensor Networks
Sandra Beyer, Stefan Lohs, Jörg Nolte, Reinhardt Karnapke, Gerry Siegemund
Wireless Sensor Networks in Structural Health Monitoring: a Modular Approach
Fabio Angeletti, Mario Paoli, Ugo Maria Colesanti, Andrea Vitaletti

SENSORCOMM 4: Deployments and implementations of sensor networks

Session chair: Andreas Puhm
Building the O-Life Franco-Lebanese Environmental Observatory Using Sensor Web Enablement Framework: Challenges and First Approach
Hicham Hajj Hassan, Anne Laurent, Nicolas Arnaud, Olivier Lobry, Laurent Drapeau, Carla Khater
A Virtual Force Movement Scheme for Sensor Deployment in Directional Sensor Networks
Chiu-Kuo Liang, Yu-Shu Lo
Implementation of an OFDM Acoustic Modem Based on TMS320F28377D [POSTER]
Jun-Ho Jeon, Hyowon An, Sung-Joon Park

SENSORCOMM 5: Data allocation and information in sensor networks

Session chair: Umair Najeeb Mughal

Classification of Human Interactions with Tools Using a Tool-mounted Wireless Sensor Node to Support Sustainable Manufacturing
Andreas Tilhein, The Duy Nguyen, Stephan Benecke, Eduard Wagner, Jörg Krüger, Klaus Dieter Lang
Evidential Network for Multi-Sensor Fusion in an Uncertain Environment
Eric Villeneuve, François Pérès, Cedrik Beler, Vicente Gonzalez-Prida
Near Real-Time Oceanographic Data Management through Sensor Web Enablement (SWE) Standards
Elena Partescano, Alessandra Giorgetti, Alberto Brosich
Feature Selection and Interpretation of GSR and ECG Sensor Data in Biofeedback Stress Monitoring
Tom Gedeon, Xuanying Zhu, Leana Copeland, Nandita Sharma

SENSORCOMM 6: Atmospheric Icing and Sensing

Session chair: Tom Gedeon
Using Mutual Charge Scheme to Measure Salinity of Ice
Umair Najeeb Mughal, Bhushan Nikumbh
Infrared Thermal Signature Evaluation of a Pure Ice Block
Taimur Rashid, Hassan A. Khawaja, Kåre Edvarsen, Umair N. Mughal

SENSORDEVICES 2015, The Sixth International Conference on Sensor Device Technologies and Applications

SENSORDEVICES 1: Sensors domain-oriented devices, technologies, and applications

Session chair: Frieder Lucklum
Characterization and Simulation of PbS Photoconductors Prepared by Chemical Bath Deposition
Said Kouissa, Amor Djemel, Mohammed Salah Aida, Mohammed Abdou Djouadi
Automation and Control in Engineering: A Global Approach with Educational Kits
Filomena Soares, Celina Leão, José Machado, Vítor Carvalho
Simple and Precise Analog Arcsine Synthesis Applied to Amplitude to Phase Conversion for Hall Effect Position Sensors
Mohieddine Benammar, Antonio Jr. Gonzales
An Intelligent and Customized Electrical Conductivity Sensor to Evaluate the Response Time of a Direct Injection System
Heitor Mercaldi, Caio Fujiwara, Elmer Penaloza, Vilma Oliveira, Paulo Cruvinel
Underwater Oil Spill Imaging via UV LED-induced Fluorescence
Sangwoo Oh, Moonjin Lee

SENSORDEVICES 2: Sensor devices I

Session chair: Vitor Carvalho

New Methods for the Preparation of Partial Selective Redox Electrodes for the Determination of H2O2

Winfried Vonau, Manfred Decker, Jens Zosel, Kristina Ahlborn, Frank Gerlach, Steffen Weißmantel

Design, Analysis and Modelling of a Capacitive-Based Collision Detector for 3-DOF Hybrid Robotic Manipulator

Dan Zhang, Bin Wei

Capillary Rise Multiparametric Sensor for Testing of Diesel and Biodiesel Fuel

Michal Borecki, Jan Szmidt, Michael L. Korwin-Pawlowski, Andrzej Kociubinski, Mariusz Duk, Jaroslaw Frydrych, Przemyslaw Prus

UV Irradiation to Increase the Spectral Sensitivity of a-SiC:H pi'n/pin Photodiode Beyond the Visible Spectrum Light

Manuela Vieira, Manuel Augusto Vieira, Vitor Silva, Paula Louro, Alessandro Fantoni, Isabel Rodrigues

Silicon Based Temperature Sensors with Extended Temperature Range and Simple One-point Calibration

Ingo Tobehn, Arndt Steinke, Andreas Albrecht, Horst Hansch, Michael Kunze, Thomas Ortlepp

SENSORDEVICES 3: Sensor devices II

Session chair: Winfried Vonau

Performance Analysis of Commercial Accelerometers of Different Technologies

Stephan Elies, Stefan Ebenhöch

2D and 3D Phononic Crystals - A New Class of (Bio)Chemical Microsensors and Sensor Networks

Ralf Lucklum, Mikhail Zubtsov, Yan Pennec, Frieder Lucklum

A Dual Grating Fiber Sensor to Discriminate Axial and Radial Strains

Romain Guyard, Dominique Leduc, Yann Lecieux, Cyril Lupi

A Multi-directional Thermal Flow Sensor Fabricated on Flexible Substrate

Anastasios Moschos, Dimitrios Barmpakos, Grigoris Kaltsas

SMARTER SI Application Experiments Based on Building Blocks of Different European RTOs and SMEs [POSTER]

Arndt Steinke, Arndt Albrecht, Thomas Ortlepp, Rainer Günzler, Stephan Karmann

SENSORDEVICES 4: Gas sensors I

Session chair: Heinz Kohler

Development of a Novel Approach for Detecting Wood Decays in Living Trees Using Gas-Sensor Arrays
Manuela Baietto, Sofia Aquaro, Alphus Dan Wilson, Letizia Pozzi, Daniele Bassi
Bayesian Inference using Spike Latency Codes for Quantification of Health Endangering Formaldehyde
Muhammad Hassan, Amine Bermak, Amine Ait Si Ali, Abbes Amira
Application of Cavity Enhanced Absorption Spectroscopy in Detection of Selected Gas Pollutants
Zbigniew Bielecki, Jacek Wojtas, Janusz Mikolajczyk, Sylwester Chojnowski
Reducing System Response Time and Noise of Electrochemical Gas Sensors - Discussed for Propofol Monitoring in Breathing Gas
Dammon Ziaian, Philipp Rostalski, Andreas Hengstenberg, Stefan Zimmermann

SENSORDEVICES 5: Gas sensors II

Session chair: Zbigniew Bielecki
Early Detection of Emissions Preceding Fires from Overloaded Electric Cables: Approach with Thermo-Cyclically Operated MOG SensorArrays and Numerical Signal Analysis
Rolf Seifert, Hubert Keller, Navas Illyaskutty, Jens Knoblauch, Heinz Kohler
Higly Sensitive Pt-TiO2-Pt Sandwich-type Metal Oxide Gas Sensors of Hydrogen
Ondrej Krsko, Tomas Plecenik, Azhar ALi Haidry, Pavol Durina, Martin Truchly, Branislav Grancic, Maros Gregor, Tomas Roch, Leonid Satrapinskyy, Marian Mikula, Peter Kus, Andrej Plecenik, Martin Mosko, Antonia Moskova
Surface Decoration Method for E-Textile Sensor [POSTER]
Hyung-Kun Lee

SENSORDEVICES 6: Medical devices and sensors applications

Session chair: Manuel Cabral-Reis
High Frequency Thick Film Ultrasonic Transducers Used for Flow-mediated Vasodilatation of the Radial Artery
Andrzej Nowicki, Marcin Lewandowski, Ihor Trots, Robert Olszewski
Figuring Out Conscientious Degree from Brightness Distribution in IADL
Shota Shimayoshi, Shun Okamura, Yusuke Kajiwara, Hiromitsu Shimakawa
Tactile Handle for an Instrumented Cane
Andrés Trujillo-León, Ragou Ady, Fernando Vidal-Verdú, Wael Bachta
Analysis of the Effect of Visuals on the Stabilization of Trunk Muscles During Rotational Motion
Nika Zolfaghari, Kristiina M. Valter McConville, Shahini Sirikantharajah
Controlled Cryogenic Ablation Using Ultrasonic Sensing
Assaf Sharon, Gabor Kosa

SENSORDEVICES 7: Sensor-based localization and tracking technologies

Session chair: Paulo E. Cruvinel

Key Features to Classify Shopping Customer Status from Gait Vector Acquired with RFID Technology

Yoshihro Uemura, Yusuke Kajiwara, Hiromitsu Shimakawa

EEG Sensor Based Semi-Supervised Inattention Prediction Framework For Unmanned Aerial Vehicles

Yerim Choi, Jonghun Park, Dongmin Shin

A GSM-based System for the Tracking of Birds

Samuel Matos, Raul Morais, Pedro Araújo, Paulo Tenreiro, Paulo Ferreira, Manuel Reis

The Experimental Study of Moving Targets Radio Shadows using GPS Signals

Christo Kabakchiev, Ivan G. Garvanov, Vera Behar, Dorina Kabakchieva

SENSORDEVICES 8: Sensor device technologies

Session chair: Arndt Steinke

Synthesis of Amide Functionalized Graphene Oxide for Humidity Sensing Application

Dinesh Kumar, Sumita Rani

Navigating for Visually Handicapped to Walk Alone with RFID Technologies

Masayoshi Asano, Yusuke Kajiwara, Hiromitsu Shimakawa

Identification of Personal Actions with Brightness Distribution Sensors to Harmonize Domestic Affairs

Nobuaki Takaoka, Yusuke Kajiwara, Hiromitsu Shimakawa

Macropixel Compressive Sensing Reconstruction of Spectral Images Sensed by Multispectral Filter Array-based Sensors

Yuri Mejia, Fernando Rojas, Henry Arguello

Receiver Design of Passive UHF RFID Sensor Platform for Gas Identification

Muhammad Ali Akbar, Amine Ait Si Ali, Abbes Amira, Mohieddine Benammar, Faycal Bensaali, Mohamed Zgaren, Mohamad Sawan, Amine Bermak

SENSORDEVICES 9: Sensors and Transducers for Non-Destructive Testing

Session chair: Sergey Yurish

Inspection and Visualization Method for the Internal Structure of Spot-Welded Three-Steel Sheet Using Eddy Current Testing

Keisyu Shiga, Song Nannan, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada

Development of the Detecting System for Steel Plate with Backside Defect Using an Array of AMR Sensor

Koji Morita, Keishu Shiga, Yuta Haga, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada

Analysis of the Planar Electrode Morphology for Capacitive Chemical Sensors

Luiz Eduardo Bento Ribeiro, Fabiano Fruett