

出國報告(出國類別：其他-國際會議)

參加 2016 STAMP Workshop、SUNBELT
CONFERENCE 及 12th Global Congress on Process
Safety 研討會

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出國期間：105 年 3 月 15 日至 105 年 4 月 15 日

報告日期：105 年 8 月 9 日

摘要

本次藉休假研究赴美國參加 3 個研討會，包括 2016 STAMP Workshop、2016 SUNBELT CONFERENCE 及 12th Global Congress on Process Safety，主要乃為了持續發展研究領域，瞭解系統理論事故模式及程序使用於各領域之危害分析與風險評估，其為 MIT Levenson 教授發展及結合系統動力學於個人機介而衍生之各類型風險評估及其新發展教學模組及研究成果，SUNBELT CONFERENCE 為社會科學將社會網絡理論於不同研究主題，其連結網路模式與探討及善用人類行為資訊。

藉由從全球石化安全專家相關研究發表及實務交流，瞭解如可燃性粉塵及石化工業領域之最新研究成果及資訊。此次並分別於 2016 STAMP Workshop 研討會及 12th Global Congress on Process Safety 會議，發表一份本團隊研究，後續會將此行參與各研討會之收穫，陸續整理加入未來研究，持續發表文章。

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一、前言

本次本人藉休假研究赴美國共計參加三個研討會，2016 STAMP Workshop 探討運用系統理論事故模式及程序(Systems-Theoretic Accident Modeling and Processes, STAMP)延伸而出之相關研究，舉辦會議地點位於麻州劍橋市的麻省理工學院，本次與會參與教學除瞭解 STAMP 使用方式外，並聆聽報告於各領域之危害分析與風險評估的優勢，STAMP 結合 3 系統動力學(System Dynamics)衍生之各類型風險評估並已發展出應變模組，也期能將此次會議所得收獲，以協助我國業界能靈活運用於人機介面及廠場風險評估方面。

SUNBELT CONFERENCE 研討會是國際社會網絡學會(International Network for Social Network Analysis, INSNA)於加州紐波特海灘的萬豪酒店舉辦，藉此會議有許多不同社會科學領域學者發表社會網絡理論(Social Network Theory)之研究，並了解於各領域學科之應用研究文章之契機，瞭解社會網絡理論於不同研究主題之連結模式與如何應用。

全球製程安全會議 (The Global Congress on Process Safety, GCPS)本年度為第 12 屆，於德州休士頓舉辦，因該會議為全球國際製程安全領域規模最大的會議之故，所以與會人士及講師皆是製程安全相關領域之專家學者，藉著參與會議之良機，瞭解全球學者專家。許多領域如於可燃性粉塵及石化工業領域之最新研究成果及資訊，及相關化工安全規範，包括 US EPA 及 US OSHA 於製程安全的最新動向。

二、過程

本人於 3 月 20 日赴美國波士頓地區參與 2016STAMP Workshop 研討會，本次研討會於美國馬薩諸薩州劍橋市的麻省理工學院舉辦，該會議主要探討基於運用系統理論事故模式及程序 (Systems-Theoretic Accident Modeling and Processes, 下文以 STAMP 簡稱之) 延伸而出之相關研究；STAMP 是由麻省理工學院 Leveson 教授提出的一種嶄新之危害分析方法，目前已廣泛被應用於航空、醫療、汽車及船舶等各產業領域上，本人除參加研討會外，並於會上發表研究報告「使用 STPA 分析人與工程系統之互動(Using STPA to Analyze Human Interactions with Engineered Systems)」，該研究報告主要是探討運用系統化之方法，說明及細分電梯運行時各因子之因果關係，並量化欲討論區塊及建構系統模式，隨即定義其系統危害，最終經由 STPA 分析使用人機介面操作電梯時，電梯的失控行為與系統危害因素有哪些，並闡釋這些因素導致事故發生之原因及訂定安全限制來減少危害發生，本次並於第三天海報展示時，發表主題為指導碩班學生論文為一部份，著重於電梯之分析。

於 4 月 5 日起至美國加州紐波特參加第三十六屆 SUNBELT CONFERENCE，本次主辦單位為國際社會網絡學會(International Network for Social Network Analysis, INSNA)，該協會是世界著名的社會網路分析組織，與會人員大多數是社會學專家，其中也不乏數學專家及統計學專家，但隨著社會網路理論被廣泛應用於各領域研究後，與會人員漸漸走向多元化，會議主題涉及社會學、管理學、政治學、心理學、生物資訊學及地理學科等專業領域，也藉著邀請許多各學科專家發表其研究成果及交流應用範疇，進而提升與會人士能於各自領域中之專業能力，近年本人指導之碩士論文「以社會網路理論探討兩石化公司之環安衛管理」、「某工業區企業環安衛知識及行動傳遞『社會網路』之探討」、「以社會網路理論探討兩家企業的環安衛管理系統之運作差異」等碩士論文均與本次研討會內容相關。

於 4 月 10 日起赴德州休士頓參與第 12 屆全球製程安全會議(Global process safety Conference,GCPS)，為製程安全領域首屈一指之會議，舉辦時間由 105 年 4 月 10 日至 105 年 4 月 13 日，有來自全球 30 多個國家及地區的 2000 多位專家學者與會，並廣邀全球製程安全領域相關學者發表最新之研究報告，藉由會議中的報告及交流討論，達到教學相長之目的，讓與會者能夠瞭解化工製程安全之最新發展趨勢，並將參與會議所汲取之新知，應用於製程安全上，本次會議主題包含 Committed Culture - Creating Felt Leadership、Human Factors in Chemical Process Safety、Combustible Dusts、Risk Based Approaches to Relief Design 等多項製程安全相關主題，本人並口頭發表” Using Social Network Theory to Analyze the effectiveness of

Environment, Safety and Health Management for Two Petrol-Chemical Companies)”(附錄 6)，此次發表，並獲 Process Safety Progress(PSP)期刊主編東北大學 Ron Wille 教授邀請整理內容並投稿至其期刊，目前已完成整理及寄出，待審查中。

三、心得：

一、 2016STAMP Workshop 研討會相關議題研討及成果發表

本次 2016STAMP Workshop 研討會是麻省理工學院 Leveson 教授舉辦之第六屆，該會議主要探討及運用 Leveson 教授發展之系統理論事故模式及程序 (Systems-Theoretic Accident Modeling and Processes, 下文以 STAMP 簡稱之) 及其延伸出之相關研究。自 STAMP 由麻省理工學院 Leveson 教授提出這種嶄新之危害分析方法，目前已廣泛被應用於航空、醫療、汽車及船舶等各產業領域上，其與傳統分析方法不同之處，在於 STAMP 於分析系統失效時，是該系統視為一個整體，並把安全作為一個控制問題進行處理，STAMP 認為安全是於某特定環境下，系統元件間互相影響而呈現出之特性，該特性受系統元件行為約束之控制，而事故發生原因中除了設備因素或人為疏失外，還應包含系統元件間之非功能互相作用此因素，而該因素誘發之事故便稱為系統事故，系統事故便是因缺少適當控制，以有效地約束元件間之交互而造成。故運用 STAMP 主要目的就是辨識及消除 (或降低) 元件間的不安全交互作用，以避免事故發生。因會議議題眾多，故僅列出部分議程之摘要範例：

1. 使用 STPA 進行風險管理(Risk management Using STPA)：

概述：一般而言風險管理主要依序分為風險辨識、風險評估、針對風險制定應變措施及制定應變與預防措施等程序，而上述最重要的階段即是風險辨識。

本議題旨在說明將基於 STAMP 理論為所發展出來之系統理論程序分析 (Systems Theoretic Process Analysis, 下文以 STPA 簡稱之)，運用於風險管理中時，能有效地辨識出存在之風險及任何可能導致風險發生的因子，並於文中列出與傳統之風險辨識方法 (如經驗法則、回顧可能發生之風險及腦力激盪等) 之差異。

2. 飛機防排煙控制系統的發展方法 (A Systems Approach to the Development of an Aircraft Smoke Control System)：

概述：隨著飛航安全科技之發展，應用於飛航安全控制系統的軟體越來越多樣化，也使得其系統組件更加複雜，導致產生許多非元件故障，卻發生意外之潛在風險出現，如軟體間指令相互干擾等因素。

本研究針對飛航之安全控制系統，採用 STPA 擴展了傳統的風險評估方法，包括評估元件間之交互關係、人為疏失、軟體錯誤等方面，進而達到有效提升飛航安全。

3. 靜脈注射病患自我控制止痛法之 STPA 分析 (STPA Analysis of Intravenous Patient-Controlled Analgesia)：

概述：根據美國食品藥物管理局 (Food and Drug Administration, FDA) 統計，2005 至 2009 年共有約 500 名靜脈注射病患因故死亡，其中約 67% 為設備因素 (如針管、夾鉗及注射器

等), 33% 是人為疏失(如劑量錯誤及藥物混搭等)本研究即是探討運用 STPA, 進行綜合臨床環境(Integrated Clinical Environment, ICE)之風險管理。

4. STAMP 之新應用：工作場所安全、工程管理、領先指標 (New Applications of STAMP: Workplace safety, Engineering Management, Leading Indicators)：

概述：工作場所安全之首要目標是於事故發生之前確認其潛在風險，但以往使用之風險分析方法因受限於技術之故，大多數依靠定量之度量，僅能做出概率之評估報告，較為無法有效的確認其事故風險因子。

本議題介紹了一種新的評估方法-STAMP，其基於系統性管控之原則，採用有系統式的評估方法，而不是傳統的可靠性理論，故能控管事故發生之因果關係，包括複雜之組件故障，預期之操失敗事件或更為複雜的原因，更能徹底辨識特定系統之風險和事故發生之可能性，並藉此設計完整工程管理架構，以利廠場管理及監督。

本次與會除了汲取 2016STAMP Workshop 研討會研究成果及最新應用資訊外，本人並於 3 月 23 日發表研究報告「使用 STPA 分析人與工程系統之互動(Using STPA to Analyze Human Interactions with Engineered Systems)」，該研究報告主要是探討運用系統化之方法，說明及細分電梯運行時各因子之因果關係，並量化欲討論區塊及建構系統模式，隨即定義其系統危害，最終經由 STPA 分析使用人機介面操作電梯時，電梯的失控行為與系統危害因素有哪些，並闡釋這些因素導致事故發生之原因及訂定安全限制來減少危害發生。

本人倡導學生林益增之論文研究以系統理論 STAMP 分析方法 STPA，分析人機介面操作系統的自動控制電梯及其他，雖然 STPA 方法利於探討各元件間交互關係，但尚欠缺如何評估各元件互動產生的危害之準則，因而研究也透過系統模擬軟體 VENSIM 搭配 STPA 分析，由因果關係圖建構不安全控制行為表，並建議安全限制，以降低系統潛在性風險其研究結果與討論於電梯部份如下述所示：

1. 系統以電梯升降速度為指標，定義系統危害結果發現電梯升降模擬曲線呈 S 型增長，上升及下降載重分別於額定載重 167% 及 210% 時會達電動機最大負載 (系統乘載力上限)，電梯載重達 227% 時電梯會失速下滑。
2. 用 STPA 方法分析結果表示多數不安全控制皆會由感應器故障或因訊號延遲產生，如載重感應器故障造成電梯超重後乘客透過人機介面控制升降，電梯仍能執行運送作業；水平感應器故障造成乘客在電梯運行時透過控制面板誤按車門開啟鍵，電梯車門隨即開啟，需定期校正電梯感應器及增設車門斷電裝置，才能確保電梯升降裝置使用上之安全性。

3. 系統模式與 STPA 比較結果顯示人機介面存在電子訊號輸入或輸出延遲、控制盤受到雜訊干擾、鋼索滑動、電梯載重及電動機輸出馬力隨電梯載重不同而跟著變化等誤差，長久累積導致電梯與目標樓層在行進時，實際距離與控制盤運算的距離有些微的差距而產生了電梯開門後下滑或上升的情況。

本次發表時有權位學者及其他公司人員洽問，尤其是一位來自全球最大電梯製造商 Otis，交流了其安全設計甚有同感。

二、 SUNBELT CONFERENCE 研討會相關議題研討

各種網絡是企業接近知識、資源、市場及技術的一項捷徑。而資料(data)、資訊(information)等資源皆屬知識的範疇，每種資源交換都是一種「社會網絡關係(social exchange relations)」。

組織中，重要的工作皆是倚靠員工之間的社會網路(social network)完成的。組織內之知識分享為一個組織成員間經驗、價值、文字、認知的交流過程，此種分享過程是建立在人際關係基礎之上。社會網絡(social network)是社會學中一項社會結構的概念，而社會網絡分析(social network analysis)則是分析社會結構和社會關係的一種方法。在知識經濟(Knowledge economy)的時代中，許多領域的專家學者們開始引用社會網路分析的研究方法，來闡述與解釋經濟學、管理學等領域所面臨的許多新挑戰，因為在人的任何活動當中，社會網路都會是一個實際的存在。

本年度 SUNBELTCONFERENCE 研討會於美國加州紐波特海灘的萬豪酒店辦理，主辦單位為國際社會網絡學會(International Network for Social Network Analysis,INSNA)，該協會是世界著名的社會網路分析組織，本屆為第三十六屆，與會人員大多數是社會學專家，其中也不乏數學專家及統計學專家，但隨著社會網路理論被廣泛應用於各領域研究後，與會人員漸漸走向多元化，會議主題涉及社會學、管理學、政治學、心理學、生物資訊學及地理學科等專業領域，也藉著邀請許多各學科專家發表其研究成果及交流應用範疇，進而提升與會人士能於各自領域中之專業能力。

「社會網絡分析 (Social Network Analysis,SNA)」是一種分析關係網絡的一種工具，主要研究是社會結構、組織系統、人際關係及團體互動的概念與方法，透過依各類不同的研究需求製成「社會網絡問卷」進行調查及訪談等方式，目的是蒐集個體與個體間彼此之間的微妙關係，但早期社會網絡研究並未加入統計與圖形建構，因此社會網路分析的發展因而停滯未有深入探討。美國社會心理學專家 Moreno J.L.在 1932 年首先利用「社會計量法

(sociometry) 」做為對社會群體中的成員進行其人際關係定量測量，為日後社會網路分析奠定下計量分析的基礎。由於人際交往是社會成員聯繫不可或缺的連結，同時也是群體得以維繫關係的首要，因此對人際關係的定量測量有助於對群體功能及結構的分析，其分析結果可有效了解群體的管理、診斷等模式。

社會網路分析，作為一種收集和分析群體中人際間聯繫模式的診斷方法，首次被引用於「知識管理」領域，在社會網路中的弱聯繫(Weak Ties)解釋組織內部知識轉移問題。國內亦有整理說明，透過弱聯繫已被證實最能傳達不同意見和新思維，弱聯繫的特性即是行動者之間很少連結，情感的強度比較弱，研究顯示弱聯繫通常存於在不同類型的行動者之間，扮演著兩個斷開的子網路之間的橋樑身份，提供個人和網路可以完整地存取不同的訊息和資源。弱聯繫可以讓網路更有彈性、更適應環境的變化，但是弱聯繫卻也反應出行動者之間缺乏著信任和瞭解。本次研討會之主題為與本人研究多所相似，切合本人近年著研究發展方向，本人近期分別指導「以社會網路理論探討兩石化公司之環安衛管理」、「某工業區企業環安衛知識及行動傳遞『社會網路』之探討」、「以社會網路理論探討兩家企業的環安衛管理系統之運作差異」等碩士論文均為社會網路方法之運用，目前也正積極其研究成果撰寫論文，其一將於 12th GCPS 發表。

三、 GCPS 製程安全研討會相關議題研討及成果發表

本年度全球製程安全會議 (Global process safety Conference) 為第 12 屆，會議地點位於德州休士頓的喬治布朗會議中心，其主辦單位是美國化學工程協會(American Institute of Chemical Engineers,AIChE)，承辦單位為化學製程安全中心(Center for Chemical Process Safety ,CCPS)，該會議由 2005 年辦理至今，已是全球製程安全領域一年一度最重要、會議規模最大之盛會，與會人士皆為各國製程安全領域相關人員，主辦單位每屆皆會邀請相關領域知名之學者專家發表其研究成果及交流當前最新製程安全技術發展趨勢，如製程相關參數推估計算模組、後果分析及風險評估方法、相關工業製程設備技術及危害管理等新知，讓與會人士都能藉此提升專業能力及相關學識，因議題眾多，僅列出部分參與議程之摘要範例：

1. 可燃性粉塵危害評估：基於風險之評估方法(Combustible Dust Hazard Assessment: A Risk Based Approach)：

概述：該危害評估研究主要目的是制定一致性的處理可燃性粉塵相關製程之風險評估方法，並構築設計出一套有效運作之固體處理設施及流程，供從事粉塵相關工作之技術人員妥善使用。

本報告說明可燃性粉塵火災特性與爆炸基本知識之概述，以及廠場建築物可能存在之可燃性粉塵危害，並提供預防及減輕危害之方法，如控制塵埃之措施(集塵設備)及工程控制方法(自動火災控制系統及灑水設備)，雖然不意味著能徹底預防可燃粉塵之危害發生，但能有效地降低可燃性粉塵之風險。

2. 粉塵爆炸-問題及其實際控制措施之本質-包含新制定之 NFPA652(美國消防協會 National Fire Protection Association,NFPA)對於粉塵危害評估之要求(Dust Explosions –The Nature of the Problem and Practical Measures for Its Control – Including the Requirements of the New NFPA 652 for Dust Hazard Assessment)：

概述：旨在說明以系統化之方法來辨識粉塵爆炸之危害，並針對此危害特性，採取有效地預防措施，確保廠場安全，主要重點可概分為下列 7 項：

- (1) 粉塵爆炸特性之了解。
- (2) 可燃性粉塵雲環境中可能存在地點之判定。
- (3) 潛在之點火源辨別，可能是於正常及非正常條件下存在。
- (4) 適當之製程及設施的設計，以消除或減少粉塵爆炸的發生，進而保護人員及設備。
- (5) 設備適當的維護，以防止火源及減少粉塵之釋放。
- (6) 各類型之點燃危害的靈敏度-如電弧和靜電放電。
- (7) 燃燒事件之嚴重程度-如爆炸和閃火

本講座提供一個行之有效的方法以用來識別、評估粉塵爆炸之危害，以及介紹對於消除/控制粉塵爆炸危害有極大助益之製程設備，並提供與會者關於如何篩選原料及相關處置及製程加工之注意事項，另還包括新制定 NFPA652 對粉塵危害評估之要求及標準說明。

3. 富含二氧化碳混合物之減壓：碳捕獲及儲存設備和強化增產石油系統製程安全的挑戰 (Depressurization of CO₂ Rich Mixtures: Challenges for the Safe Process Design of CCS Facilities and CO₂ EOR Systems)：

概述：由於工程成本的影響，故安全減壓系統之設計對於碳捕獲及儲存設備(Carbon Capture and Storage,CCS)和二氧化碳強化增產石油(Enhanced Oil Recovery,EOR)裝置而言，是特別重要的，就石油與天然氣加工製程設備而言，其設備與管道金屬處於高瞬降壓操作階段時，其環境溫度可能會低於-46°C，故選擇金屬材料時因考量耐低溫之故，將會對於工程成本造成極大之負擔，另因涉及二氧化碳時，將會引入複雜之熱力學行為，如果沒有能準確地計算其狀態變化之標準方程式、受限之相包(phase envelope)及在固相減壓階段之電位生成等因素影響，故設計對於富含二氧化碳混合物之安全減壓系統是非常困難

的，且傳統之設計方法也難以適用。

於本研究中，以為燃煤發電廠所設計之碳捕獲及儲存設備為例，提出能準確評估高壓氣體處理設施使用逆態之減壓的方法，且能夠有效的增進其製程效益及降低約數億美元的成本。

4. 預測關於氫氣及合成氣等燃料氣體之火焰和高壓噴射火災的熱輻射新模組方法 (New Model for Predicting Thermal Radiation from Flares and High-Pressure Jet Fires for Hydrogen and Syngas) :

概述：目前製程工業中使用預測火焰和噴射火災熱輻射的模擬計算模組，主要是基於烴類氣體所構築，但發現使用於低光度氣體，如氫氣和合成氣之混合物的熱輻射推估上並不準確。

本研究針對此類氣體，建立新模組來預測其垂直及水平方向之火焰形狀及熱輻射，該模組將噴氣動力、浮力、風及火焰輻射率等因素作為其計算參數，增加其推估準確度，並於報告中列出相關測試數據及完整方程式供其驗證準確性。

5. 氨氣蒸氣雲爆炸試驗和設施選址意義之後果分析及風險(Ammonia Vapor Cloud Explosion Testing and Implications for Facility Siting Studies, Consequence Analyses, and Risk) :

概述：於設施選址後果分析及風險評估上之研究上，只要涉及非常低之層流燃燒速度(Laminar Burning Velocity, LBV) 燃料與寬敞空間之蒸氣雲爆炸危害(Vapor Cloud Explosion, VCE)之關係，是一個懸而未決之問題。

本研究即是利用氨氣(LBV 燃料)與甲烷(參考基準)進行 VCE 試驗，將相關實驗數據紀錄下來，並建立資料庫，作為日後相關設施選址風險評估之參考因素。

本次與會除了汲取全球製程安全領域最新研究成果及收集相關資訊外，本人並於 4 月 12 日口頭報告發表撰寫之論文『使用社會網絡理論分析兩石化公司之環安衛管理(Using Social Network Theory to Analyze the effectiveness of Environment, Safety and Health Management for Two Petrol-Chemical Companies)』，該研究報告主要內容為運用社會網絡理論分析台灣兩家大型石化公司之環安衛管理系統運作情形，以問卷及 NodeXL 質性與量化分析組織網絡，作為觀察個別管理系統中成員運作及差異，並借此觀點闡釋其環安衛管理系統的實際運作狀況，其網絡組織成員之關聯性及運作情形可定量分析成五種網絡「類型」及四種「衡量指標」，參考組織及人員的背景資料，再搭配衡量指標數值與網絡圖，則可推論出三種特殊網絡成員類型『網絡核心』、『邊緣人物』及『資訊經紀人』用以探討組織之網絡工作流模式。經探討後，接觸網絡資料建構出兩家企業的社會網絡關係，發現其組織架構與實際運作方式，有一定程

度不同，如此的模式間接影響著人員階級、職務及運用等管理問題，而從兩家個案企業的環安衛管理組織架構與實際運作的分析結果，吾人發現組織之運作是透過無形的社會網絡在密集的人際交流互動下實現，可以說組織在實際運作時與正式組織的樣貌呈現相異，因此可得出下述幾點建議供企業管理者作為發現組織運作實際問題及改善執行效率之重要依據：

- (1) 知識傳遞及決策建議與執行的往來流向或運行方面，會因其企業文化不同有所差異，因資訊流通管道不暢通問題，使資訊及知識無法藉組織成員聯繫而延續，使組織整體效益難以發揮至極致，故建議面對新的環安衛議題時，應立即邀請適當重要成員參與（如諮詢網絡裡中心性較高的人員）開會，使環安衛管理系統可迅速反應並執行該議題所需的前置作業或相關措施，提升整個管理系統的績效。
- (2) 環安衛管理系統執行組織改造或績效提昇方針時，可納入社會網絡理論工具，除可節省人力資源、提昇文件系統管理制度、簡化作業流程、稽核流程簡化等優點，更可讓環安衛管理具有持續改善並提昇績效的前瞻性。
- (3) 企業組織異動或成員調整可參考社會網絡分析結果，對整體組織有助益成員可適當調整其職位，使其發揮更大功效，若職位功能未能發揮之成員，亦可調任之職務，使團隊每位成員都能竭盡所能解決困難，改善其作業效率。由於組織成員之社會網絡會隨著業務週期、工作任務調配而變化，與社會網絡分析中所描述的諮詢網絡或資訊網絡呈現穩定不變有所差異，建議透過不同時間點或實施不同議題時進行調查，可發現結果所帶來之差異，進而瞭解組織中編制的改變及出現不同議題，會對被調查成員帶來何種改變，可提供給管理者進行改善或調整的參考依據。

本次發表之口頭報告已如前述，受邀投稿至 **PSP**，也已完成。

四、建議事項

(1) 傳統的危害及事故分析方法主要是將危害視為一系列事件作用之結果，所考慮因素通常涉及部分類型之設備故障或人為疏失，此類方法僅適用於分析物理元件故障造成之損失或較為簡單的系統，然而隨著製程技術之迅速發展，製程組件及設備系統也趨向機器化程屬外及複雜化，種種事故因子累加起來為繁冗複雜之系統，這也意味著傳統危害及事故分析方法於此種情況下，其應用侷限性也更為顯著，尤其我國多數製程已由人工轉變機械化製程，人們所擔任的是監督與控制之角色，主要是透過各類型輸入裝置，如鍵盤或觸控面板等人機介面，給予機械設備指令，完成指定之工作，但人機介面於工業上廣泛使用，使作業型態複雜化，伴隨而來之事故風險也隨之提高；而麻省理工學院 Leveson 教授推出之系統理論事故模式及程序 (Systems-Theoretic Accident Modeling and Processes, STAMP)，乃以系統工程分析和發展使用為基礎，因應現代設備之人機介面交互作用系統而開發，其系統分析理論所建立的模型，可用於探討系統元件間的交互關係，有利於極度複雜多重原因系統之危害分析及風險評估，經由本次參加 2016 STAMP Workshop 研討會，初步了解 STAMP 理論發展之危害分析及風險控管技術，已被應用多種產業發展上，如航空、醫療、汽車及船舶等，且皆有明顯之成效，我國政府及相關單位目前推動網路與製造結合之工業，需多加重視 STAMP 此一技術，使我國產業在迅速發展之餘，更能有效地管控其風險，減少其可能之危害，進而達到經濟及產業兩者均衡發展雙贏之局面。

(2) 從 GCPS 最新粉塵危害研究成果顯示，我國許多產業皆存在隱性之粉塵性危害，如金屬加工、食品、木材加工及紡織染整等傳統產業，在其製程中都會產生粉塵，但從事相關產業人員對於粉塵之危害特性、預防措施及基本認知等資訊普遍不足，且粉塵爆炸因受其特性之故，無論是爆炸帶來之損害及影響範圍與一般可燃性氣雲爆炸相較之下，都更為嚴重，且從去年 6 月份新北市八仙樂園塵爆事故相關主管單位作為判斷，可得知我國對於可燃性粉塵管理上明顯較為不足，故如何宣導粉塵之危害預防及認知、制訂相關管理法規及營造安全作業環境是我國政府相關主管機關亟需解決之議題。而本人此次參加全球製程安全會議，也汲取許多關於粉塵爆炸危害之相關資訊，後續也將經由課堂授課及對企業廠場員工教育訓練時，教導可燃性粉塵之危害及維護安全作為。

(3) 社會網路近年於網路社群組織運用甚為廣泛，舉凡 LINE、FACEBOOK 等，都影響各種資訊的交流及運用，本人過去指導學生於企業內調查環安環工人員，在其工作上運用組織及社會網路的情形，過去只限於單一企業，隨著 LINE、FACEBOOK 等社群的蓬勃發展，勢將影響未來所有公司成員之資訊、知識及行動之交流與互動，值得持續研究與探討。

五、附錄

表 1、出國行程一覽表

日期	行 程	附 註
03/15 (週二)	搭機前往美國 ● 台灣桃園國際機場至美國洛杉磯國際機場	美國
03/16 (週三)	抵達美國洛杉磯國際機場	-
03/17-03/19	休假(未支差旅費)	-
03/20(週日)	洛杉磯前往波士頓 ● 美國洛杉磯國際機場至美國洛根國際機場	-
03/21(週一)	參加 2016 STAMP Workshop 研討會	-
03/22(週二)	參加 2016 STAMP Workshop 研討會	-
03/23(週三)	參加 2016 STAMP Workshop 研討會	-
03/24(週四)	參加 2016 STAMP Workshop 研討會 ● 美國波士頓國際機場至美國洛杉磯國際機場	-
03/25-03/31	休假(未支差旅費)	-
04/01-04/04	休假(未支差旅費)	-
04/05(週二)	參加 SUNBELTCONFERENCE 研討會	-
04/06(週三)	參加 SUNBELTCONFERENCE 研討會	-
04/07(週四)	參加 SUNBELTCONFERENCE 研討會	-
04/08(週五)	參加 SUNBELTCONFERENCE 研討會	-
04/09(週六)	參加 SUNBELTCONFERENCE 研討會	-
04/10(週日)	參加 SUNBELTCONFERENCE 研討會 洛杉磯前往休士頓 ● 美國洛杉磯國際機場至美國休士頓布希國際機場	-
04/11(週一)	參加 12thGCPS 研討會	-
04/12(週二)	參加 12thGCPS 研討會	-
04/13(週三)	參加 12thGCPS 研討會	-
04/14(週四)	搭機回台	美國
04/15(週五)	抵達臺灣	臺灣

表 2 、 2016 STAMP Workshop 議程摘要表

議程表			
Program Overview			
DATE	AM	PM	EVENING
Monday March 21	Registration Introduction	Introduction STPA, STAMP, CAST etc.	
Tuesday March 22	Workshops Parallel Section	Parallel Sessions	Hospitality
Wednesday March 23	Parallel Sessions	Parallel Sessions	Poster Section
Thursday March 24	Parallel Sessions	Open Discussion	

表 3 、 SUNBELT CONFERENCE 研討會議程摘要表

SUNBELT CONFERENCE 研討會議程表			
Program Overview			
DATE	AM	PM	EVENING
Tuesday April 5	Registration Workshops	Workshops	Workshops
Wednesday April 6	Registration Workshops	Parallel Paper Sessions	Hospitality
Thursday April 7	Registration Parallel Paper Sessions	Parallel Paper Sessions	Keynote Banquet Hospitality
Friday April 8	Registration Parallel Paper Sessions	INSNA Board Meeting Parallel Paper Sessions	Poster Symposium & Slam Hospitality
Saturday April 9	Registration Parallel Paper Sessions	INSNA Business Meeting Parallel Paper Sessions	Hospitality
Sunday April 10	Registration Parallel Paper Sessions	Close	—

表 4 、 12thGCPS 研討會議程摘要表

12thGCPS研討會議程表	
SUNDAY, April 10	
9:00 AM – 5:00 PM	GCPS Short Courses
6:30 PM – 8:00 PM	2016 AIChE Spring Meeting and 12th GCPS Opening Reception Location: Conv. Ctr. Exhibit Hall E
MONDAY, April 11	
7:00 AM	Complimentary Breakfast Location: GRB Conv. Ctr. General Assembly Theater Foyer
8:00 AM	2016 AIChE Spring Meeting and 12th GCPS Opening Plenary Session: June C. Wispelwey, AIChE Executive Director and Gregory Stephanopoulos, AIChE President Location: GRB Conv. Ctr. General Assembly Theater C
8:30 AM	AGILE Award Keynote Address: “Transforming a Business for Success” Presented by Andreas C. Kramvis Location: GRB Conv. Ctr. General Assembly Theater C
9:15 AM	Coffee Break Location: GRB Conv. Ctr. Exhibit Hall E
9:40 AM	12th GCPS Welcoming Plenary Session Location: GRB Conv. Ctr. General Assembly Theater C 12th GCPS Introduction and Welcome: Shakeel Kadri (Executive Director, CCPS) and Ronald J. Willey (GCPS Chair) Symposia Introductions: Fred Henselwood (CCPS Chair), Kendall Werts (LPS Chair), Kathy Shell (PPSS Chair), Trey Morrison (PSM2 Chair), Eric Peterson (Spotlight Track Chair), and Marcela Recaman (Regional Perspectives Chair) Presentation of William H. Doyle Award for LPS Best Paper Award, PPSS Best Paper Award, and CCPS Best Paper Award

圖1、各項研討會照片



12thGCPS 研討會會場



12thGCPS 研討會報告



12thGCPS 研討會



12thGCPS 研討會大合照



與徐啟銘老師合照



12thGCPS 研討會會場

二、2016 STAMP Workshop 研討會議程表

March 21(Monday) MIT Stata Center, building 32				
8:30-10:00	STAMP Intro and General Overview Nancy Leveson (32-123)	STPA and CAST Practicums (32-124 and 32-144)		STECA Intro David Horney and Andrea Scarinci (32-141)
10:20-11:50	STPA Intro John Thomas (32-082)			STECA Examples (32-141)
11:50-1:00	Lunch break			
1:00-2:30	STPA Practicum John Thomas (32-082)	CAST Intro, examples Nancy Leveson and Elsabe Willeboordse (Dutch Safety Agency) (32-141)		Security Intro Bill Young (32-155)
2:50-4:20	STPA Practicum (32-082)	CAST Practicum Willeboordse (32-141)	Security Practicum (32-144)	STAMP in Workplace Safety Lori Smith, Emily Howard (Boeing) Larry Hettinger (Liberty Mutual Research Institute for Safety) (32-155)
4:30-6:00	<p>Medical Device Safety Co-Session (with IEEE International Symposium on Medical ICT 2016) (room 32-123)</p> <ol style="list-style-type: none"> 1. Systems Thinking and Medical Device Safety, Nancy Leveson 2. Application of Systems and Control Theory-Based Hazard Analysis to Radiotherapy, Todd Pawlicki (Dept. of Radiation Medicine and Applied Sciences, University of California, San Diego) 3. STPA Analysis of Intravenous Patient-Controlled Analgesia, John Thomas (MIT) 			

<p>8:30-10:30</p>	<p>Welcome (Nancy Leveson)</p> <ol style="list-style-type: none"> 1. Human Interaction and Potential Error Evaluation Associated with Shift By Wire Devices, Mark A. Vernacchia and Bill Arnold (GM) 2. Engineering for Humans: STPA Analysis of an Automated Parking System, John Thomas and Megan France (MIT) 3. Hazard Analysis for Rotorcraft (UH-60MU), Blake Abrecht, Dave Arterburn, David Horney, Jon Schneider, Brandon Abel, Nancy Leveson (MIT, U.S. Air Force, University of Alabama Huntsville)
<p>10:50-12:20</p>	<ol style="list-style-type: none"> 4. An Approach to Determine Safety Indicators in Radiation Therapy, Taylor Harry and Todd Pawlicki, Univ. of California (Dept. of Radiation Medicine and Applied Sciences, University of California, San Diego) 5. ‘Spaghetti’: Tasty but Messy; Using STAMP to Model a Cancer Diagnosis Progress, Maria Mikela Chatzimichailidou, James Ward, Chloe Chan, John Clarkson (University of Cambridge, UK and Lister Hospital, UK) 6. A Systems Approach to the Development of an Aircraft Smoke Control System, Danilo da Costa Ribeiro, Amanda Iriarte Quilici, Emilia Villani (Embraer and Instituto Tecnológico de Aeronautica, Brazil)
<p>13:45-15:15</p>	<ol style="list-style-type: none"> 7. CAST applied to Fukushima Daiichi nuclear disaster, Daisuke Uesako (MIT and Ministry of the Environment, Japan) 8. STPA of an Offshore Supply Vessel Dynamic Positioning System, Blake Abrecht (MIT and U.S. Air Force) 9. STPA used on Dynamic Positioning, Odd Ivar Haugen (Marine Cybernetics, Norway)
<p>15:45-17:15</p>	<ol style="list-style-type: none"> 10. Safety Thinking in Cloud Software: Challenges and Opportunities, Kevin Riggle (Akamai) 11. STPA for Additive Manufacturing, Greg Pope (Lawrence Livermore National Laboratory) 12. Exploring the Systematic Causes of Beijing Subway PSD Accident, Shijie Zhang, Tao Tang, Hongwei Yan, Fei Yan, Ru Niu (Beijing Jiaotong University, China)

March 23 (Wednesday) All presentations are in Stata 32-123	
9:00-10:30	<ul style="list-style-type: none"> 13. Scenario Based STPA Analysis in Automated Urban Guided Transport System, Fei Yan, Tao Tang, (Beijing Jiaotong University, China) 14. Using STPA for Evaluating Aviation Safety Management Systems, Nektarios Kananikas and Mohamed Abrini (Aviation Academy, Amsterdam University of Applied Sciences, The Netherlands) 15. Application of STPA on Small Drone Operation: The Approach and First Results, Anastasios Plioutsias, Nektarios Karanikas, Maria Mikela Chatzimichilidou (National Technical University of Athens, Amsterdam University of Applied Sciences, The Netherlands, and University of Cambridge, UK).
10:50-12:20	<ul style="list-style-type: none"> 16. Improving STPA Step 2, John Thomas (MIT) 17. Applying STECA to Create Safety Constraints for UAV Integration in NAS, Yusuke Urano (MIT and Ministry of Land, Infrastructure, Transport and Tourism, Japan) 18. The Usability of STAMP in Drug Development, Veronika Valdova , Ronald L Sheckler, Asim Abdulkhaleq, Stefan Wagner (University of Stuttgart, Germany)
13:45-15:15	<ul style="list-style-type: none"> 19. Systems-Theoretic Process Analysis of Automobile Features for Lane Management, Diogo Castilho, Megan France, and Dajiang Suo (MIT) 20. Can STPA contribute to identify hazards of different nature and improve safety of automated vehicles? Stephanie Alvarez, Franck Guarnieri and Yves Page (Mines Paris Tech, PSL Research University, and Renault SAS, France) 21. New Applications of STAMP: Workplace safety and Engineering Management, Nancy Leveson, Lori Smith, Emily Howard, and Larry Hettinger (MIT, Boeing, and Liberty Mutual Research Institute for Safety)
15:45-17:15	<ul style="list-style-type: none"> 22. Applying STPA to Automotive Cyber-Security, John Thomas, Hideki Nomoto, Michihiro Matsumoto, Shigeyuki Kawana, Morihiro Kawamura, Shuichi Sato, Katsushi Sanda, and Nancy Leveson (MIT, JAMSS, Toyota Motor Corp, and Toyota Central R&D Labs) 23. From STPA-Sec to STPA-Priv: Leveraging STPA for Privacy Engineering, Stuart Shapiro (MITRE Corp.) 24. Understanding STPA-Sec through a Simple Roller Coaster Example, Colonel Bill Young (U.S. Air Force War College)

March 23 (Wednesday) Dinner and Poster Session	
<ul style="list-style-type: none"> 25. Tool assisted Hazard Analysis and Requirement Generation based on STPA, John Thomas and Dajiang Suo (MIT) 26. Using STPA to Analyze Human Interactions with Engineered Systems, Prof. Jao-Jia Horng (National Yulin Univ. of Science and Technology, Taiwan) 27. Verification of a Study Comparing the STECA Theory and the Actual Condition of Products in Automotive Products, Yasuhiko Kawabe (Japan MOT Society) 28. Improvements to XSTAMPP Tool, Asim Abdulkhaleq and Stefan Wagner (University of Stuttgart, Germany) 29. The Use of STAMP in the MH-17 Accident Investigation, Elsabe Willeboordse (Dutch Safety Board, The Netherlands) 	

March 24 (Thursday) All presentations are in Stata 32-123	
9:00-10:30	<p>30. Evaluation of a Safety Engineering Approach for Software-Intensive Systems in the Automotive Domain: An Industrial Case Study, Asim Abdulkhaleq, Sebastian Vöst, Stefan Wagner, John Thomas (University of Stuttgart, Germany and BMW)</p> <p>31. A STAMP-based Hazard Log for Use during Development and Operations, Andrea Scarinci and Alessandro Giusti (MIT and Alitalia Etihad Airlines)</p> <p>32. A Different Look at the Entire Accident / Disaster Cycle affecting Safety of Complex Sociotechnical Systems by Using System-Theoretic Accident Model and Processes (STAMP) Model, Daniel Hartmann (Ben Gurion University, Israel)</p>
10:50-12:20	<p>33. How to Enhance Bowtie Analysis using STAMP, Simon Whiteley (Whiteley Safety Engineering, U.K.)</p> <p>34. Using STAMP to Address Causes and Preventive Measures of Mid-Air Collisions in Visual Flight, Ioana Koglbauer (Technical University of Graz, Austria)</p> <p>35. Systematic Review on STPA: Final Results, Carlos H.N. Lahoz and Synara Rosa Gomes de Medeiros (Instituto de Aeronautica e Espaco IAE and Embraer, Brazil)</p>
13:30-14:30	Open Discussion

三、2016 SUNBELT CONFERENCE研討會議程表

Program Overview			
DATE	AM	PM	EVENING
Tuesday April 5	Registration Workshops	Workshops	Workshops
Wednesday April 6	Registration Workshops	Parallel Paper Sessions	Hospitality
Thursday April 7	Registration Parallel Paper Sessions	Parallel Paper Sessions	Keynote Banquet Hospitality
Friday April 8	Registration Parallel Paper Sessions	INSNA Board Meeting Parallel Paper Sessions	Poster Symposium & Slam Hospitality
Saturday April 9	Registration Parallel Paper Sessions	INSNA Business Meeting Parallel Paper Sessions	Hospitality
Sunday April 10	Registration Parallel Paper Sessions	Close	—

Room	Tuesday 8:00am-11:00am	Tuesday 11:30am-2:30pm	Tuesday 3:00pm-6:00pm	Tuesday 6:30pm-9:30pm	Wednesday 8:00am-11:00am
Baycliff	Introduction to Social Network Analysis with R and statnet	Moving beyond Descriptives: Basic Network Statistics with statnet	Exponential Family Random Graph Modeling (ERGMs) Using statnet	Introduction to Egocentric Network Data Analysis with ERGMs and TERGMs Using statnet	Valued Network Modeling with statnet
Salons 1 & 2	Dynamic Network Analysis (DNA) and *ORA		Managing Dynamic Network Data in statnet: Animations, Data Structures and Temporal SNA	Advanced Social Network Analysis using UCINET and Netdraw	
Salon 3	EgoWeb 2.0: Flexible Social Network Data Collection Software	Introduction to Modeling Temporal (Dynamic) ERGMs Using statnet	Modeling Relational Event Dynamics with statnet	From Words to Networks: Text-based/Semantic Network Analysis	
Salon 4	A Hands-on Introduction to Analyzing Social Networks with UCINET & Netdraw		Introduction to Ego-network Analysis with R		Social Network Approaches for Behavior Change
Salon 5	Introduction to Research Design with Social Networks		Analysing Network Dynamics and Peer Influence Processes with RSiena		MRQAP-regression Analyses: Cross-sectional, Multilevel and Longitudinal Models
Cardiff	Visualizing Social Networks. How to Create Meaningful and Compelling Network Drawings	Multilevel Modeling for Egocentric Network Analysis	BlauNet: An R Package to Construct Blau Spaces and Analyze the "Blau Statuses" of Social Entities and Individuals...	Algebraic Analysis of Multiple, Signed, and Affiliation Networks with 'multiplex'	The Positional Approach to Network Analysis
Laguna & Sunset	Understanding Diffusion with netdiffuseR	Basic and Advanced Network Visualization with Gephi: Part 1	Basic and Advanced Network Visualization with R: Part 2	Simplifying Ego-centered Network Analysis in R with egonetR	
Sapphire Cove	Collecting and Analyzing Social Media Data Using SocialMediaLab	Mixed Methods Research in Social Networks			
Copper Cove	Using R and igraph for Social Network Analysis		Agent-Based Models in Social Network Analysis Using Netlogo		Introduction to Social Network Data Collection with an Emphasis on Social Survey Methods
	Tuesday 8:00am-11:00am	Tuesday 11:30am-2:30pm	Tuesday 3:00pm-6:00pm	Tuesday 6:30pm-9:30pm	Wednesday 8:00am-11:00am

Wednesday - PM1

PM1	Salon 3	Salon 4	Salon 5	Salon 2
13:40	Intra-Organizational Networks Susan O'Shea Network Relationships and Job Changes of Software Developers Down Foster, Guido Conradi, Riccardo De Vito	Collaboration and Coordination Joneh Apakarian	Collecting Network Data: New Methods and Tools Wendy Church	Isolation and Risk: The Role of Social Networks Thomas W. Valente
14:00	Pizza Talk IV: Fighting Back Shitstorms With An Army of Superfans Thomas Zorboch, Juergen Pfeiffer	Modeling Information Sharing Networks in Community Change Efforts Jennifer Lawlor, Zachary Neal	Social Network Analysis Through Perceptual Tomography (SNAPT) Blair Khan, Kiril Dombrowski	An Investigation of Prison Inmate Network Structure David Schofer, Jacob Young, Derek Kreeger, Martin Bouchard
14:20	Teams and Ties: Workflow, Organizational Cultures and The Role of Workplace Design Kerstin Zoller	Relational Dynamics Between Emergency Management Organizations During A Terrorism Event C. Ben Gilbert, Carter T. Butts	SPIDER: New Technology For Constructing Socioeconomic Networks From Personal Network Data Christopher Hopkins, April Young	Network Connections of Gang Members in a Homeless Youth Street Network and Related Risk Taking Behaviors Robin Paterling, Amanda Yoshiko-Matrawel, Josh Crofford
14:40	Merging Social Networks: Roles and Characteristics of Brokers in Corporate Acquisitions Nicola Miric, Philippe Very, Norbert Zieglerberger, Mark Ebers	Talking About Teaching Social Networks of Instructors of Undergraduate Mathematics Naneh Apakarian	Mechanisms of the Formation in Activity-Based Online Social Networks Emma Spiro, Zack Almqvist	An International Perspective On Social Isolation and Community in Personal Networks Vicente Espinazo, Matias Borge, Luis Maldonado
15:00	Diffusion of Social Media Among International Nonprofit Organizations Jiann Shin, Adina Park, Wenlin Liu	The Beauty of In: When Inequality Meets Equity Julia Poeschlender	The Sensorial Map of the City From Social-Networking Data Danielle Querico, Luca Maria Aiello, Rossano Schifone	Loneliness and Cortisol Associations With Friendship Network Dynamics Olga Kozminskii, David Schofer, Thao Ng, Douglas Dranger
15:20	Through The Looking Glass: The Network of FRF Standing Committee Members Susan O'Shea, Paul Widdop, Peter Millward		Rightizing Network Analysis For Social Impact Assessment: Matching Strategic Questions To Evaluation Practice Wendy Church, Jone Reisman	Effects of Externalizing Behavior, Internalizing Behavior On Friendship Networks Among Children Heesung Shin, Jimi Huh, Thomas W. Valente
15:40	Coffee Break, Newport Coast Ballroom Foyer			

Wednesday - PM1 cont.

PM1	Sunset	Laguna	Cardiff	Baycliff
Chair	LOGIC Networks and Health Adam Jones, Lindsay Young	Networks and Market Norms Elise Penello-Itcher	Recent Advances in Statistical Analysis and Mathematical Modeling of Social Networks Tai-Chi Wang	The Dormancy and Reactivation Alexandra Morin, Chang Z. Lin
13:40	Changes in Sexual Network Characteristics of Young Men Who Have Sex With Men Over Time Gregory Phillips II, Patrick Janulis, Brian Mustanski and Michelle Birkeht	Examining Yelp Business Network Using Homophily Theory Yuehan Wang	Committed Activists and The Reshaping of Status-Quo Social Consensus Dino Mirani, Qian Zhang, Nicole Pore, Andrea Borronchi	The Pause that Refreshes: Based Net Models For Renewing and Re-igniting Social Ties John Skvoretz
14:00	Individual And Network Predictors Of HIV And STI In Young Men Who Have Sex With Men Michelle Birkeht, Patrick Janulis, Gregory Phillips II and Brian Mustanski	What Drives Food Truck Location Decisions? Social Contagion in Mobile Location Choice Russ Nelson	An Investigation Into Seasonal Influenza Vaccination Uptake In Foundation Doctors: Using Social Network Analysis and Spatial Modeling Rhannon Edge, Thomas Keegan, Peter Diggle, Rachel Jobe	Dissolution and Re-Activation in Collaboration Networks
14:20	Social Disorder and Network Dynamics Among Young Black Men who Have Sex With Men Britt Staehelin and John A. Schneider	Social Networks And Industrial Rules Definition During Trade Fairs Guillaume Fevre, Julien Brully and Emmanuel Luzzago	Alternative Estimation Methods For Identifying Contagion Effects Using Longitudinal Social Network Data Ran Xu	Inter-organizational Tie Preservation and Dissolution During Crisis Sean Flinchbaugh and Arwen DeCostanza
14:40	Sexual Networks And Racial Disparities in HIV Among Men Who Have Sex With Men in Atlanta: A Dynamic Network Modeling Study Steven Goodreau, Samuel James, El Rosenberg and Patrick Sullivan	Estimating Thresholds in Empirical Social Contagion George Berry, Christopher Cameron	Using Trusses To Detect Social Anomalies in Network Data Christine Sowa, John Butkevics, Jonathan Cohen	Efficient Incremental Extraction of Social Groups from Real-World Social Network Data Sets Larry Richard Carley and Kathleen Carley
15:00	Changes in Drug Network Characteristics and Marijuana Use Among Young Men Who Have Sex With Men Patrick Janulis, Gregory Phillips, Brian Mustanski and Michelle Birkeht	An Application of Input-Output Networks To Regional Economics Tayo Babajayi and Juergen Pfeiffer	Episodic Relationships and HIV in Disease Networks David Bell	
15:20				
15:40	Coffee Break, Newport Coast Ballroom Foyer			

Wednesday - PM2

PM2	Salon 5	Salon 4	Salon 3	Salon 2	Salon 1
Chair	Bibliometrics and Co-Citation Marjan Cugmas	Exponential Random Graph Models Alex Stavrou	Social Networks and Health: Risky Populations and Behaviors Edith Fox	Dynamics of Networks For Health Promotion Rachel Hogg	Inter-Organizational Networks: NGOs Sophia Fu
16:00	Measuring Homophily in Scientific Collaboration Networks: A New Metric For Disconnected Networks Boston St-Louis, Lohr David, Comptel, Guillaume Robert, Gregoire Goss, Adini Louie and Eric Achambault	Hamming Trajectory Sampling For Exponential Family Random Graph Models Carter Butts	Peer Influence On Injection Status: Social Proximity VS. Geographic Proximity Abby Rudolph, April Young and Jennifer Novacek	Evaluation of A Regional Network For The Inclusion of Social Persons with Impairments Christine Kellner	International Refugee Crisis and The Evolution of a Network: From 2002 To 2016 Aimee Yang and Rong Wang
16:20	Different Operationalizations of The Stability of The Co-Authorship Blockmodels in Time Marjan Cugmas, Anuska Ferligo and Luker Krueger	Consistent Estimation of Multilevel Exponential-Family Random Graph Models Michael Schweinberger	Exploring Substance Use and Network Composition of Homeless Youth With and Without a History of Foster Care Amanda Yoshiko-Matrawel and Eric Rice	Measuring Organizational Network Capacity Among State-Level Nutrition Incentive Networks Ligia Pinto, Pamela Surian, Anup Kharmatz, Julie Pan and Leah Johnson	Global Connectedness of Local NGOs: A Remedy Or Poison For The Young Civil Society? Adil Rodonov and Darkhan Medevau
16:40	The Effects The Number of Agents Has in The Network: An Analytical Study On Multiple Networks Abel Comacho, Claudio Juan Tezanos and Renee Algeheiser	Mixed Connections? Social Similarity and The Diffusion of Smoking Among Adolescents Chen S. Su, Yongren Shi and Matthew Brophy	Mixed Connections? Social Similarity and The Diffusion of Smoking Among Adolescents Chen S. Su, Yongren Shi and Matthew Brophy	The Anatomy of Public Health Collaborations: An Analysis of 500+ PARTNER Networks Rachel Hogg	The Evolution of Health International Nongovernmental Organization Networks Matthew Pearce and Nolan Phillips
17:00	How Teens Speak Out: Formative Research For A Social Communication Intervention On Teen Contraceptive Use Alex Shivalo, Colin Gallagher, David Ellis, Peng Wang and Darryl Robins	Social Influence Models With Missing Data Alex Shivalo, Colin Gallagher, David Ellis, Peng Wang and Darryl Robins			Understanding The Size and Spread of Chikungunya: Capacity and Board Affiliations Sophia Fu and Michelle Zhumate
17:20	Break				
17:40	Hospitality Presidential Suite				
18:00	Hospitality Presidential Suite				
18:20	Hospitality Presidential Suite				

Wednesday - PM2 cont.

PM2	Sunset	Laguna	Cardiff	Baycliff
Chair	Learning and Knowledge Networks Wenli Zhao	Social Networks and Migration Olga V. Kozminskii	Scientific Collaboration Networks Lidiane Carvalho	Networks and Teams Yu Xu
16:00	Study Conversation, Study Advice, and Good Borrowing Networks in A Japanese University Class Hidaki Fujiyama	Diffusion of Innovation in Family Size Preferences and Acceptability of Contraceptive Use Between Urban Migrants and Non-Migrants in Rural Senegal John Somburg, Loethio Doucoure, Valerie Delonay and Yacine Boujija	Exchange-Based Collaboration in Science: A Theoretical Model Michal Bajanowski	Solving Temporal Team Assignment Problems Using A Markov Decision Process Framework Prithwish Bose, Aaron Schacter and Noam Contractor
16:20	The Role of Ethnicity and Social Networks in Academic Achievement and Drop-Out of High School Students Zofia Bodd and Christoph Ziegler	The Effect of Network Segregation On Wage Formation: The Case of The Sri Lankan Immigrant Community in Milan, Italy Valerio Leone Scabrozza, Raffaele Vacca and Luca De Benedictis	Field Formation in Intellectual Networks: The Emergence of The Life Sciences in Germany, 1770-1890 Ott Toomet and Jaanika Suurmees	Structural Measures of Specialization in Teams Gahyun Jeon, Leslie DeChuruk and Noam Contractor
16:40	The Characters of Keywords Network Structure in The Field of SNA Wenli Zhao, Guodong Zhang, Yiqun Li	Migration and Ethnic Segregation: Evidence From Mobile Phone Logs Ott Toomet and Jaanika Suurmees	Field Formation in Intellectual Networks: The Emergence of The Life Sciences in Germany, 1770-1890 Ott Toomet and Jaanika Suurmees	Teamwork: Examining The Roles of Peer Assessment, Extrinsic Motivation, and Average Tie Strength With Teammates Yu Xu and Yusi Liu
17:00	Layers of Social Integration: Contact Opportunity and The Dynamics of Inter-Ethnic Friendships and Adolescents' Perceived Integration Robert Hollings, Jockel Raabe and Jan O. Jonsson	Layers of Social Integration: Contact Opportunity and The Dynamics of Inter-Ethnic Friendships and Adolescents' Perceived Integration Robert Hollings, Jockel Raabe and Jan O. Jonsson	Social Capital: Concepts and Measures Applied To The Study of Brazilian Scientists' Performance Lidiane Carvalho and Regina Maria Marteleto	
17:20	Break			
17:40	Hospitality Presidential Suite			
18:00	Hospitality Presidential Suite			
18:20	Hospitality Presidential Suite			

Thursday-AM1

AM1	Salon 3	Salon 4	Salon 5	Salon 2	Salon 1
Chair	Collecting Network Data Janet Hebl	Trade Networks Clay Feck	Intra-Organizational Networks Jonathan Cummings	LOGIC Networks and Health John Somburg	Social Networks and Climate Change David Foray
08:20	Integrating Approaches To Place, Time and Social Networks Using Agent-Based Modeling Edmund Ostrom-Brown and Laurence Drey			The Organization of Sexual Risk and Protection in A Digital Social Environment Lindsay E. Young, Adam B. Jones, Stuart McKeown and John A. Schneider	Network Governance And The Law Carbon Transition - Governing Sustainable Energy Transition in The City of Birmingham, UK Tomas Nectus
08:40	Surveying Networks in Corporate Perspective: A Social Capital Approach Dominique Joly, Monique Sagan and Christof Wolf		Employee Cooperative Behavior in Organizations: A Virtuous Cycle Nikki Van Derwan, Vincent Bultman and de Gooze	A Social Network Comparison of African American Men Who Frequently Use The Internet For Sexual Partners With Those Who Seldom Or Never Use The Internet For Partners Carl Latham and Karm Tabin	Two-Hubs Networks Testing Governance and Climate Resilience in Alaska: How? Philip Murphy
09:00	An Evidential View of Coping: Peering Decision Making and Health in Resilient Cities Jingdong G. Xue, Zhenyu Zhang, Heather Malar, Margaret Hwang, Steven Moshir, Thomas Viana, Robert Palmer	Seeking To Learn? Versus Seeking To Teach? Impacts On Time-Ty Performance Rogay Roman and Yaron Givon	Trade Networks And Institutionalization Failure in Mexico (1815-1911) Bart Wuyts	Social Support Dynamics and Happiness of LGBT Adults Mia Vogel and Bernd Thurau	Care-Preparatory Dynamics in Thematic Stakeholder A Case Study of Social Media Adoption By Outreach Professionals Marco Bartsch, Mark Labell and Carlo Riccardi
09:20	An Inductive Typology of Ego-Networks Eric Diamante and Claude Fischer	Trade Networks And Institutionalization Failure in Mexico (1815-1911) Bart Wuyts	Network Approach For Managing Large Organizations Jan McElvich	Membership in The House of Bill and Gay Family Communities and Effects On HIV Protective Behaviors Among A Population Base Sample of Young Black Men Who Have Sex With Men Adam Jones, Lindsay Young, Stuart Michaels and Andrew Morse	Does Sharing Support Just Feel Security? New Insights From Family Sharing Networks Elizabeth Reedy
09:40	Understanding Social Network Size Variation Among Networkers Using The Network Size-4 Method Patrick Khoran, Biol Khan and Kiril Dombrowski	International Trade of GMO Related Agricultural Products Xianfeng Xu, George Bernard and Hui Wou Park	The Impact of Proximity and Network On Knowledge Reorganization: A Field Experiment Jonathan Cummings and Ramon Leoncini	Membership in The House of Bill and Gay Family Communities and Effects On HIV Protective Behaviors Among A Population Base Sample of Young Black Men Who Have Sex With Men Adam Jones, Lindsay Young, Stuart Michaels and Andrew Morse	Social Networks and Barriers To Innovation in Urban Water Infrastructure Planning Lisa Schacter and Gunilla Oberg
10:20	Coffee Break, Newport Coast Ballroom Foyer				

Thursday-AM1 cont.

AM1	Sunset	Laguna	Cardiff	Baycliff
Chair	Network Analysis in Educational Research Jennifer Wasting Mead	Networks and Market Norms Folien Elbre	Social Media Networks Susan Meindl	Recent Advances in Statistical Analysis and Mathematical Modeling of Social Networks Francesca Iacono Zhou
08:20	Using Networks To Facilitate The Use of Research Evidence By Public School Administrators Kristen Miller, Zachary West, Jennifer West and Jennifer Lawlor	Relationship Change in Social Networks: Analyzing Change in Support Provision Within Network Ties and Implications For Single Name Generator Longitudinal Studies Alexandra Mann		
08:40	On The Role of Informal Personal Networks in Explaining Technical Education Student Drop-Out Carlos Contreras-Balaz	How much he earns? Family? Regional? Vocational? Comparison As A Stratification Process On Labor Market Entry Elise Penello-Itcher	Women/Women Belgium 2015: Using Social Media and Social Network Analysis To Empower Young Women in The Age of 150 Ruth Tamara, Alpha Ternary and Katherine Triglia	GLG/AN: Online Tracking of Health Behaviors and Mood Tzu-Jung Yen
09:00	Students' Popularity, Achievement and School Assessment Vero Tirkova, Valeria Ivanushina and Daniel Alexandrov	A Networked Anatomy of The COO Bubble Daniel Tischer and Adam Leaver		
09:20	Effects of Teaching Practice On Classroom Friendship Networks Moaden Abouattoum, Ingrid Gonzalez, Barry Robbins and Vicki McKenzie	The Micro-Regional Structure of Markets: Modeling Transaction Sequences in The EU Interbank Money Market Federica Bianchi, Paolo Zappo and Alessandro Lomi	Consumer Ties in Social Media Networks Dagmar Aidelwiger and Alisdair Venkatesh	Modeling The Covolution of Event Networks and States With Application To Team Process Aston Davidson and Heather Contractor
09:40	Personality and Play: The Evolution of Reciprocity? Temperament Traits and Social Play Networks Jennifer Wasting Mead, C. Emily Durbin, Allison Odomik and Sharon Lu	Collective Rationality in The Dynamics of Popularity Peter Krings, Jialu Zhang, Wei Pan, Nicolas Della Paolra, Yanni Altshuler, Eric Shmueli, Josh Tenenbaum and Alex Sandberg	Emotion Homophily in Online Discussion Networks: A Networked Approach To Discussing The Expressive Behavior of Social Media Users in China Yanyu Song, Xinyi Dai and Jie Wang	Non-Parametric Analysis of Bi-Dynamic Line-Graphs For Dynamic Network Data John Kaskorian, Chora Broccolotti and Martin Everett
10:00	Multiplying and Changes in Borrowing, Fear Exchange, and Advice Networks in Response To The Availability of Formal Markets Alamy Borge, Arun Choudhary, Esther Duflo and Matthew Jackson		Network Awareness: The Development and Validation of A Scale Brooke Paschall Walker, Michael A. Szymanski and Christa Wilson	The Ups and Downs of Network Churn: How Much is Too Much? Wenli Taylor and Meredith Weisler
10:20	Coffee Break, Newport Coast Ballroom Foyer			

Thursday - AM2

AM2	Salon 5	Salon 4	Salon 3	Salon 2	Salon 1
Chair	Alleya Nettekoven	David Schoch	Peter Mandel	Joseph Cabrera	Suzanne Coderre
10:40	Psychology and Mental Health Social Network Characteristics and Engagement With Mental Health Services Among Black-African and African-Caribbean People With Psychosis Amy Dagnan, Nick Croxall, Glenn Gage, Katherine Barry, and Emma Gill	Network Centrality: Theoretical Advances and Applications Biased Net-Type Centrality Measures Using A Probabilistic Version of Watts, Traud and Palla To Specify Central Actors in A Network Filip Agrelescu	Regional and Community Networks For Healthcare Improvement Community Engagement Interventions and Local Networks To Improve Health Services: Network Effects of the Community Paediatric Care (CPC) Cluster-Randomised Study Peter Mandel, Jennifer O'Hara, Farhad Fazlipoor, and Lily Zhang	Social Support and Personal Networks Influence of Social Networks, Social Norms, and Cultural Beliefs On HIV Risk and Testing Behavior Among African American Women Karin Wagner, Harold D. Owen, Jr., and James Sirooni	Academic and Co-Authorship Networks Network Analysis of Communications and Connections of Engineering Professional Skills Through Group Discussion Mengyao Zhu and Mo Zhang
11:00	An Application of Social Network Analysis To The Community Study of DSM-IV Mental Disorders Nanjo Kim and Michèle Newman	Evaluating Network Centrality Using Entropy Tools Tamarah Shupe and Dae Fraust	Health, Healthcare, and Community Networks: Kaplan Studies in Organizational SHU Malcolm Williams, Ryan Brown and Daniela Viora	Social Network Support and Healthcare Utilization: Access To Care and Health Outcomes Among Sexual Refugees Janet Okamoto, Pamah Omer, Scott Anderson and Mohamed Alshar	What Brings Us Together: Institutions and Linking Behavior in Early Stage Academic Communities Katherine Anderson, Matthew Cappi and Eleanor Sayre
11:20	The Big Five Personality Traits in Network Research Brandon Seale-Smith, David Huxton, Omar Lopez and Matthew Chandler	Navigating The Centrality Landscape of Networks Using Multi-Objective Optimization Emilia-Agneta Nordst and Kristin Rognstad	Creating A Network For Chronic Disease Management: The Atlanta Healthcare Quality Improvement Collaborative Kaya Phillips, Thomas Volante, Keesa Eickens, Jennifer Verma and Anne Chohan	Calling On Kim: The Place Of Parents and Adult Children in Epigenetic Networks Shira Offer and Claude Felber	Update of Methodological Innovations in Pharmacoepidemiology Follows The Diffusion of Systematic Reviews and Guidelines Research Analysis Suzanne Coderre
11:40	Social Influence Models in Community Settings: The Case of Post-Disaster Mental Health J. Gabe Gallagher, Owen Lusk, Richard A. Bryant, Wang Ping, Lisa O'Neil and Phillip Robinson	Is It A Sign of Stability or Instability? Multiple Centrality Indices Agree? David Schoch and Ulrik Brandes	A Network Evaluation Framework for Community Networks Using The PARTNER Tool Daniela Viora	Personal Network Structure and Post-Disaster Recovery Experiences in Tornados-Affected Communities Sangeun Lee, Arif Sabir, Scott Johnson, Rickie Chohan, & Justin Saper	
12:00	Role of Structural Features of Epigenetic Networks in Detection of Heat From Genome Based Suicide and Depression On-Line Social Network Visualization Alleya Nettekoven, Anandaram Suresh, Phillip Uppenkaw, Mubim Khanbajani and Michael Treisman	Centrality Facing Inequality Ulrik Brandes	Analyzing Real-World Health Community Networks Using PARTNER To Assess Ego-Centered Events Sara Spring Sica, Ramon and Daniela Viora	Measuring Social Capital Using Network Structure Joseph Cabrera and Alyssa Carroll	
12:20	Break				

Thursday - AM2 cont.

AM2	Sunset	Laguna	Cardiff	Bayciff
Chair	Chloé Marechal, Kendra Stearns	Jana Diezner	Patrick Doreian	Frederick Kin Ming Piao
10:40	Networks For Learning The "Strength" of Ties? Investigating Teacher Burnout From A Social-Structural Perspective Chloé Marechal, Sarah Dielen and Eva Jymdt	Socio-Semantic Networks Deliberative Methods, Social and Sociosemantic Networks and Opinion Francis P. Robert, Pierre Kongozo and Johanne Saint-Charles	Sampling Methods / SNA Methods A Network-Based Approach To Sampling Sumner Studies in Social Media Logan Walsh, Kate Stearns and Emma Spira	Recent Advances in Statistical Analysis and Mathematical Modeling of Social Networks Network Exploration by Complements of Graphs With Graph Coloring Frederick Kin Ming Piao
11:00		The Quality of Imposed and Emergent Meaning: A Socio-Semantic Network Analysis of Artistic Collectives Kendra Stearns, Jan Vanhooft, Piet van den Broeke and Henke Moelenaar	Estimating The Proportion Depressed Among Urban, Gay, and Bisexual Older Adults: Lessons Learned From A Respondent-Driven Sampling Feasibility Case Study Maryclare Griffin, Krista Ols, Karen Fredrikson-Brodie, Anne Henderson and Elena Erusheva	Formal Statistics For Testing Network Centrality On Uncorrelated Random Graphs Tai-Chi Wang and Frederick Piao
11:20	Stick Together and Teach On: How Do The Characteristics of The College Network Influence Newly Qualified Teachers' Social Informal Learning and In-Turn Their Job Satisfaction? Sanne De Vos, John De Wilde, Jansen Beusart and Chloé Marechal	Hybrid Roles? A Socio-Semantic Network Analysis of Artists and Managers in Between Scales of Fields and Practices Alexandra Nenta, Anastasia Zenchova and Nikita Bazo	Positional Analysis of Multiple Networks With Actor Attributes Antonio Rivera Ostalc	Two-Stage Pseudo Maximum Likelihood Inference Combining Likelihood and Exponential Random Graph Models Ming Cao, Kyoji Fujimoto and Yang Chen
11:40	Knowledge and Informal Network Structure of Teachers' Project Teams Bieke Schreurs and Jolanne De Laet	Affection, Cognition and Power in Social and Sociosemantic Networks Johanne Saint-Charles and Pierre Mongeau	Actor Non-Response in Valued Social Networks: The Impact of Different Non-Response Treatments On The Stability of Blockmodels Anubha Perigal, Anja Trinajstić and Patrick Doreian	Exact Exploratory Biomodelling of Multiple Relation, Mixed-Mode Networks Matthew Dobson, Ning Fan and Gerald Bragler
11:00	Exploring Change of Teachers' Social Networks Within Elementary Schools in Korea Chong Min Kim		Stability of Centrality Measures in Valued Networks Regarding Different Actor Non-Response Treatments and Macro-Network Structures Patrick Doreian	Network Change Detection and Prediction Using Time Series Methods Janis Butkovic, Ian McCulloch and Christine Zou
12:20	Break			

Thursday - PM1

PM1	Salon 5	Salon 4	Salon 3
Chair	Emily Smith	Bernice Pescosolido	Joshua Mendelsohn
13:40	Informant Accuracy Comparing Accuracy and Respondent Burden of Approaches To Gathering Alter-Tie Data in Egocentric Networks. Kate Edkins and Jesse Pagan	Egocentric Network Analysis: Theoretical and Methodological Simplifying Ego-Centric Network Analysis in R With Egonet Till Kraenz and Andreas Herz	Health Provider Networks and Practice Behavior Epidol and Benzodiazepine Prescribing Among Medicaid-Enrollees With Opioid Use Disorders: The Role of Provider Communities Brad Stein, Joshua Mendelsohn, Adam Gordon, Andrew Dick, Rachel Burns, Mark Sorbero, Rosalie Paculo
14:00	Mutual Assent Or Unilateral Nomination? A Performance Comparison of Interacting and Union Rules For Integrating Self-Reports of Social Relationships Francis Lee and Carter T. Butts	EgoViz 2.0: Open-Source Software For Collecting and Analyzing Ego-Centric Network Data David Kennedy	An Investigation of Variation of Evidence-Based Implantable Cardioverter Defibrillator Treatment in The U.S. From A Network Science Perspective Erika Moen, Andrea Austin, Julie Byrns, Jonathan Skinner, A. James O'Malley
14:20	Accuracy of Ego's Report of Alter's Drug Use: Feasibility of Using Behavioral Data To Help Resolve Duplicates in Sociometric Risk Networks April Young, Christopher Hopkins, Abby Rudolph and Jennifer Hovens	Empirical Dimensions of Social Capital: Testing For Inter-Group Measurement Equivalence of The Social Capital Instrument of The German National Educational Panel Study Benjamin Schulz	Advice-Seeking Among Colorectal Cancer Control Program Grantees, 2011-2012 Miruna Petrescu-Prohova, Peggy Robinson, Annette Maxwell, Cora Escoffery, Thy Vy, Mariana Kahn
14:40	Interviewer Identity and Learning Effects as Sources of Variation in Self-Reported Reported Social Networks Guy Harling, Frances Xavier Gomez-Olive, Jessica Perkins, Katherine Morris, Colin Payne, Tili Sabinghousen, Lisa Berkman	Modeling The Dynamic of Networks With Heterogeneous Social Capital Allocation Enrico Ubaldini, Nicola Perro, Anton Karal, Alessandro Vezzani, Raffaella Buroni, Alessandro Vespanani	When Do Relations Between Organizations Serve Client Benefits? The Role of Enabling Network Structures Denis Trapiold and Francesco Pallotti
15:00	The Accuracy Problem in Network Data Revisited Steve Corman, Daniel Preiser and Daniel Bliss	Using Non-Hierarchical Multilevel Models To Analyze Social Support in Overlapping Egocentric Networks Raffaella Vacca, Jeanne-Marie Stacciarini and Mark Trammer	
15:20	Predicting Respondent Precision of Geographic Network Data Emily Smith, Carter Butts, John Hipp, Nicholas Nagle	Estimating Contextual Effects From Sampled Ego Network Data Jeffrey Smith	
15:40	Coffee Break, Newport Coast Ballroom Foyer		

Thursday - PM1 cont.

PM1	Salon 2	Salon 1
Chair	Yanjie Bian	Kate Coronges
13:40	East Asian Social Networks	Social Network Science in The U.S. DoD
14:00	Bibliometric Traits of Social Network Analysis Field Guodong Zhang, Wanli Zhao and Zhizhang Wang	Panel Members: Edward Palazzolo, Army Research Office Andy Slaughter, Army Research Institute Raluca Gera, Naval Post Graduate School John Roginski, Naval Post Graduate School
14:20	Institutional Contingency of Network Embeddedness of Class Identification: Network Members' Occupational Status and Subjective Social Class in Three Societies Lijun Song and Aosh-Rang Yu	
14:40	Network and Individual Factors Associated With Drug Use Among Female Sex Workers in China Yuan Jue Yu, Christopher McCarty and So Wang	
15:00	The Re-Birth of Sociology in China in The Early 1980s - A Network Analysis Danching Ruan	Facilitator: Kate Coronges, Northeastern University
15:20		
15:40	Coffee Break, Newport Coast Ballroom Foyer	

Thursday - PM1 cont.

PM1	Sunset	Laguna	Cardiff
Chair	Jessica Shearer	Klaoy L. Martin	Sara Dorgan, Raja Kari
13:40	Climate Change Alters Mating Strategies and Social Systems Among Rural African Pastoralists Ashley Hazel and James Holland Jones	Network Analysis in Educational Research Klaoy L. Martin	Automotive International Trade Networks: A Comparative Analysis Over The Last Two Decades Sara Dorgan and Alessia Amighetti
14:00	Peer Learning Networks in Global Health: An Innovative Approach To Improve Primary Health Care in Africa Emily Camahan	Teachers' Active Engagement in Social Media: A Comparison of Network Interactions Across Physical and Virtual Spaces Zivi Chen, Kaitlin Topchy, Adrienne Hu, and Andy Jurtzsek	Fragmentation of Production and The Competitiveness of Nations in The Automotive Sector - A Network Approach Matthew Smith
14:20	Social Network Analysis in Low-Resource Settings: Data Collection Do's and Don'ts Arija Thompson	Who Does Not Want To Sit Next To You in Class? Educational Performance and Social Rejection of Children of Immigrants in Europe Isabel Koabe	Assessing The Fragility of Global Trade - The Impact of Localized Supply Shocks Using Network Analysis Magali Pinot, Yevgeniya Komjenko and Brian Dew
14:40	Evaluating Global Health Partnerships: A Case Study of The Zvivi Vaccine Application Process in Uganda Carol Kamya, Peter Waiswa, Gilbert Asimwe, Faith Nampugaya, Emily Camahan and Jessica Shearer	Achievement Similarity Among Friends: Selection and Influence Processes David Kretschmer	Network Structure and Industrial Clustering Dynamics in The Aerospace Industry Raja Kari, Ari Van Assche and Ekaterina Turkina
15:00		Factors Influencing Parental Decisions: A Social Network Analysis of School Choice in Michigan Klaoy L. Martin	Rethinking Distance in International Trade: World Trade Atlas 1870-2013 Guillermo Garcia-Perez, Maridin Boguñá, Antoine Allard and M. Angeles Serrano
15:20	The Effects of Sexual Network Attributes On HIV Prevalence in Rural Uganda Laura Bloomfield and Ronan Arthur		Mapping Accountability Relationships Between Citizens and State Actors in The Water Sector in Rural Uganda: Insights From Social Network Analysis Miet Kuppens
15:40	Coffee Break, Newport Coast Ballroom Foyer		

Thursday - Evening Program

17:30 to 18:30	Keynote: Garry Robins <i>Collapse Of Networked Social Systems: Network Dependence, Fate, And War</i> Newport Coast Ballroom
19:00 to 20:00	Keynote Reception Rose Garden (If raining: Newport Coast Ballroom Foyer)
20:00 to 21:30	Banquet Seaview Terrace (If raining: Grand Pacific Ballroom)
21:00 to 24:00	Hospitality Presidential Suite

Friday - AM1

AM1	Salon 5	Salon 4	Salon 3	Salon 2
Chair	Social Network Analysis of Mobile Phone Datasets David Lazer, Geoffrey Corngis, Keith Brigg-Morson	Microfoundations of Dark Networks Tonya Monson, Mario Small, Neal Smith	Dark Networks Tracy Rizzuto	Networks in International Trade, Investment & Policy Sara Dargatzis, Rajee Iyengar
08:20	Making Sense of Big Data: Mobile Phone Communication Predicts Face-to-Face Interactions Sam D. A. Roberts, Tobias Bornscheuer, Tolobek Akissov and Jari Saarimäki	The Enemy of My Friend is Easy to Remember: Balance As A Compression Heuristic in Mental Health Tjerk Beentjes, Mark Loran, Jorim Touwstra and Helen Christensen	Partners in Crime? A Theory of Corruption as a Criminal Network: Evidence from a Lab Experiment Romain Ferrel	Networks of Trade and Foreign Direct Investment Bruce Kogut and Joe Song
08:40	Using Participatory Data Smartphones to Investigate the Role of Social Networks in Mental Health Tjerk Beentjes, Mark Loran, Jorim Touwstra and Helen Christensen	The Co-Evolution of Networks and Personality Meredith Wheeler, Theresa Floyd, Wookje Song, Jesse Fagan, Rishi Agrawal, Travis Grosser and Giuseppe Joel Lubiano	Graph Theoretic Detection of Dark Networks in Background of Larger Social Networks J.R. Lapsley and Daniel Evans	Bitcoin: The Network Structure of a Decentralized Financial Network Ethan Friedman
09:00	Interpersonal Network Dynamics in an Emerging Crisis Carolina Mattsson, Drew Margolin and David Lazer	Think Before You Network: Cognitive Flexibility, Agency, and Information Networks Edina Dövényi, Daniela Laurin-Kortner and Zoltan Boross	Enhancing Community Detection in Multiple Networks Leveraging its Layered Aggregation Raluca Gera, Ryan Miller and Alvaro Sanchez	Network Influences on Country Policy Implementation Thomas W. Valente, Stephanie Paul, George Vaggioris, Kai-wei Chu, Heather Wolff and Aya Fujimoto
09:20	Inferring Urban Activity Distribution from Aggregated Egocentric Communication Data Juhang Zhang and Carter Butts	Partner-Specific Behavior in Social Networks: Coordination Among Actors With Heterogeneous Preferences Vincent Busiello and Mikko von Brnken	Business Policemen Behind The Blue Veil of Silence: Determinants of Centrality, Sentencing, and Whistleblowing in Elite Corruption Networks Ivan Anagnostis	Repertoire Communities in American Popular Music 1895-1950 William Roy
09:40	Strategies for Cleaning and Merging Social Network Data From Multiple Sources Matthew Chandler	Motivation As Antecedent For Employee's Embeddedness in Intra-Organizational Collaborative Networks Natalie David and Claf Rank	Conspiracies As Structure and Perception Georg Rilling	The Role of Showbusiness Families in Movie Industry: A Network Perspective Yasaman Goji
10:00	Ethnoracial Status and Tie Decay in Social Networks: Linking Triadic Hierarchy and Simmelian Tie Theory David Richter, Omar Lizards, Michael Pento, Matthew Chandler and Brandon Spauldo	12:20	12:20	12:20
12:20	Coffee Break, Newport Coast Ballroom Foyer			

Friday - AM1 cont.

AM1	Sunset	Cardiff	Laguna	Baycliff
Chair	Networks of Cultural Organizations and Institutions Gabriel Rosman and William Roy	Networked Innovation Julian Brilly	Network Approaches to Language, Meaning, and Sociocultural Contexts David L. Elliott	Visards Session
08:20	Networks of Music Groups As Success Predictors Dmitry Zhovnev	How Social Networks Shape Absorptive Capacity in Open Innovation: Preliminary Results From Two Case Studies Andrew Terhorst	Dynamic Co-Evolutions of News Frames in International Peace Coverage: A Semantic Network Analysis Ka Jong and George Barnett	Juergen Pfeiffer, Vladimir Bratkov, Katy Boerner, Link Brnken, Seok-Hee Hong, Jeffrey Johnson, Lachar Kempel and Seung Winer
08:40	How Music Genres Are Perceived and Reconstructed in the Consumer Market? Yongren Shi	The Emergence of Business Networks in an Emerging Biotechnology Sector: The Case of Taiwan Pao-Long Mao	Embodied Cognition Embedded in Semantics: Feature Networks for Chinese, English, German and Italian Feng Lin, Wei-Hung King, Dong Zhang, Jinyang and Boqi Li	
09:00	California Uber All: Using Stochastic Actor-Oriented Models to Analyze Network Dynamics of Facebook in the USA 1979-1996 Joe Watson	Organizational Cultural Barriers to Innovation: A Social Network Perspective of the Commercialization of Public Research Boris Kozmin, Oleg Luchter, Michael Gilling, Thomas Spurling, Greg Simpson, Tom Blum, Julia Bernhardt, Peng Wang, Vikki Burton, Jill Kubit, Julian Brilly	Multi-Graph Based Semantic Knowledge Detection Giuseppe Giordano	
09:20	Repertoire Communities in American Popular Music 1895-1950 William Roy	The Role of Showbusiness Families in Movie Industry: A Network Perspective Yasaman Goji	The Context and Contents of Cyberbullying Anthony Park and Marzen Ramirez	
09:40	Can Radio Stations Pick Singles? The Opinion Leadership Hypothesis Gabriel Rosman	12:20	12:20	12:20
12:20	Coffee Break, Newport Coast Ballroom Foyer			

Friday - AM2

AM2	Salon 5	Salon 4	Salon 3	Salon 2
Chair	Adolescent Friendship Networks Joemin Lee	Multilevel Network Perspectives in and Around Organizations Soyoung Anagnostis, Francesca Peiffert	Two-Mode Networks Martin Everett	Networks, Economics and the Labor Market Scott Feld
10:40	Bridging the Gender Divide: The Effect of Informal Status on the Structuring of Women and Men's Networks Andrew Parker, Amy Welton, Peng Wang and Stephen Borgatti	Multi-Scale Policy Networks For Regional Water Resources Governance Jacob Willemson and Mark Lubell	Knowledge and Experience in Two-Mode Temporal Networks Martin Everett, Chiara Broccatelli and Johan Koskinen	Indirect and Generalized Reciprocity Predict Networks of Interpersonal Aid David Galambos and Brent Simpson
11:00	The Coevolution of Friendship, Companionship and Music Preference in Early Adolescence: A Social Network Study Zeynep Kocak and Tom Snijders	Multilevel Socio-Material Network Analysis of Artistic Organizations: Combining Ethnographic and Exponential Random Graph Models Anisqa Khokhlova and Nikita Basov	The Value of Affiliation: Dealing With Value Two-Mode Networks Zachary Neal	Global Private Capital: A Network Perspective William McCumber, Patrick Stanton
11:20	Segregation in Social Networks: A Novel Approach Using Facebook Bos Heijmans, Resse Corfen, Frank Van Tubergen and Nicole Ellison	MMMR: Using Multiple Membership Multilevel Models To Analyze Networked Organizations Guang Ying Mo and Barry Wellman	Online Dating Preferences: Two-Mode Versus One-Mode EGM Network Analysis Alina Lungescu, Diane Felmeier and Derek Kraeger	Identifying Online Consumer Engagement For Public Health Messages Helen Suki and Cynthia Webster
11:40	Influence and Selection in Adolescent Social Experiences: Modeling Differential Sexual Homophily by Gender and Cross-Gender Friendships Joemin Lee, Sarah Thirth, Conilyn Holman and James Moody	Explaining Participation in Open Organizations: The Role of Specification and Repeated Collaboration Marzo Tomellato and Giulio Conadi	When Knowledge and Experience Matter: Measuring Centrality in 2-Mode Temporal Covert Networks Chiara Broccatelli, Richard De Heijboer, Martin Everett and Johan Koskinen	Social Capital, Islam, and Labor Outcomes Among Muslim Immigrants? Chang Z. Lin, Jeffrey D. Reitz
12:00	12:20	12:20	12:20	12:20
12:20	Break			
12:30	ISNA Board of Directors Meeting Diamond Cove			

Friday AM2 cont.

AM2	Salon 1	Sunset	Laguna	Cardiff	Baycliff
Chair	Socio-Semantic Networks Ina Hellsten	Networks For Learning Katerina Bohle	SMA in Russia: Progress and Prospects Valentina Kusova	Social Networks and Health: Support Laura Roehly	Visards Session
10:40	Socio-Semantic Analysis of Online Discussions On Public Transit Service Mehin Hossain and Tamer El-Ghazaly	What Predicts The Dissolution of Instructional Advice and Information Ties Between Teachers? James P. Spillane and Benjamin Lind	Competitive Cultural Market: Collaborative Networks in Jazz and Metal Stanislav Molev and Benjamin Lind	Family Environment From A Network Perspective: Implications On Long Term Impacts of Genetic Services Laura M. Leahy, Christopher S. Marcani, Sunm Song and Donald W. Hedley	Juergen Pfeiffer, Vladimir Bratkov, Katy Boerner, Link Brnken, Seok-Hee Hong, Jeffrey Johnson, Lachar Kempel and Andri Mirvar
11:00	Socio-Semantic Configuration of A Twitter Territory Camille Roth and Ina Hellsten	The Evolution of The Personal Networks of Novice Librarian Researchers Mona Kennedy, David Kennedy and Kristine Brancolini	Political Attitudes: Stability among Students' Social Network Approach Irene Marzi-Priestly and George Sekizkar, Yutshover	Assessing The Degree of Partnerships Between Informal and Formal Sectors Robert Aisling and Tao Chen	
11:20	Framing and Blaming the Barometer Adina Verghes and Ina Hellsten	Toward An Integrated Social Exchange Theory of Advice Relationships in Two-Mode Cores Paolo Zappo and Alessandro Lomi	Subnetworks and Music Scenes: An Application of Generalized Two-Mode Cores Benjamin Lind and Stanislav Molev	'Peer Leaders' Demographic and Sociometric Characteristics Influence Allies' Intervention Exposure in The Sources of Strength Suicide Prevention Program Trevor Pickering, Thomas Valente and Peter Wyman	
11:40	Networks of Meaning On Meaning-Making in Networks? A Study of Socio-Semantic Change Among Young Scientists Marjona Adilovici	The Co-Evolution of Work-Related Advice and Voice Networks Ivan Kuznetsov	Social Networks and Breast Cancer Progress in The Pathways Study Candice Kroeckle, Marilyn Iwata, David Kennedy and Larry Kushi		
12:00	12:20	12:20	12:20	12:20	12:20
12:20	Break				
12:30	ISNA Board of Directors Meeting Diamond Cove				

Friday - PM1

PM1	Salon 5	Salon 4	Salon 3	Salon 2
Chair	Changes in Social Networks and Resources Through The Life Course Betho Hollstein	Beyond Middle School: Further Results From The RAND Social Context of Adolescent Risk Behaviors Study Michael Pento	Online Networks Amir Saha	Social Networks and Climate Change David Threlkoff
13:40	Longitudinal Influences of Family, Individual and Community-Level Predictors On Alcohol Use in Middle and High School Brett A. Ewing, Jeremy Ivry Miles, Joan T. Tucker, Dorothy E. Lipke and Harold D. Green, Jr.	Differential Use, Differential Meaning: Race and Community Structure On Twitter Nina Casare	n-Body Search, Sort, and Filter Twitter Data Via A Planar Visualization To Handle Real-Time Data Michal Soffer	Climate Change Policy Networks in The Czech Republic: Mapping Coalitions and Conflicts Petr Zoubek
14:00	Network Changes Over The Life Course: Mechanisms and Driving Forces Betho Hollstein	Relationship Characteristics Associated With Successful Bullying Homophily: A Social Relations Model Perspective Harold D. Green, Jr., Marc Punkley, Brett Ewing, Joann Embrey, Dorothy Lipke and Joan Tucker	Structural Signatures of Online Discussion Groups and Their Influence On Group Cohesion Jacqueline Ng, David Ivry and Joann Tucker	Combining Policy Network and Discourse Network Analysis To Understand Climate Change Advocacy Coalitions in Brazil Leonora Petroni, Monica Di Gregorio and Peter Ardy
14:20	Pathways To Health And Wellbeing - The Social Networks of Orphaned and Abandoned Children Lynne Messer, Anthony Whetten, Anne Acoro and Christine Eloy	Association of Community Norms With Willingness To Intervene in Bullying among Early Adolescents Benjamin Colabato, Harold D. Green, Jr., Dorothy Lipke, Brett Ewing, Joella de la Hoya, Michael Pollalis and Joan Tucker	Modeling Rumor Diffusion On Social Media During Crisis Events Li Jing, Kate Starbird and Emma S. Spina	Towards An Understanding of Citywide Urban Environmental Governance: An Examination of Stewardship Networks in Baltimore and Seattle Michelle Romolini, Morgan Brown, Curtis Vermeir, Christopher Kralik and Daniel Armstrong
14:40	Friendship Suspended: Estimating The Effects of School Suspension On Change in Friendship Selection Wade Jacobson	Examining Bullying With A Longitudinal Social Network Analysis Lisa De La Rue, Dorothy E. Lipke, Joan T. Tucker, Marc Punkley, and Harold D. Green, Jr.	Community Peer Support For Autism In Social Media Amir Saha and Nilin Agarwal	The Meaning of A Close Tie: Social Network Name Generators and Concepts of Closeness Molly Copeland, Josh Bruce and Marie Christine Roman-Felix
15:00	Network Analysis, Social Support, and Mental Health in College Students: An Examination of The Literature Heather Clark, Rhonda Rehn, Margaret Shippy and Leslie Sherman	Results From The RAND Social Context of Adolescent Risk Behaviors Study: Summarizing Key Findings Joan Tucker	15:40	15:40
15:40	Coffee Break, Newport Coast Ballroom Foyer			

Friday - PM1 cont.

PM1	Sunset	Laguna	Cardiff	Baycliff
Chair	Qualitative Social Network Research Silvia Dominguez and Rosalyn Isgrig	Network Approaches To Language, Meaning, and Sociocultural Contexts David L. Elliott	Words and Networks Jana Diesner, Peter Bloor	Social Media and Political Campaigns Dimitris Christopoulos
13:40	Quantitative Social Network Analysis Through A Qualitative Lens: An Analysis of Subjectivity in Exploratory Analysis and Stochastic Models of Networks Rosa Hoag-Horvath, Matthew Dobbin, Alessandro Lomi, Lynne Lofley and Robert Rosenbaum	Authenticity and The Effects of Relational and Categorical Identities On Restaurants Reviews Alexandros Lomi, Anastasia Giacharou, Paolo Cristani, and Spyros Angelopoulos	Mental Models in A Knowledge Network Michael Levy and Mark Lubell	Online Political Media: Twitter Activity On The Run-Up To The Scottish Referendum Dimitris Christopoulos and Juergen Pfeiffer
14:00	Heterogeneous Personal Networks: Connecting Across Race and Class in Personal Relationships Silvia Dominguez and Juanta Barera	An Exploration of Textual Stance-taking by Major Bioethical Authors, 1979-1979 David L. Elliott	Hopes and Fears: Institutional Logics and Discourse Settlement around MOOCs Eugenia Digirola, Pursey Heugens, Arjen Wulf and Kristo Partala	Gei Park Protests On Collective Learning Gunes Erten
14:20	Spread Global, Start Local: Modeling Endemic Socio-Spatial Influence Networks Jeffrey Block	The Ecology of Scientific Production: Modeling Competitive Dynamics Among Sociology Journals Fedor Dolzhen and Matthew Brinkner	The Emergence of Negative Campaigning On Twitter: Evolution of A Spread Network During The 2016 GOP Nomination Contest Justin Gross	
14:40	Social Network Ethnography: Doing Qualitative Network Analysis in A Gang Neighborhood in Central Illinois Mark Fleisher	Metacommunicative Grammars in Sexual Encounters: Indexing HIV Status Across Migrant and Local Sexual Networks Roberto Bepko, Gabriela Araya, Fabio Teixeira and Igor Igo	Scientific Collaboration in Brazilian Health Informatics Scientific Community Roberto Bepko, Gabriela Araya, Fabio Teixeira and Igor Igo	This is #FridayGang: Networks of Community Response To Injustice and Policing Kimberly Olsogow
15:00	The Meaning of A Close Tie: Social Network Name Generators and Concepts of Closeness Molly Copeland, Josh Bruce and Marie Christine Roman-Felix	The Fifteen Days: How A Protest Theme Emerges in Communication Networks? Eunhyung Song	Reinventing The Classics: Present Influences On Past Work Valentin Danchev, Jacob Foster and James Jones	Tackling User Bias in Social Media To Increase Prediction Validity of Political Opinions Juergen Pfeiffer and Fred Morstatter
15:20	Local Action and The Inter-Relational State: Creating Uncertainty and Delay in Relational Decisions So As To Get The Upper Hand Colin Peterson and Daniel McFarland	Legal Action and The Inter-Relational State: Creating Uncertainty and Delay in Relational Decisions So As To Get The Upper Hand Colin Peterson and Daniel McFarland	Starling Hunter and Susan Smith	Ossabak: Maximizing Social Media Value Rick Gronow and Ricky Gronow-Vu
15:40	Coffee Break, Newport Coast Ballroom Foyer			

Friday - PM2

Friday - PM2 cont.

PM2	Salon 5	Salon 4	Salon 3	Salon 2	Salon 1
Corporate Networks Chair Katie Heermans	Communication Networks Nicola Bellar	Building Network Structure Scott Feld	Social Support Jacob Young	Doing Qualitative Network Analysis Stephan Bernhart, Andrea Herz	Narrative Methods For Network Ties Stephan Bernhart
16:00 Corporate Elite Campaign Donations and Political Behavior: The Case of Proposed Labor Legislation Anna Jacobs	What is a Relationship? - Friendship as a Mutually Perceived and Enacted Type of Relational Story Daniel Matarfand and Jan Fuhs	The Company We Keep: Experimental Evidence on Network Change from 56 Middle Schools Hana Shepherd	Coworking and Social Support Among Peers: A Multivariate Model of Economic and Social Exchange Between ICT Practitioners Federico Bianchi, Nicolò Corini and Pamela Spagnolo	Bound To Help? Measuring Sense of Obligation in Strong Ties Lindsay Boylson, Lina Prescott and Matthew Johnson	Figurational Approach To Network Dynamics: Analyzing Qualitatively The Evolution of Marital Networks Anno-Majla Costron
16:20 Business Unity and Corporate Responses To Social Movement Protests Taran Banerjee	Changing Alliances: Insider Threat and Inadvertent Leaks Kathleen Carley, Geoffrey Morgan, Nikki Behari, Neal Abramson and Andrew Moore	Using Organizational Social Capital To Increase Cancer Screening For Medically Underserved Populations in New York State: A Practitioner Oriented Intervention Jennie Low, Ellen Brodt and Dara Shapiro	Bound To Help? Measuring Sense of Obligation in Strong Ties Lindsay Boylson, Lina Prescott and Matthew Johnson	Figurational Approach To Network Dynamics: Analyzing Qualitatively The Evolution of Marital Networks Anno-Majla Costron	Panel Members Zachary Neal Small World Experiments in Undergraduate Courses Jordi Comas Teaching Networks To Non-Experts in a General Education Class Peng Wang, Dean Lusher, John Koskinen and Garry Roberts
16:40 The US Business Roundtable: Large Corporations and Congressional Lobbying Bruce Cronin	Which Authors of ICANN Documentary Information Disclosure Policy Requests are Likely to Receive Defined Conditions of Non-Disclosure in ICANN's Response? Sarah Clayton	Friends of Friends Referrals Create Network Inequality: Evidence From a Field Experiment Mehdi De Vaan and Don Wang	Sources and Changes in Social Support As Athletes Recover From Serious Sports Injuries: Retrospective Study Ruth Lowy, Carl Recascio and Melissa Day	Towards Typologies in Qualitative Network Analysis Alice Altissimo and Andrea Herz	Brooke Foucault Welles: SNA As A Pathway To STEM Broadening Participation in STEM Through Undergraduate SNA Classes Catherine Ormer: Teaching Social Network Analysis To Undergraduates
17:00 Political Contributions Pre and Post Citizens United Roy Barnes	Trust in Prisons: An Exponential Random Graph Analysis of Binary and Weighted Networks Brian Solter, Jessica Goodkind and Christopher Browning	Eco-Network Entanglement and Community Attachment Among Recent Refugees in Albuquerque Jacob Young, David Schaefer and Derek Kreager	The Story Behind The Network Graph: A Mixed-Method Study On Problem-Centered Interviews About The Impact of Social Relations On Career Paths Morine Herzig and Colleen Zuber	Panel Members Zachary Neal Small World Experiments in Undergraduate Courses Jordi Comas Teaching Networks To Non-Experts in a General Education Class Peng Wang, Dean Lusher, John Koskinen and Garry Roberts	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law
17:30 17:30 to 19:30 21:00 24:00	Break Poster Symposium & Slam Poster Symposium and Reception 17:30 to 19:30, Poster Slam 17:30-19:30 Grand Pacific Ballroom Hospitality Presidential Suite				Break Poster Symposium & Slam Poster Symposium and Reception 17:30 to 19:30, Poster Slam 17:30-19:30 Grand Pacific Ballroom Hospitality Presidential Suite

PM2	Sunset	Laguna	Cardiff	Coral Cove	Copper Cove
Networks For Learning Chair Katerina Bohle Carbonell	Social Networks and Health Inequalities Andreas Klemer	Teaching Network Science To University Undergraduates Alexandro Marin and Kate Corcoran	Exponential Random Graph Models Ick Hoon Jin	Estimation of Exponential-Family Random Graph Mixed Models With Dyadic Dependence Pavel A. Khrivitsky	Combined Analysis of Social Structure and Individual Outcomes Using ERMAs Peng Wang, Dean Lusher, John Koskinen and Garry Roberts
16:00 Teaching and Learning About Networks: A Pedagogical Dilemma Stephan Uzko, Catherine Ormer, Lori Sheetz and Miraki Szegem	Spatial Capital: Applications For The Study of Urban Inequality Joseph Golobkiewicz, Kathryn Freeman Anderson and Kendra Thompson-Dyck	Integrating Ethnographic Perspectives and Personal Network Data in the Study of Vicarious Racism and Hypertension Among African Americans Dellia Dingo, Clarence Grovlee and Raffaele Vozza	Panel Members Zachary Neal Small World Experiments in Undergraduate Courses Jordi Comas Teaching Networks To Non-Experts in a General Education Class Peng Wang, Dean Lusher, John Koskinen and Garry Roberts	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang
16:20 To Share Or Not To Share? A Social Network Application Of Transactional Memory Theory To Examine Knowledge Sharing and Hiding in Organizational Work Teams Chunlei Su and Kami Vinton	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law	Panel Members Zachary Neal Small World Experiments in Undergraduate Courses Jordi Comas Teaching Networks To Non-Experts in a General Education Class Peng Wang, Dean Lusher, John Koskinen and Garry Roberts	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang
16:40 Similarity, Breadth/Depth Connection, Diversity Spikes II: Exploring The Structure of Advice Networks in A Community of Practitioners Dimitrina Dimitrova and Emmanuel Koku	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law	Panel Members Zachary Neal Small World Experiments in Undergraduate Courses Jordi Comas Teaching Networks To Non-Experts in a General Education Class Peng Wang, Dean Lusher, John Koskinen and Garry Roberts	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang
17:00 Knowledge System Regarding Social Learning Amongst Streetkeepers in Veracruz, Mexico Rae Simms, Luciano Parrot-Bolland and Alfonso Langle-Flores	Social Networks, Stigma and Community Influence On HIV Testing and Disclosure Emmanuel Koku	Panel Members Zachary Neal Small World Experiments in Undergraduate Courses Jordi Comas Teaching Networks To Non-Experts in a General Education Class Peng Wang, Dean Lusher, John Koskinen and Garry Roberts	Using Network Analysis To Evaluate Leadership Development: The LAAAPP Practice/Knowledge Network Linda Brown, Raffaele Vozza, Jaime Martinez, Raymond Boyle and Rod Law	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang	Bayesian Analysis For Exponential Random Graph Models Using The Adaptive Exchange Sampler Ick Hoon Jin, Ying Yuan and Faming Liang
17:30 17:30 to 19:30 21:00 24:00	Break Poster Symposium & Slam Poster Symposium and Reception 17:30 to 19:30, Poster Slam 17:30-19:30 Grand Pacific Ballroom Hospitality Presidential Suite				Break Poster Symposium & Slam Poster Symposium and Reception 17:30 to 19:30, Poster Slam 17:30-19:30 Grand Pacific Ballroom Hospitality Presidential Suite

Saturday - AM1

Saturday - AM1 cont.

AM1	Salon 5	Salon 4	Salon 3	Salon 2
Social Networks and Health Chair Kaye Fujimoto	Modeling Network Dynamics Lucia Fabian	Negative Ties and Signed Graphs Joe Labianca	Inter-Organizational Networks Alessandro Iorio	Organizational and Technological Networks Marta Jobst
08:20 Network-Based Modeling For HIV In US Drug Injectors: Treatment As Prevention Alexei Zeleny, Jiahong Li and Patrick Wolfe	Choosing A Beta Attenuation Value For The Political Independence Index Joe Labianca, Jesse Papp and Carlo J. Labianca	Unlikely Affiliations: Donor-Based Connections Between Congressional Senators Elects, 2012 Christina Robbins	The Citation Impacts of Structural Holes and Status in Patent Inventor Networks: Three Taiwan Semiconductor Firms Yi-Hsien Guan and Rui-Ying Hsing	Marketing Ecologies and Housing Structure in Commons-Based Commerce Sites Emily Saha
08:40 Agent-Based Geospatial Analysis For Epidemic Control Wei Luo	Estimating Demand Variability Due To Social Network Influence: Hidden Costs of A Connected World Maurice C. Minner, Giovanni C. Di Silvio and Renato Quimrodes	Avoidance in Negative Ties: Unbinding Closure, Reciprocity, and Homophily Nicholas Harrison and Janice Yip	Using Web 2.0 To Support Collaboration in The Occupational Context - Analyzing The Use Phase Daniel Kammer, James Wilberg and Lida Lindstrom	From Social Networks To Social Networks: Social Pricing Model For Emerging Markets Telecom Customers Clayton Adams
09:00 Empirically Calibrated Simulation Experiment of Non-Medical Vaccine Exemptions and Disease Outbreak Potential in California Royce Liu	Simultaneous and Temporal Autocorrelative Network Models Daniel Sewell	The Balance Theory of Sentiment Relations: An Experimental Test Craig Redding and Leah Friedman	Developing Infrastructure Networks in Support of the Humanitarian Assistance Missions Valentine Dike and Daniel Evans	Longitudinal Analysis of Collaborative Graphs of Fictive Open Source Software Development Projects Using An Actor-Network Social Network Analysis Emmanuelle Auber
09:20 Using Artificial Intelligence Techniques To Design Peer Led Interventions Amulya Yadav, Leonardo Soriano Marcondes, Eric Rice, Robert Pettingill and Milind Taneja	How Do Social Networks Change? A Conceptual Framework Guillermo Ruiz and Eric Quintane	Negative Ties: An Integrative Framework of Antecedents and Consequences, Methodological Investigation, and Agenda For The Future Harmed Ghahramani and Prasad Bhatnagar	Investigation of Organizational Structures and Organizational Performance in Multinational Private Water Companies Yusman Sobah	From Social Networks To Social Networks: Social Pricing Model For Emerging Markets Telecom Customers Clayton Adams
09:40 Integrating Theories of Health Behavior, Social Networks, and Systems Science Kaye de la Haye and Jennifer Colverson	Patterns of Ties On The Reheated Supreme Court Patrick Donohue, Jeffrey Johnson and Stephen Borgatti	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira	From Social Networks To Social Networks: Social Pricing Model For Emerging Markets Telecom Customers Clayton Adams
10:00 Multiplex Networks Among Organizations Catering To Young MSM: Competition, Collaboration, and Funding Relations Kino Fujimoto, Peng Wang, Lisa Fuller, Michael Fries, Mark Williams, Robert Douglas, Adam Kivitski, Edward Luman, John Schneider	Exploring Temporal Network Connectivity in Online Interactions Lucia Fabian	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira	From Social Networks To Social Networks: Social Pricing Model For Emerging Markets Telecom Customers Clayton Adams
10:20	Coffee Break, Newport Coast Ballroom Foyer			

AM1	Sunset	Laguna	Cardiff	Coral Cove	Copper Cove
Corporate Networks Chair Ray Barnes	Social Networks and Health Youth Shahinaz Dzul	Interventions Using Network Structure Scott Feld	Collective Action and Social Movements David Foray	Organizational and Technological Networks Marta Jobst	Marketing Ecologies and Housing Structure in Commons-Based Commerce Sites Emily Saha
08:20 Network-Based Modeling For HIV In US Drug Injectors: Treatment As Prevention Alexei Zeleny, Jiahong Li and Patrick Wolfe	Choosing A Beta Attenuation Value For The Political Independence Index Joe Labianca, Jesse Papp and Carlo J. Labianca	Unlikely Affiliations: Donor-Based Connections Between Congressional Senators Elects, 2012 Christina Robbins	The Citation Impacts of Structural Holes and Status in Patent Inventor Networks: Three Taiwan Semiconductor Firms Yi-Hsien Guan and Rui-Ying Hsing	Using Web 2.0 To Support Collaboration in The Occupational Context - Analyzing The Use Phase Daniel Kammer, James Wilberg and Lida Lindstrom	Developing Infrastructure Networks in Support of the Humanitarian Assistance Missions Valentine Dike and Daniel Evans
08:40 Agent-Based Geospatial Analysis For Epidemic Control Wei Luo	Estimating Demand Variability Due To Social Network Influence: Hidden Costs of A Connected World Maurice C. Minner, Giovanni C. Di Silvio and Renato Quimrodes	Avoidance in Negative Ties: Unbinding Closure, Reciprocity, and Homophily Nicholas Harrison and Janice Yip	The Balance Theory of Sentiment Relations: An Experimental Test Craig Redding and Leah Friedman	Negative Ties: An Integrative Framework of Antecedents and Consequences, Methodological Investigation, and Agenda For The Future Harmed Ghahramani and Prasad Bhatnagar	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer
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10:00 Multiplex Networks Among Organizations Catering To Young MSM: Competition, Collaboration, and Funding Relations Kino Fujimoto, Peng Wang, Lisa Fuller, Michael Fries, Mark Williams, Robert Douglas, Adam Kivitski, Edward Luman, John Schneider	Exploring Temporal Network Connectivity in Online Interactions Lucia Fabian	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer	Divide and Rule: A Network Assessment of The Italian Job-Interlocking Law Alessandro Iorio and Jaergen Pfejfer
10:20	Coffee Break, Newport Coast Ballroom Foyer				Coffee Break, Newport Coast Ballroom Foyer

Saturday - AM2

Saturday - AM2 cont.

AM2	Salon 5	Salon 4	Salon 3	Salon 2	Salon 1
Interventions Using Network Structure Chair Scott Feld	Political Activity and Social Networks Julia Puschunder	Bibliometrics and Co-Citation Elika Bellar	Centrality in Social Networks Jonathan Hansen	Changes in Social Networks and Resources Through The Life Course Anna Anderson	The Impact of Critical Labour Market Transitions On Social Networks Sebastian Balz
10:40 Network Change Theory: Integrating Values and Modes of Diffusion of Innovations David Foray	Network and Actor Attributes Effects On Performance of Researchers in Two Fields of Social Science Suzanne Lobo	Migration of Researchers To New Research Communities: The Use of Social Network Analysis To Tackle Integration in Structured Communities and The Impact On These Communities Guillaume Robege	Longitudinal Network Analysis With Incomplete Data Zachary Shpaner-Thorwald	Socio-Technical Change and Social Networks: The Case of Women Workers in The Ready Made Garment Sector of Bangladesh Kabon Eriwan and Robert Escapa	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira
11:00 Reducing Gunshot Victimization Through A Targeted Network Intervention George Wood, Yanick Charney and Andrew V. Zipporstein	Women As Key Nodes and Using Trust, Reciprocity and Reputation in Mexican Authorities: Warning Signs For Public Policy On Food Production Marta Gumbarek and Gabriela Monsoy-Velazquez	Migration of Researchers To New Research Communities: The Use of Social Network Analysis To Tackle Integration in Structured Communities and The Impact On These Communities Guillaume Robege	Longitudinal Network Analysis With Incomplete Data Zachary Shpaner-Thorwald	Socio-Technical Change and Social Networks: The Case of Women Workers in The Ready Made Garment Sector of Bangladesh Kabon Eriwan and Robert Escapa	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira
11:20 Do Your Friends Really Have More Friends Than You? The Paradox of Friends Vincent Kamin, David Foray and Scott Feld	Searching For Structures According To Scientific Reference Frames of Researchers Luka Kronegger, Anabela Farfaglia and Franz Mair	Migration of Researchers To New Research Communities: The Use of Social Network Analysis To Tackle Integration in Structured Communities and The Impact On These Communities Guillaume Robege	Longitudinal Network Analysis With Incomplete Data Zachary Shpaner-Thorwald	Socio-Technical Change and Social Networks: The Case of Women Workers in The Ready Made Garment Sector of Bangladesh Kabon Eriwan and Robert Escapa	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira
11:40 Further Considerations For Strategies of Using Friends For Reaching Large Numbers of Others Scott Feld, Vinay Kumar and David Foray	Measuring and Across Disciplines in Italian Academia Elika Bellar, Luca Kronegger and Luigi Scudato	Migration of Researchers To New Research Communities: The Use of Social Network Analysis To Tackle Integration in Structured Communities and The Impact On These Communities Guillaume Robege	Longitudinal Network Analysis With Incomplete Data Zachary Shpaner-Thorwald	Socio-Technical Change and Social Networks: The Case of Women Workers in The Ready Made Garment Sector of Bangladesh Kabon Eriwan and Robert Escapa	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira
12:00 Targeting To Maximize Reachability Between Change: A Cluster Randomized Controlled Trial David Kim, Alison Healey, David Stafford, Alex Hughes, James O'Keefe, James Power and Nicholas Christakis	Measuring and Across Disciplines in Italian Academia Elika Bellar, Luca Kronegger and Luigi Scudato	Migration of Researchers To New Research Communities: The Use of Social Network Analysis To Tackle Integration in Structured Communities and The Impact On These Communities Guillaume Robege	Longitudinal Network Analysis With Incomplete Data Zachary Shpaner-Thorwald	Socio-Technical Change and Social Networks: The Case of Women Workers in The Ready Made Garment Sector of Bangladesh Kabon Eriwan and Robert Escapa	How do Environmental Groups "Stick Together"? A Study of Homophily Effects on The Effect Yi Sun, Kevin Delgado and Renato Siqueira
12:30 12:30-13:40	Break INSA Business Meeting Salon 3				Break INSA Business Meeting Salon 3

AM2	Sunset	Laguna	Cardiff	Coral Cove
Egocentric Network Analysis: Theoretical and Methodological Chair Ann McCrone	Game Theory Elija Jayne Bienenstock	Dynamics of Multilevel Networks Julien Brailly	Networks and Teams Alice Leung	Networks and Teams Alice Leung
10:40 Social Networks of Youth and Young Adults Who Misuse Prescription Opioids and Heroin Alia Al-Tayyib, Stephen Muth, Eric Rice and Paula Riggs	Altruism as a Network Parameter in Game Theoretic Framework William LeBoon	Testing Higher-Order Network Structures in An Online Experiment Jason Raffard, Ram Ramonathan, Amotz Baron, Alexey Nikolov, Soad Alshammari and David Lazar	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara
11:00 A Nationally Representative Sample of Egocentric Personal Cognitive Networks Christopher Aloraim and Laura Isabella	Modeling Coalitions Within Constraints: An Integration of Social Network and Game Theory Elija Jayne Bienenstock and Michael Salven	Testing Higher-Order Network Structures in An Online Experiment Jason Raffard, Ram Ramonathan, Amotz Baron, Alexey Nikolov, Soad Alshammari and David Lazar	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara
11:20 Ego-Network Characteristics and Transportation Mode Choice Conformity Susan Pike, Louis Lubow and Mark Lubell	Modeling Coalitions Within Constraints: An Integration of Social Network and Game Theory Elija Jayne Bienenstock and Michael Salven	Testing Higher-Order Network Structures in An Online Experiment Jason Raffard, Ram Ramonathan, Amotz Baron, Alexey Nikolov, Soad Alshammari and David Lazar	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara
11:40 Nomination Order and Alter Attributes in Adolescent Ego Networks Mike Wood and Ethan Fridmanski	Modeling Coalitions Within Constraints: An Integration of Social Network and Game Theory Elija Jayne Bienenstock and Michael Salven	Testing Higher-Order Network Structures in An Online Experiment Jason Raffard, Ram Ramonathan, Amotz Baron, Alexey Nikolov, Soad Alshammari and David Lazar	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara	Social Network Analysis of The FIFA 2014 World Cup: Quantification of Games Won By Germany Keita Sugihara
12:00	Break			
12:20-13:40	INSA Business Meeting Salon 3			

Saturday - PM1

	Salon 5	Salon 3	Salon 2	Salon 1
PM1	Inter-Organizational Networks Chair: <i>Jeff Hegels</i>	Collective Action and Social Movements <i>Zeynep Tufekci</i>	Mathematical Models <i>Elisa Bienenstock</i>	Networks and Religion <i>Scott F. Ewarton</i>
13:40	A Comparative Analysis of Humanitarian Relief Networks After Two Natural Disasters <i>Chih-Hsiung Lee, Ting-Chia Hsu</i>	Wills and Work Groups: A Social Network Approach To Predicting Community Growth <i>Jeremy Fook, Aaron Shaw and Benjamin Miao Kir</i>	Isolation and Apocalyptic: Analyses and the Münster Rebellion <i>Sean Ewarton, Dan Cunningham and Rob Conover</i>	Patent Classification With Text Traces On Network Positions <i>Jon Christoph Adenauer, Antonia Eggert, Corinna Hofmann and Ulrik Brande</i>
14:00	Unifying The Basics: How Streamlined Ties Guide The Evolution and Performance of Multi-Partner Alliances <i>Sabaton Jang, Ming Ding and Taylor Williams</i>	Interactions and Separations in Gene- and Base-Focused Social Media Movements <i>Oliver Harrison, Jaeger Pfeiffer and Brian Hovav</i>	Networks, Religion, Group Boundaries, and The 40 Individuals in The Towers of Terrorist Network <i>Marie Ouellet and Martin Bouchard</i>	Filtering Methods in The Archaeological Context <i>John Roberts, Matthew Napier, Barbara Mills and Ronald Braver</i>
14:20	The Formation and Evolution of State Emergency Operations Plan Networks <i>Nolan Phillips, Cedar League, Britt Johnson, Jeannette Smith and Carter Burt</i>	Endosymbiotic Network Literacy: A Grassroots Story <i>Catherine Conner, Mason Porter, Hani Sayem, Lou Shew and Stephen Lutz</i>	Algorithmic Network Graphs: Proving Algorithms For Weighted Complex Networks <i>Navid Danesh</i>	Applied and Research Applications of Social Network Analysis With Religious Congregations <i>Can They Tell? James Zeman, Debrahne, Mavis Giffin, Suzanne Ducharme, Yarnah Ziegler, John Tavel</i>
14:40	Relationship Marketing in Social Networks: A Study of Chinese Construction Small and Medium-Sized Enterprises <i>Suqin Ali, Huihui, Muhammad Hussain and Naim Agwan</i>	Exploring US Cyber Network Activities: Evolution, Means, and Strategies <i>Samir Al-Hussain, Muhammad Hussain and Naim Agwan</i>	Latent Space Network Models of Statistics Journals/Citizens <i>Jon Corbin and Mark Handcock</i>	Caseyway Bone Dunes From Papua New Guinea: Similarity Networks, BMD, and Spatial Modeling: What Can They Tell? <i>James Zeman, Debrahne, Mavis Giffin, Suzanne Ducharme, Yarnah Ziegler, John Tavel</i>
15:00	Exploring The Impact of Location On University Business Relationships in Regional Social Network Approach <i>John Hogg, Adam Bauman, Carter Burt, Jeff Hegels and Andre Ghitvan</i>	Social Fabric: Time of Day, and Fear of Crime <i>John Hogg, Adam Bauman, Carter Burt, Jeff Hegels and Andre Ghitvan</i>	An Influence Maximization Approach To Enhance Or Degrade Networks By Assigning Multiple Chess Games <i>Anthony Johnson and Chame Johnson</i>	Game Theory and Network Models For The Reconfiguration of Networks <i>Victoria Amadi and Ulrik Brande</i>
15:20				
15:40	Coffee Break, Newport Coast Ballroom Foyer			

Saturday - PM1 cont

	Salon 5	Salon 3	Salon 2	Salon 1
PM1	Networks and Teams Chair: <i>Julia Brailly</i>	Networks and Teams <i>Julia Brailly</i>	Networks and Teams <i>Julia Brailly</i>	Networks and Teams <i>Julia Brailly</i>
13:40	Social Influence On 5-Year Survival in A Longitudinal Cohort Study: The Role of Collaboration Networks <i>Jeffrey Wang, Christopher Adams, Jim Arvey, Amy Reif, Barbara Jansen-Hart</i>	Investigating Dynamics of Collective Performance in Collaborative Networks <i>Victor Aronin, Dmitriy Aronov, Sergei Kim, Amir L. Shalizi, and Yael Sheffer</i>	Organizational Structure of Health Problems Among Mexican Immigrants: A Multiple Classification Model <i>Assessors, Alex, Anissa Patis, Alex Tranter and Anne Pison</i>	Organizational Structure of Health Problems Among Mexican Immigrants: A Multiple Classification Model <i>Assessors, Alex, Anissa Patis, Alex Tranter and Anne Pison</i>
14:00	TweetClust: Communication Networks and Social Interactions in A Group-Based System Using Social Media <i>Ying-Hong Jung, Jiwon-Jeong, Carrie Hutchins, Justin Brackley</i>	A Formal Theory of The Evolution of Group Power: Natural Topologies of Interpersonal Influence Systems Along Social Networks <i>Chang Wang, John Hogg, Carter Burt, Kyle Fox and Cynthia Lucas</i>	Sensu Models of Independent Use of Ecological, Behavioral, and Molecular <i>Julia Brailly</i>	The Effect of Social Networks On Adult Health: A Conceptual Approach To The Intersecting Family Life Survey <i>Julia Brailly</i>
14:20	Predictive Health Analytics With Networks <i>Luise Hoffmann</i>	Overcoming Decision Bias Through Network Structure <i>Arminia Lutz, Christian Schulz, Emma Aggar, Robert Zirk, Wolfgang Bohn</i>	Using Equi-Centric Radial Networks To Explore The Impact of a Suicide and Alcohol Use Disorder Intervention For Rural Youth <i>David Perry, Lisa Conroy, Steve Parnes and Jon Allen</i>	Price and Position Among Friends and Enemies: Behavioral Attachment and Hierarchy in Positive and Negative Ties <i>Ang Yong Tan, Nicholas Hongbin, and Junmei Yao</i>
14:40	The Influence of Social Networks On Material Health Status of Women of Reproductive Age in Ghana, West Africa <i>Yvonne Oduro, Theresa Lawson and Emily Zimmerman</i>	Who To Ask? Analysis of Information Robustness <i>Hussein Chen, David Albrecht</i>	Multi-Agent Agency Network Partition <i>Alex Vetro, Norman Zorn, Reed, Steven Corbett, Christine Jensen, Christian Jensen, Christian Jensen, Christian Jensen, Christian Jensen</i>	Difficult People: Who Is Not To Be Demanded? <i>Christine Frazier and Zhong Qian</i>
15:00	Does Being Homeless Change Social Networks and Support? <i>Isabelle Hoesly, Jeremy Phelan, Holly Williams, Benjamin Newman, et al.</i>	Discussion <i>Kyle Lewis</i>	The Resilience of Unemployment, Health and The Role of Social Networks <i>Andrew Zare, Gennaro Vercillo and Roberto Zappalà</i>	A Broader Perspective On Intra-Group Conflict: Extended Families and Negative Ties <i>Eric Jaspard</i>
15:20	Insights For Peer Based HIV Prevention For Adolescent Youth From A 2 Year Panel Study of Whole Networks <i>Eric H. Whitley, Holly Williams, Amanda Hens, Jennifer Kester, Christian Crossen, Robin Fearing</i>		Dynamic Interactions of Social Networks and Health of Long-Term Unemployed Adults From A Qualitative Research Project in Germany <i>Julianus Hamel, Jule Endler, Sylvia Ham, Ingrid Pflaum, Michael Grottel</i>	Amity and Enmity: A Multiple-Cases Approach Using Identity-Typed Ties <i>Jonathan Morgan and James Lee</i>
15:40	Coffee Break, Newport Coast Ballroom Foyer			

Saturday - PM2

	Salon 5	Salon 4	Salon 3	Salon 2
PM2	Adolescent Friendship Networks Chair: <i>Nayan Ramirez</i>	Corporate Networks <i>Roy Barnes</i>	Culture, Ethnicity and Networks <i>Christopher Browning</i>	Gendered Networks <i>Neha Gondal</i>
16:00	Gender Differences in Friend Selection and Peer Influence: Applying A Dynamic Network Approach To Study Adolescent Delinquency, Drinking, and Smoking <i>Cassie McMillan</i>	Globalists in The American Inner Circle <i>Joshua Murray</i>	Fleeting Friendships - The Stability of Adolescents' Cross-Race Friendships <i>Bailey Terry and James Moody</i>	Gender Differences in Online Networks: A Comparison of Two Virtual Worlds <i>Cullus Shen and Grace Benefield</i>
16:20	Selection Heterogeneity in The Effects of Extracurricular Activities On Friendship <i>Andrea Vest Zerkal, David Schofer</i>	Refineries of DeKal: A Fossil Fuel Power Structure At Koch Industries' Political Strategy Meetings <i>Michael C. Drevling and Jeff Sunn</i>	Partner Choice and Reciprocity in Hada Food Sharing Preferences <i>James Holland Jones and Brian Wood</i>	Who Does Academic Inequality Hurt More? An Examination of Academic Placement By Professional Rank, Gender, and Discipline <i>Neha Gondal</i>
16:40	(Dis)Embedded Aggression in Multiple Networks: Effects of Perceptual Overlap and Robustness of Positions On Bullying Among Adolescents <i>Melba Dooling, Michael Von Gunden and Anja Geisler</i>	Pluralism and Elitism in The Global Corporate Elite: A Big Data Network Analysis Approach <i>Erke Heemskerk</i>	Adolescents' Antipathy Networks: Does Migration History and Minority Status Matter? <i>Daniel Alexandru, Vera Tikhova and Valeriu Ivanushina</i>	
17:00	Sexual Attraction, Peer Network Characteristics and Behavioral Change Across Adolescence <i>Nayan Ramirez</i>	Discussion <i>Bill Donohoff</i>	Socioeconomic Segregation of Activity Spaces in Urban Neighborhoods: A Network Approach <i>Christopher Browning, Catherine Collier, Lauren J. Krivo, Anna L. Smith and Bethany Boettner</i>	
17:20	Break			
21:00 to 24:00	Hospitality Presidential Suite			

Saturday - PM2 cont.

	Salon 1	Salon 2	Salon 3	Salon 4
PM2	Egocentric Network Analysis: Theoretical Methodological Chair: <i>Bernice Pescosolido</i>	Networks in Enterprise and Governance <i>Hyo Nguyen</i>	Words and Networks <i>Janina Diesner, Peter Sloor</i>	Networked Innovation <i>Julia Brannecke</i>
16:00	Networked Cultural Knowledge: Personal Consensus and Cultural Consensus in Personal Networks <i>Rosilyn Negron, Linda Sprague-Martinez, Eduardo Siquiera and Cristian Bricegoso</i>	The Roles of Networks in SMEs' Internationalisation <i>Nurhana Udombiri and Claus Schreier</i>	The Spatial Properties of Radical Environmental Organizations in The UK <i>Benjamin Bogazzi and Sorja Almqvist</i>	Knowledge Networks of Top Managers in The Fashion Industry: The Relational Embeddedness <i>Alexander Pfister and Sorja Spierker</i>
16:20	Identity Change and Reversion From Islam: An Egocentric Social Network Perspective <i>Solun Erin</i>	The Evolution of Social Networks in Collaborative Natural Resource Governance <i>Matt Robbins and Amy O'Connor</i>	How Consumers and Activists Amend Their Semantic Networks <i>Michelle Shumate and Amy O'Connor</i>	Abandoning Innovations: Network Evidence On Enterprise Collaboration Software <i>Jacob Fisher, Yong-Mi Kim and Jonathan Cummings</i>
16:40	Segregation, Integration, Or Isolation: Immigrants' Personal Networks and Social Capital <i>Ying Cho Hsu and Chin-Chao Tsao</i>	Interorganizational Networks and Strategy: Evidence From An Italian Footwear District <i>Riccardo De Vita, Delfino Ghinoli and Alessandro Sintra</i>	Information Diversity and Structural Diversity in A Changing Environment <i>Jessie Fagan</i>	
17:00	Dental Problems Among American Immigrants To The American Midwest: An Examination of Oral Health Characteristics <i>Gerardo Masopous, Erin Pullen, Brad Perry and Eric Wright</i>	Consumer Credit and Household Banking Networks in Renaissance Florence <i>Paul McLean</i>	Interplay Between Personal Morals With Tie and Cluster Formation in A Corporate Communication Network <i>Craig Evans, Rezwaneh Rezapour, Ming Jiang and Janina Diesner</i>	
17:20	Break			
21:00 to 24:00	Hospitality Presidential Suite			

Sunday - AM1

	Salon 5	Salon 4	Salon 3	Salon 2
AM1	Mixed Methods Studies Chair: <i>Berino Hollstein</i>	Corporate Networks <i>Joshua Murray</i>	Internet of Things (IoT) With Social Media and Social Networks <i>Jong Hyun Kim</i>	Social Networks and Migration <i>Olgu V. Maysorova</i>
08:40	Using Qualitative Comparative Analysis (QCA) To Address Debates in The Literature About Centralization and Density of Covert Networks <i>Gemma Edwards, Susan O'Shea, Nick Crossley, Martin Everett and John Robinson</i>	Stability and Change in Corporate Governance Networks <i>Lasse Hellmuth, Anton Grau Larsen and Christoph Houman Ellersgaard</i>	Dynamics of The Worldwide Web: A Longitudinal Analysis of The Two-Mode Network of Website Use By Country <i>George Barnett, Ke Jiong and Billy Liu</i>	Network Specificities of Circular Migrants in Rural Senegal <i>Larry Lin and William Carley</i>
09:00	Citing For Existing: Building Research Management Studies' Autonomy By Relying On US References (1965-1975) <i>Nicolas Guilhot and Benoit Cret</i>	On Data Quality in Big Corporate Network Analysis <i>Javier Garcia-Bernardo, Frank Takes and Erke Heemskerk</i>	How Social Media Companies Perceive and Corporate With Internet of Things <i>Mijun Yoo, Jung Hyun Kim and Kang-Nyeon Lee</i>	Climate Change and Population Movement <i>Larry Lin and William Carley</i>
09:20	The Measurement of Guanxi Circle - Using Qualitative Study To Modify Quantitative Measurement <i>Jin-Der Luo and Han Xiao</i>	Search in Networks with Vacancies: The Case of Board Interlocks <i>Mitri Kitti, Mervi Pihlaja and Minna Salonen</i>	How Internet of Things Changed Online-Community Interlocks <i>Seunghee Han, Myoungbo Shim and Jigun Hwang</i>	Climate Change and Population Movement <i>Larry Lin and William Carley</i>
09:40	Neural Signatures of Social Valuation Predict Future Liking <i>Noam Zerbib, Mark Hoffman, Adam Rich and Peter Beaman</i>	Dynamics of The Formation Following Financial Statements <i>Michael Howard, Michael Withers and Laura Jones</i>	"Who Communicates with Whom": Social Capital, Designer Performance and Network Formation in The Online Brand Community <i>Yoo Sun</i>	Climate Change and Population Movement <i>Larry Lin and William Carley</i>
10:00	The Naisance and Geographical Spread of Quantitative Research Into Corporate Interlocks <i>Meindert Fennema and Erke Heemskerk</i>	A Semantic and Social Network Analysis of Nam June Paik in Cyberpace <i>Yoo Jung Hong, Jung Ah Shin and Jung Hyun Kim</i>	Geography, Gendered Networks and Well-Being: The Case of Forced Migrants in Georgia <i>Olgu Maysorova and Beth Mitchell</i>	
10:20	Coffee Break, Newport Coast Ballroom Foyer			

Sunday - AM1 cont.

	Salon 1	Salon 2	Salon 3	Salon 4
AM1	Scientific Collaboration Networks Chair: <i>Grace Huang</i>	ONA in Russia: Progress and Prospects <i>Valentina Kuslova</i>	Networked Innovation <i>Julien Brailly</i>	Networks and Teams <i>Kate Congotes</i>
08:40	Collaboration Networks and Structural Influence in Mental Health <i>Jeffrey Prokop, Chengyu Pang and Justin Macelle</i>	Overcoming Entrepreneurial Project Failure: Social Networks Influence <i>Ludmila Petrova, Valentina Kuslova and George Belknap-Vukobratovic</i>	From Crowdfunding To Co-Production: Community Building Towards Collective Action On Kickstarter <i>Rong Wang, Li Li and Janet Fu</i>	Network Structure and Team Performance: Study of Slices and Fresh Organizations <i>Barbara Lutz, Helena Kovacic, Hajdara Gligic and Andrija Fu</i>
09:00	How Knowledge Travels: An Analysis of The Diffusion of Philosophy of Science Over 60 Years <i>John McLevey and Kathryn S. Platzone</i>	Quantifying Political Power: Applied Network Research Approach <i>Alina Medvedeva and Valentina Kuslova</i>	The Crowd-Sourced Graph: Uncovering The Social Innovation Landscape in Austin, Texas <i>Mark Hand and Clare Zitz</i>	Command-and-Control Agility Under Adversarial Conditions <i>Erugul Ochiyev, Siddarth Swami, Derya Cansever, Anshul Singh and Arithwish Bostu</i>
09:20	Uses of Network Analysis To Assess Collaboration Readiness Among Researchers and Affiliated Practice Partners in The State and Community Tobacco Control Research Initiative <i>Grace Huang, Michael Skene, Julie Bromberg, Keith MacLure, Janet Okamoto and Elizabeth Givari</i>	Social Network Analysis Approaches To Team Sports: Centrality Tendencies of Best Teams Based On Player Selection <i>Alina Medvedeva and Valentina Kuslova</i>	Patent Citation Distance: Measuring Trends in Combinatorial Innovation <i>Ryan Whalen and Nishir Contractor</i>	Structures of Influence: Formal and Informal Leadership Dynamics <i>Kate Congotes</i>
09:40	Anonymity and Social Image in Ultimatum and Dictator Games <i>George Belknap-Vukobratovic and Yana Maria Priestley</i>			Who Needs An Alter Anyways? Using The Egocentric Relational Event Model To Analyze Teams in Open Communication Networks <i>Andrew Pilly, Scott Poole, Jeff Prokop, Li Delli and Jigun Hwang</i>
10:00	Latent Space Model For Community Detection Based On Information Cascades <i>Igor Zabihin and Aleksandr Semenov</i>			
10:20	Coffee Break, Newport Coast Ballroom Foyer			

Sunday - AM2

Sunday - AM2 cont.

AM2	Salon 5	Salon 4	Salon 3	Salon 2	Salon 1
Chair	Corporate Networks <i>Elke Heesbrink</i>	Social Media Networks: Challenges and Solutions <i>Juergen Pfeffer</i>	Innovation and Diffusion <i>Jungyun Han</i>	SNA in Russia: Progress and Prospects <i>Valentina Kuslova</i>	Mixed Methods Studies <i>Berita Hollstein</i>
10:40		Understanding The Different Networks On Social Media <i>Kai-Hai Chu, Daniel Soto, Kayla de la Hoya, Thomas Valente, Tess Cruz, Jennifer Langer</i>		Network Studies in Russia: The Structure of a Scientific Community <i>Daria Moshkova</i>	Sensitive Self-Disclosures and Responses On Instagram <i>Maznan Andolij, Piotr Cichuk and Andrea Forte</i>
11:00	How Do Firms Networks Affect Their Participation in Business Seminars and Subsequent Behaviors? Evidence From a Randomized Controlled Trial in Vietnam <i>Dachi Shimamoto, Yuri Kim and Tetsuyuki Tada</i>	Platform Effects in Social Media Networks <i>Momin Malik and Juergen Pfeffer</i>	Network Interventions For Managing The Diffusion of Health Beliefs <i>Jun Zhao and Dawn T Robinson</i>	Changing Role of Personal Ties in Russian Labour Market <i>Elena Artyukhova and Olga Mayorova</i>	Identifying Emerging Research Fields Through Community Detection in Scientific Collaboration Networks at a Research University <i>Theresa Kienelly, Oksana Raffaele, Valeria Chini McCarty, Valerio Leone Scobolozza</i>
11:20	The Silicon Valley Wage Cartel: How Cartel Membership Spreads and Its Impact On Management Job Transitions <i>Jon Mckelvey and James Wilson</i>	Eurocrisis Vs Twitter: Evolution of Social Movement Communication Networks <i>Robert Schroeder, Semi Evertsen and Daniel Leroy</i>	Gender Role-Based Difference in Multiplies Ties Between Korean Business Groups <i>Jungyun Han</i>	Cross-Buying Customer Behavior in Internet Shopping in Russia From The Network Perspective <i>Igor Slav and Elena Artyukhova</i>	Offline Networks On Online Communities: A Mixed-Methods Approach <i>Spyros Angelopoulos and Yasmine Meralli</i>
11:40				Diffusion and Discussion Networks On Twitter: The Case of Product Meetings in Russia <i>Aleksandr Semenov, Igor Dziblabov and Alexander Tolmoch</i>	
12:00				The International Trade Networks Sanctions Performing As A Strength Test of Economic Ties <i>Julia Wotzemann and Valentina Kuslova</i>	
12:20	Conference Close				

AM2	Laguna	Cardiff	Baycliff
Chair	Networks in Global Health <i>Jessica Shearer</i>	Socio-Semantic Networks <i>Nikita Basov</i>	Negative Ties and Signed Graphs <i>Josh Marineau</i>
10:40	Modeling Preferential Recruitment For Respondent-Driven Sampling <i>Katherine McLaughlin</i>	Latent Cognitive Social Spaces: Theory and Methods For Extracting Prejudice From Text <i>Kenneth Joseph and Kathleen Carley</i>	The Interplay Between Creative Problem-Solving Interactions and Difficult Ties in Organizations <i>Julia Brennecke, Dean Lusher and Michael Gliding</i>
11:00	Social Network Analysis: Evaluating A Community Health Mobilization Strategy Using A Women's Microfinance Platform in Uttar Pradesh, India <i>Jenny Ruducha, James Potter and Robin Lemaire</i>	Toward A Computational Hermeneutics For Social Network Analysis <i>John W. Mohr, Robin Wagner-Pacifici and Ronald L. Breiger</i>	A Social Network Perspective On The Influence of Social Content On Supervisor Perceptions of Counterproductive Behavior <i>Christopher Sterling and Travis Grosser</i>
11:20	Assessing The Implementation Strength of Health Message Dissemination Networks in Uttar Pradesh, India Through Egocentric Snowball Sampling <i>James Potter and Jenny Ruducha</i>	Exploring The Meaning of Interdisciplinary Collaboration in A Scientific Organization: An Application of Text and Network Analysis <i>Ly Dinh</i>	Why All The Negativity? An Empirical Analysis of The Determinants of Negative Ties <i>Alexandra Gerbasi, Eric Quintane and Joe Labianca</i>
11:40	Rubrics: A Mixed-Methods Approach To Measuring and Evaluating Networks <i>Jessica Shearer, Emily Carnahan and Caroline Sol</i>		Do You See What I See? Role of Homophily in Organizational Social Structure Perception <i>Joshua Marineau and Sukamrakurup Krishnakumar</i>
12:00	Empowering Health Workers in Low-Resource Areas To Engage in Network Analysis <i>Emily Beylerian and Jessica Shearer</i>	Translational Research in Medicine: A Multi-Modal Approach To Inter- and Transdisciplinary? <i>Iina Hellsten and Loet Leydesdorff</i>	
12:20	Conference Close		

THURSDAY, APRIL 14					
11 th Centre for Chemical Process Safety International Conference (CCPS)	50 th Annual Loss Prevention Symposium (LPS)	19 th Process Plant Safety Symposium (PPSS)	9 th Process Safety Management Meeting (PSM)	Process Safety Spotlights	50 th Annual Loss Prevention Symposium (LPS)
Enhanced Application of Lessons Learned Location: GRB Conn. Ctr. 360 Co-Chair: Ryan J. Hart Jerry J. Forest	Facility Siting, Conceptual Analysis, and Bill of Materials Location: GRB Conn. Ctr. 370 Co-Chair: Kathleen A. Kao Pam N. Smith Murray Reed	Process Safety Management Systems – Bill Board Location: GRB Conn. Ctr. 381 Co-Chair: Jack Christie Eliashib Schler	Disturbance to Process Safety – LPS I Location: GRB Conn. Ctr. 371 A, B, D, E Co-Chair: Lina Long Qingdong Wang	Refinery Safety I Location: GRB Conn. Ctr. 362 A, B, D, E Co-Chair: Michael Montemurlo Christopher S. Bowler	Combustible Dust I Location: GRB Conn. Ctr. 372 A, B, D Co-Chair: Walter J. Frank David C. Kirby
1:30 PM LOPA – When the Solution Becomes the Problem <i>David Jones & Ann Bruner</i>	Evaluating the Effect of Obstruction Distance on Flamehole Out Propagation Using CFD <i>Harvard Boehmer</i>	Risk Criteria Selection and the Impact on the LOPA Process <i>Performance Improvement David Jones</i>	Adequate Pressure Relief <i>Shankar H. Sanyal</i>	Feasibility Study for Hydrogen Sulfide (H ₂ S) Operate On Isotop <i>Yongsheng Zeng</i>	Combustible Dust Hazard Assessment: A Risk Based Approach <i>Robert Yess</i>
2:00 PM Improving Learning through Interactive Case Studies <i>Fritz Kertz</i>	Transient Large-Scale Chlorine Release in the Jack Rabbit II Field Test <i>New Source Release Data and Postmortem Analysis Thomas O. Givier III</i>	A Call to Action: Understanding the Key Driver for Control Process Safety Performance Improvement <i>David Jones</i>	Vapor Cloud Explosions <i>Egley Thomas</i>	Design Considerations for Old Waste Lab Sitings at Refineries <i>William Colvoco</i>	Who's Afraid of Combustible Dust? – An Update on Electrical Area Classification <i>Samuel A. Rodgers</i>
2:30 PM CSB Recommendations: Cons, Congress, and Best Practices <i>Scott Berger</i>	Modeling and Validation of Dispersion Following an Instantaneous Vapor or Two-Phase Release from a Pressurized Vessel <i>Heidi W. M. Hines</i>	Risk Based Process Safety Program in R & D Facility <i>Monica Pineda</i>	Prevention of Combustible Dust Explosions <i>Steven D. Eversman</i>	A Structured and Dynamic Risk Analysis Methodology for Pump Units in Process Industry <i>Qianlin Wang</i>	NFPA Combustible Dust Standards – 2008 Update <i>Joan Reichard</i>
3:00 PM	Coffee and Networking Break Location: GRB Conn. Ctr. Exhibit Hall E				

THURSDAY, APRIL 14					
Session Dates	Chemical Reactivity	Case Studies on Organizational Management of Change	The Day PMH Hit Home – Young Engineer's Perspective	Refinery Safety II	Combustible Dust II
Location: GRB Conn. Ctr. 360 Co-Chair: Bernard Gross Martin Tamm	Location: GRB Conn. Ctr. 370 Co-Chair: Justin Shook Setha Bhattacharyya	Location: GRB Conn. Ctr. 361 Co-Chair: Lauren Steady Jeff Swartzell	Location: GRB Conn. Ctr. 371 A, B, D, E Co-Chair: Bryson La Cox Kathlin Keller	Location: GRB Conn. Ctr. 362 A, B, D, E Co-Chair: Michael Montemurlo Christopher S. Bowler	Location: GRB Conn. Ctr. 372 A, B, D Co-Chair: Walter J. Frank David C. Kirby
3:30 PM Risk More Than Just Numbers <i>Cynthia Grotzinger</i>	The Application of a High-Temperature Chemical Equilibrium Program for Assessing Combustion and Other Chemical Hazards <i>Eric Hilder</i>	Reconstructing Process Safety at Air Products <i>Ryan E. Ferrell</i>	React Now to Reactive Hazards: Early Identification is Critical for Your Safety Concept <i>Sarah Decker</i>	Practical Application of Advancing Process Safety Tools for the Petroleum Refining and Petrochemical Industries <i>Robby Reichard</i>	Flammable Vapor Testing <i>Bill Stevenson</i>
4:00 PM Assessing Molecular Weight Effectiveness Using RAGOP and LOPA <i>John F. Forst</i>	Guidelines for Chemical Reactivity Evaluations and Application to Process Design after Twenty Years <i>Marshall Bitteliger</i>	Becoming "Wise" in Management of Change <i>Scott J. Doe</i>	An Early Lesson and a Late Night How I Learned the Hard Design Expert is the User <i>Armando Saez</i>	From Pinpointing a Safe Meta-Analysis Process <i>Markus Ryckelt & Daniel Ryckelt</i>	Using a Planning Rate Model for Degradation <i>Yong Sheng Zeng</i> <i>Michelle Murphy</i>
4:30 PM Disciplined Adherence to Standards & Methodical Verification – The Checks and Balances of Process Safety <i>Anne O'Neal</i>	Kinetics and Thermochemistry of Organic Oxide Explosive Decomposition for Safety in Large-Scale Storage and Processing <i>Long Qiu</i>	Successfully Managing a Changing Workforce – Application to Process Safety Management <i>Charles A. Sacchi</i>	Personal Growth and Mission from Burn Injury <i>Matthew T. Gagliardi</i>	Safety Practice for Refinery and Petrochemical Plants During the Major T&E (Turnaround of the New Inspection) <i>Armando Saez</i>	Dust Explosions – The Nature of the Problem and Practical Measures for Its Control – Including the Requirements of the New NFPA 652 for Dust Hazard Assessment <i>Fabrizio Zoccolato</i>

WEDNESDAY, APRIL 13					
31 st Centre for Chemical Process Safety International Conference (CCPS)	50 th Annual Loss Prevention Symposium (LPS)	19 th Process Plant Safety Symposium (PPSS)	9 th Process Safety Management Meeting (PSM)	Process Safety Spotlights	19 th Process Plant Safety Symposium (PPSS)
Emergency Evacuation Training Location: GRB Conn. Ctr. 360 Co-Chair: Samantha Soragni Marisa Perre	Advanced Prevention and Mitigation Technologies Location: GRB Conn. Ctr. 370 Co-Chair: Charles A. Sacchi Samuel A. Rodgers	The Evolution of Mechanical Integrity – Lessons Learned and What Lies Ahead Location: GRB Conn. Ctr. 381 Co-Chair: Steven D. Eversman Soria Diaz	Disturbance to Process Safety – LPS II Location: GRB Conn. Ctr. 371 A, B, D, E Co-Chair: Lina Long Qingdong Wang	Modeling of Relief and Flow Systems Location: GRB Conn. Ctr. 362 A, B, D, E Co-Chair: Warren Greenfield Caren Hesterman	Innovative Ideas, Methodology, and The After-Bit Analysis I Location: GRB Conn. Ctr. 372 A, B, D Co-Chair: Stephen Ward Georgios Iyodorik
8:00 AM Process Accident Prediction Using Transition Path Sampling <i>Andreas Antonov</i>	Do You Feel Lucky? Or Do You Want to Identify and Manage Safety – Critical Equipment <i>Mike Brundage</i>	Chemical Incompatibility <i>Robert W. Johnson</i>	In-Breeding Requirements for a Transport Tank Exposed to Probable Seismic Events <i>David Mancuso</i>	Engineering Application: Perceptive and Performance Standards Across the Globe <i>Kyle Wignate & Kerri Manning</i>	Quantitative Risk Analysis for Decision Support in Process Plant Operations <i>Steve Hengert</i>
8:30 AM Paid with Invited Speakers	Analysis of Overflow Incidents: Searching for Situational Awareness Demands <i>Chadwick</i>	Using Post Incidents as Leading Indicators for Pipeline Integrity Management <i>How Chen</i>	Basic Concepts in Risk Analysis <i>Victor Edwards</i>	Methodology to Determine Relief Load for Trans-Critical Fluid Fire <i>Craig Powers</i>	Quantitative Risk Analysis for Decision Support in Process Plant Operations <i>Steve Hengert</i>
9:00 AM	Identifying Risk Design for Vertical Knock-Out Drums and Vapor Liquid Separators <i>George Malhotra & David Rodriguez</i>	Best Practices for Performing Data Mining from Unstructured Data for Mechanical Integrity <i>Brent Stanley & Randy Montgomery</i>	Intro to Quantitative Risk Analysis <i>Vincent Simoes</i>	Dynamic Simulation Modeling to Protect Flare Headers from Air Ingress <i>Jesus Munoz</i>	Approximation of CO ₂ Rich Mixtures: Challenges for the Safe Process Design of CCS Facilities and CO ₂ EOR Systems <i>apostolos Goumoutos</i>
9:30 AM	Coffee and Networking Break Location: GRB Conn. Ctr. Exhibit Hall E				

WEDNESDAY, APRIL 13					
Featured CCPS Project	After-Industry Damage Mechanisms and Condition Monitoring	Joint Life Time Life and Asset Use on the Line	Disturbance to Process Safety – PPS II	Executive Order 13630 – Improving Chemical Facility Safety and Security – An Update	Innovative Ideas, Methodology, and The After-Bit Analysis II
Location: GRB Conn. Ctr. 360 Co-Chair: John Horner John F. Forst	Location: GRB Conn. Ctr. 370 Co-Chair: Robert W. Johnson John F. Forst	Location: GRB Conn. Ctr. 361 Co-Chair: James E. Thompson Mike Brundage	Location: GRB Conn. Ctr. 371 A, B, D, E Co-Chair: Mike W. Thompson Felix Khan	Location: GRB Conn. Ctr. 362 A, B, D, E Co-Chair: Lina Long	Location: GRB Conn. Ctr. 372 A, B, D Co-Chair: Stephen Ward Georgios Iyodorik
10:15 AM New CCPS Guidelines Book: Guidelines for Recognizing and Responding to Normalization of Deviance <i>Demetrius Demetriou</i>	Assessing Potential Damage Mechanisms and Selecting Effective Inspection & Testing Methodology for Fired Equipment <i>Russ F. Davis</i>	Facilitating Auditing Practices – One Company's Journey <i>Robert Rossmo</i>	Effective Operational Discipline Programs <i>James Klein</i>	10:15AM-11:00AM Executive Order 13630 – Improving Chemical Facility Safety and Security – National Workgroup Update <i>EPA National Office Rep. OSHA National Office Rep.</i>	Probabilistic Analysis for Smoke and Gas Occurrence Based on CFD Simulations and Frequency Assessment <i>Rafael Saez</i>
10:45 AM A Tool for the Evaluation of Process Safety Incidents <i>Marty Motta</i>	Process Relief Valve Inspection, Sizing and Maintenance Intervals <i>Charles Karbow</i>	Beyond Compliance: Auditing DCS to Find the Pan Points and Release the Pressure <i>Lawrence Anderson</i>	Best-in-Class MOC Implementation – Case Studies <i>Russell Hoff</i>	11:00AM-11:45AM Executive Order 13630 – Improving Chemical Facility Safety and Security – Regional Working Group Update <i>EPA Regional Rep. OSHA Regional Rep.</i>	Leveraging PRA to Develop Requirements for Cyber Security <i>Edward M. Wolf</i>
11:15 AM CCPS Certification Process for Process Safety Professionals <i>Chris Davies</i>	Verification of In-Service LP Tank Pressure Ratings <i>Archie Beckman</i>	How Effective Are Your Safety Controls, Alarms, and Interlocks? The Importance of Functional Safety Auditing <i>Monica Reichert</i>	Facility Integrity: Learning from the Equipment Lifecycle <i>Robert Washburn III</i>	11:00AM-11:45AM Executive Order 13630 – Improving Chemical Facility Safety and Security – Regional Working Group Update <i>EPA Regional Rep. OSHA Regional Rep.</i>	Pipeline Risk Assessment Using Analytical Investigation: A Case from the Columbia Oil Network <i>Alexander Goumoutos</i>
11:45 AM	Lunches with Speaker: Mark K. Cox, Senior Vice President, Chief Manufacturing and Engineering Office, Eastman Chemical Company Location: Hilton Americas, Second Floor, Ballroom of the Americas, C, B, E & F				

WEDNESDAY, APRIL 13	
Case Histories and Lessons Learned – GCPS Joint Session Location: GRB Conn. Ctr. General Assembly Theater C Co-Chair: Derek Miller, Russell Ugle, Mervyn Corvino	Case Histories Presentation Finnest A. Sankhland, CSB Chairperson
1:30 PM CSB Investigations of the West Freeway Explosions and Fire <i>Johnston & Reich</i>	Process Safety Incidents: Big Picture Perspectives <i>Paul Reichard</i>
2:00 PM Process Safety Incidents: Big Picture Perspectives <i>Michael C. Sora</i>	Accidents during Turnarounds, Cleanings, and Other Infrequent Operations <i>Michael C. Sora</i>
2:30 PM Break	Business Industry Explosion Case Study <i>Andy Davis</i>
4:00 PM Asphyxiating Tank Explosions: Mechanism and an Unsuspected Case Study <i>Michael E. Sankhland</i>	Explosions in SAGO Hydrogenation Unit <i>Nick Corvino</i>
6:00 PM GCPS Concluding Remarks	

五、12thGCPS 研討會口頭報告論文摘要



Using Social Network Theory to Analyze the effectiveness of
Environment, Safety and Health Management for Two
Petrol-Chemical Companies

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Prepared for Presentation at
American Institute of Chemical Engineers
2016 Spring Meeting
12th Global Congress on Process Safety
Houston, Texas
April 11-23, 2016

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in papers or printed in its publications

Using Social Network Theory to Analyze the effectiveness of Environment, Safety and Health Management for Two Petrol-Chemical Companies

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Keywords: Social Network Analysis Theory, Environment, Safety and Health Management System, Petrochemical Company

Abstract


The social network analysis theory was used to explore two domestic petrochemical companies on their environment, safety and health (ESH) management system and operation effectiveness. Both qualitative and quantitative analyses by NodeXL and statistical tools were applied to through the survey questionnaires to observe the social network and interactions of individual members among two management systems.

The ESH organizational relevance could be divided into five types of network communities and four measurement parameters. From the background information of those individuals, parameters and network diagrams, we could identify three kinds of specialized network personnel, core persons, marginal men and information agents, in order to understand the organization work and information flows and patterns. Two companies showed differences in their International Standard Organization (ISO) based management systems and actual functioning systems. The centrality parameter indicated that some managers lack network connections to others and some members' knowledge could not be adequately used owing to the faults in organization structures. Those problems could lower the effectiveness and efficiencies of management systems. Our analysis also showed positive correlations between the trustworthiness among members as well as network densities and recognition networks. A limited random telephone interviews was done to verify different types of personnel among the networks. This study showed that the network analysis could be a good reference for the high-level managers to understand their ESH system, to evaluate the organization efficiency and to analyze their future development and operation needs.

2016 STAMP Workshop March 23, 2016


Using STPA to Analyze Human Interactions with Engineered Systems

Horng, Jao-Jia, Distinguished Professor,
Lin, Yi-Zeng M.S.
Department of Safety, Health and Environ. Engr.
National Yulin University of Science and Technology
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 YunTech 國立雲林科技大學
National Yulin University of Science & Technology

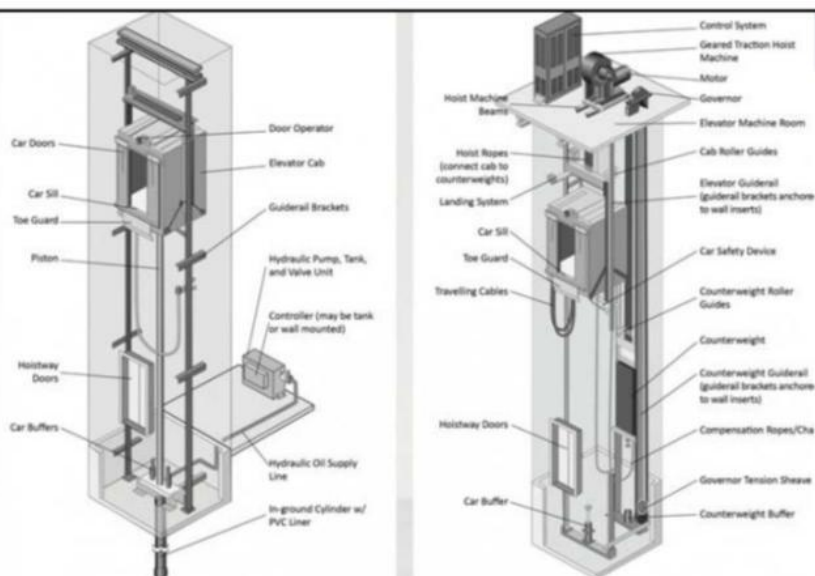
Applications on

- Elevator,
- Fluid Flow Lab Unit,
- Headwork of Wastewater Treatment Plant,
- Input System of Incinerator

 YunTech 國立雲林科技大學

Elevator facts

- London, 1823 for tour attraction
- 6 Million units in 2002, now ??
- In 1998, estimated 1 in 12 million of elevator rides with an anomaly, vast majority minor -- doors failing to open.
- 2012 In Thailand, a woman killed in free falling elevator -- "first legally recognized death caused by a falling lift" .<https://en.wikipedia.org/wiki/Elevator>
- Many falling accidents happened from 2008 to 2013, in Hong Kong, Taiwan and China

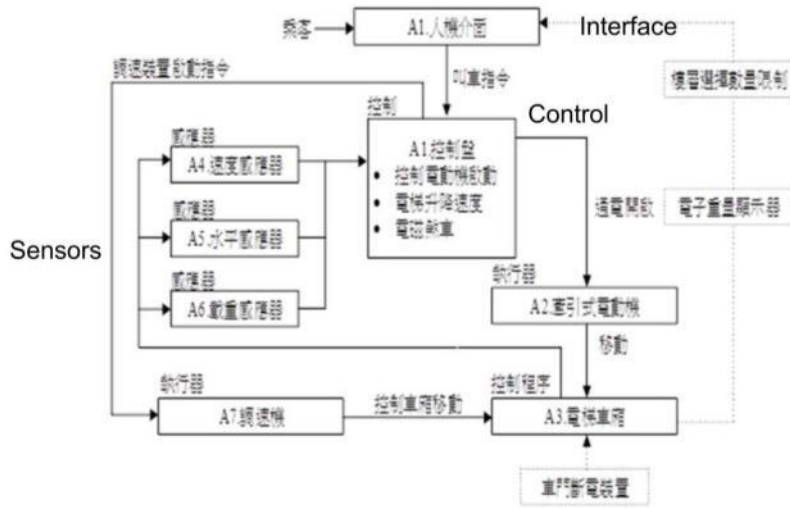


Hydraulic Elevators - a configuration where hydraulic cylinder(s) are used to raise and lower the car. Hydraulic systems are typically limited to buildings that are three stories tall or shorter.

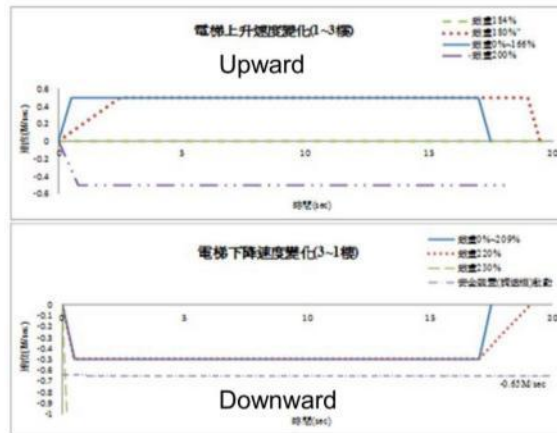
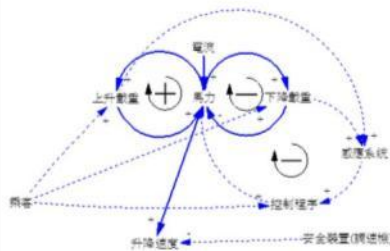
Traction Elevators - a motor driven configuration where cables are attached to the car and looped over a drive sheave to a counterweight. The counterweight is located in the hoistway and rides a separate rail system.

- <http://www.robsonforensic.com/articles/elevator-anatomy-schematic-of-traction-hydraulic-elevator-systems>

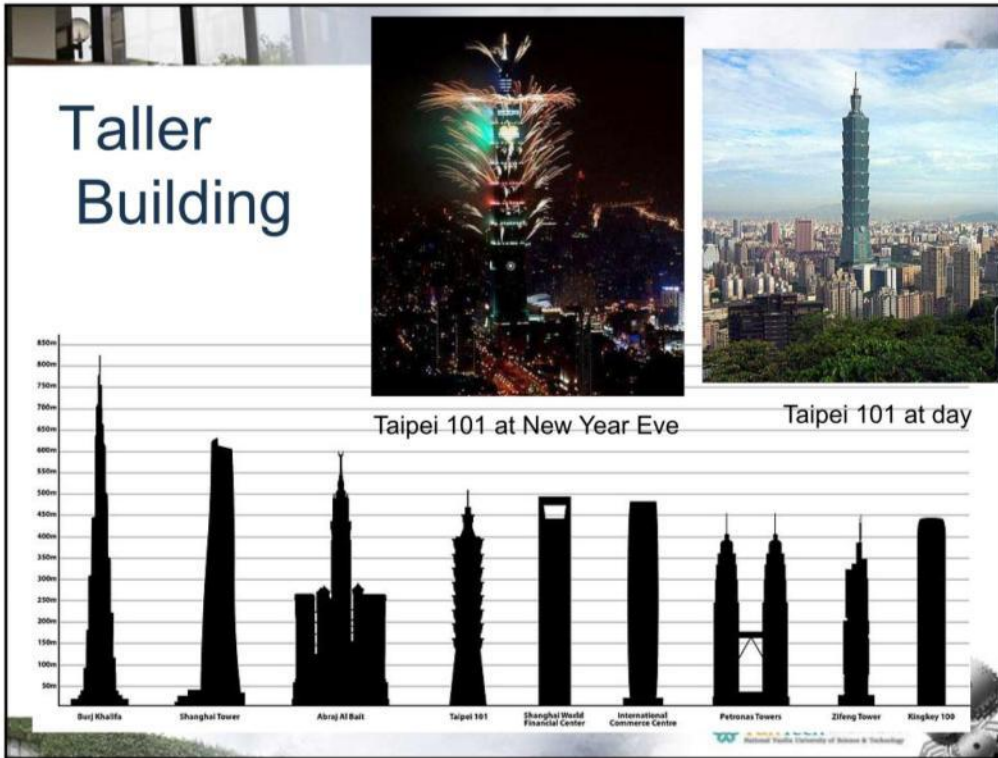
Simplified model



Causal Loops and Vensim Simulation



Regulation: First Brake (Electronic) on 130% designed operation speed
Second Brake (Mechanic) on 140 %



Fastest Elevators?

- 5 to 89 th floor at 37.7mph (60.3 km/h).
- <http://gizmodo.com/322557/taipei-101-elevator-fastest-in-the-world>

CERTIFICATE
The world's fastest passenger elevators were installed by Toshiba Elevator and Building Systems Corporation (Japan) in Taipei 101, Taiwan and have a maximum speed of 60.3 km/h.

金氏世界紀錄
世界最快速電梯
Guinness World Records
of the world's fastest passenger elevator
ギネス世界記録-世界最速エレベーター

TOSHIBA

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National Yangtze University of Science & Technology

- Shanghai Tower by Mitsubishi's new elevator
- maximum speed of 1,080 m/s (64 km/h)
- Other high speed elevators from Halifa Tower (64 km/h) and Guangzhou CTF Finance Center (72 km/h)

Future Development

- Use STPA to analyze high speed elevators.
- Develop more scenarios on elevator hazards
- Relate sensors to leading indicators and regulations
- Provide the criteria for maintenance and part replacement
- Apply to more engineering examples, such as Wastewater Treatment Plants (100s in Taiwan, 1000s in China in the future).