

Leung, Gracemary, J. Bason-shone, and S.L. Chow, The University of Hong Kong, SAR China

- Title:** Are Investors Gamblers?
- Presentation Date:** Tuesday, May 26, 4:15-5:45
- Abstract:** Investment used to be a non-participatory (if not benign) means of generating financial gains in the long run. However, as a result of changes in financial practices, investment has become more like a participatory sport in speculation. It is not uncommon to find people characterizing investment as gambling. Is it justified to do so? Why has 'investment' acquired a negative connotation? As a first attempt to answer these questions, it helps to ascertain the similarities and differences between investors and gamblers by asking the following two empirical questions: Are investors necessarily gamblers?
- Are there subcategories of investors as there are sub-categories of gamblers?

Levy, Moshe, Ariel University Centre of Samaria, Israel

- Title:** The Rationalization of Gambling in Israel
- Presentation Date:** Tuesday, May 26, 4:15-5:45
- Abstract:** Among the various sociological theories of gambling, there are only a handful of works based on the ideas of Max Weber, and especially his thesis of rationalization. This study aims to fill this void by proposing a Weberian theory of gambling. Using this theory, this study presents a socio-historical analysis of legal gambling in Israel. The analysis reveals that gambling in Israel has undergone a McDonaldization process. As part of this process of McDonaldization, legal gambling organizations adopted technological means aimed at making work methods faster and more efficient and enabling gamblers to plan their gambling in a calculated, non-random fashion. Together with McDonaldization, an instrumental discourse was introduced into public debate about gambling. The use of language that seeks to describe that which is good and ethical was abandoned and was replaced by a new vocabulary that emphasized the method and efficiency of the operation.

Light, Steven Andrew, and Kathryn R.L. Rand, Institute for the Study of Tribal Gaming Law and Policy, University of North Dakota

- Title:** The Hand That's Been Dealt: The Indian Gaming Regulatory Act at 20
- Presentation Date:** Thursday, May 28, 10:30-12:00
- Abstract:** The timing of this Conference corresponds to the 20th anniversary of the Indian Gaming Regulatory Act of 1988 (IGRA), the federal law that established the legal and regulatory framework for tribal gaming. Anniversaries of landmarks in American law, politics, and public policy provide a terrific opportunity to ask and answer important questions about their effects. Twenty years later, what did Congress actually intend IGRA to accomplish? How well has IGRA facilitated those policy goals? Given the hand that's been dealt to them, how successful have American Indian tribes been in achieving their *own* policy goals, which may or may not overlap with IGRA's? When Congress enacted IGRA, it articulated two main policy goals: to codify tribes' right to conduct gaming on Indian lands, and to adequately regulate that gaming. In this

paper, we take up the task of tracking two decades of Indian gaming against these goals and in relation to tribal experiences. We provide an overview of IGRA and profile in brief several of tribal gaming's effects on tribes and American Indian communities. We then identify three of the most significant legal and political developments since IGRA was enacted: *Seminole Tribe v. Florida* (1996), which tilted IGRA's legal and political balance in favor of states; the rise of tribal-state revenue sharing agreements; and controversies over "off-reservation gaming." Perhaps not surprisingly—and yet, we believe, quite significantly—we find that IGRA has had both intended and unintended legal, political, and policy consequences for American Indian as well as non-Indian populations and jurisdictions.

Lister, Jamey J. and Lia Nower, Center for Gambling Studies, Rutgers University, New Jersey

- **Title:** Motivations for Gambling: A Logotherapeutic Perspective on the Origins of Excess
- **Presentation Date:** Thursday, May 28, 2:00-3:30
- **Abstract:** Cognitive models of problem gambling suggest that erroneous beliefs and distortions about gambling, combined with interval ratio schedules of behavioral reinforcement, significantly contribute to the development and maintenance of problem gambling behavior.* Various studies have also identified higher levels of boredom proneness, sensation seeking, mood avoidance, and maladaptive stress-coping strategies as predisposing risk factors. However, little research has explored the underlying motivation for the boredom or the quest for excitement or escape, which can result in excessive gambling. Logotherapy provides a theoretical starting point for future explorations in this area. It proposes that individual behavior is driven by the desire to find meaning and purpose in life, accomplished primarily through positive relationships with others, generating a work, and/or finding meaning in unavoidable suffering. Absent these experiences, individuals experience boredom, depression, and frustration that can lead to maladaptive behaviors. This presentation will: (a) outline the basic tenets of logotherapy and apply those tenets to concepts in problem gambling research; (b) review empirical studies with implications for gambling motivation; and (c) introduce a new theoretical framework to guide future research in addressing the underlying causes of excessive gambling. Implications for treatment and prevention will also be discussed.

Littler, Alan, Tilburg University, The Netherlands

- **Title:** Don't Bet on Luxembourg: Why the European Court of Justice Alone Cannot be Relied Upon to Resolve the Question of Gambling Regulation in the European Union
- **Presentation Date:** Friday, May 29, 10:30-12:00
- **Abstract:** This paper seeks to provide some insight into what the European Court of Justice can be expected to contribute to the establishment of an internal market for gambling services within the EU. Since the 1990s the Court has been

the primary institution of the EU in terms of defining the criteria for ascertaining whether national measures which restrict the free movement of gambling between the various Member States are compatible with Community law. To date the case-law has proved to be rather vague and the open texture of the judgements allows all parties to claim that their arguments are ‘rubber-stamped’ by the Court. A brief overview of the case-law will be given, concentrating on the two most recent cases to come before the Court and its Advocate General; *Placanica* (C-338/04, C-359/04 & C-360/04) and *Santa Casa de Misericórdia* (C-42/07). This will highlight the relatively vague nature of the Court’s rulings while permitting for the outer-reaches of the effects of the case-law to be drawn. This will be followed by an explanation of why the Court is unable to provide any greater depth, and thus certainty, in its rulings. However, the highly specific nature of the questions arising in the pending cases will be illustrated before suggesting that uncertainty at this stage of the debate is not necessarily bad, and that parties (and others) should not expect the Court alone to solve current issues

Liu, Day-Yang, National Taiwan University of Science and Technology, Taiwan

- **Title:** Casino Gaming in Taiwan: A Strategic Management Approach
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** The purpose of this paper is to present the complete mentality and actual planning of casino gaming in Taiwan from a strategic management approach. The main contents include vision, mission, differential strategy, focus strategy, international strategy, and cooperative strategy. On January 13, 2009, Taiwan’s National Legislature passed an “Outlying Island Act” revised version to legalize casino only in outlying islands. This piece of national legislation established a milestone for casino gaming to become possible, i.e., to make dream of casino come true. All the competitive counties and cities in Taiwan mainland for casino opportunities are definitely ruled out at least for now. Next, a complete casino control law is needed to set up all the necessary rules and regulations for casino gaming in the near future. In addition, a government agency for casino regulators including Casino Gaming Commission and Gaming Control Board are expected to be established soon as well. It has been for a long time, since outlying island such as Penghu in Taiwan had argued for casino. Finally, it becomes reality and for sure more challenges are ahead especially during world financial crisis now. In this paper, I would laid out all the complete framework I recommended to both national government and local government, i.e., CEPD and Penghu County government, from a strategic management approach. Besides beautiful ocean, seafood gourmet, nature resources, local culture and tradition, and local nice hospitality, this paper is to look at many important planning key issues by differential strategy in local tourism resources, focused strategy in designated agency and problem gambling prevention center, international strategy in inviting world first-class casino operator to participate and cooperative strategy in competitive tax rate and revenue sharing for both national and local governments. A complete framework of casino planning is hence presented in this paper.

Liu, Xiaoming, and Zhaotong Lian, University of Macau, SAR China

- **Title:** Estimating the Expected Customer Experiences at a Slot Machine
- **Presentation Date:** Wednesday, May 27, 2:00-3:30
- **Abstract:** This paper applies a mathematical model of Absorbed MarkovChain to estimate the customer experiences of slot machines theoretically from the payout distribution table. It provides explicit formula for almost all quantitative measurements that are of interest to both casino managers and slot machine manufactures: the house advantage, the hit frequency, the customer winning/losing probability, the mean and standard deviation of time-on-device per customer, the mean and standard deviation of time-on-device per losing customer, and winning customer etc. These results can be utilized by slot managers/manufactures to evaluate very quickly (without simulation) the impacts of slot machine payout distribution to customer experiences and then help to select the appropriate payout distribution that gives the best trade-off of customer experience and casino gain.

Lloyd, Joanne, Robert D. Rogers, Keith Hawton, John Geddes, and Guy M. Goodwin, Warneford Hospital, Oxford, **Hellen Doll**, Department of Public Health, Oxford, and **William H. Dutton**, University of Oxford, United Kingdom

- **Title:** A Web-based Survey of Internet Gamblers' Behaviors, Motivations, and Health Experiences
- **Presentation Date:** Tuesday, May 26, 2:15-3:45
- **Abstract:** Little is known about the behaviours and health characteristics of those who gamble online, despite widespread speculation about possible negative implications. We collected completed surveys from 4,125 online gamblers, recruited 'at source' via links on gambling websites. Respondents provided information on their gambling behaviour, motivations for gambling, and demographics, and completed screens for problem gambling, mood and substance use disorders, and deliberate self harm (DSH). A latent class analysis segmented participants based on patterns of regular gambling activities, and variables were compared across different gambler types. Significant differences between gambler types were observed in incidence of their problem gambling, mood and substance use disorders, and DSH. Those favoring multiple diverse activities, or games of chance in combination with sports betting, were most at risk of psychological disorders including problem gambling, and were most likely to have parents who gambled (some, problematically), compared with those who favor sports betting alone, lottery play, or do not typically gamble. Motivations also differed according to preference for Internet gambling activity, with exclusive sports bettors being mostly motivated by money, while those who play chance games alongside sports betting tended to gamble as a coping strategy. Despite surface similarity between different Internet gambling activities, patterns of online gambling behaviour vary considerably, and are differentially associated with problem gambling and other comorbid difficulties. This information highlights the heterogeneity of online gamblers' health experiences, and will be useful for the design of assessments and appropriately tailored interventions for Internet problem-gambling

Loi, Edmund H.N., Macao Polytechnic Institute, and **Matthew T.C. Liu**, University of Macau, SAR China

- **Title:** A Study of Macao Youth Gambling Behavior
- **Presentation Date:** Thursday, May 28, 8:30 – 10:00
- **Abstract:** The liberalization of casino gaming in Macau led its blooming business development and economic growth. Meanwhile, many social conflicts are also sharpened during the rapid growth process. In most Macao resident's perception, the negative impacts brought by casino gaming may be larger than the tax revenue and economic benefits. One of the most controversial issue is the problem gambling is more prevalent now. Since more and more young students are enrolled by casino, the age of problem gambler showed the decline trend in recent years. This survey was hold at 2008 and 744 participants in range between 13 years and 40 years. It focuses on the gambling behavior of Macau youth's and their impacts perception towards gaming industry. The finds show: (1) most respondents accept gaming as entertainment though most of them won't enter casino; (2) more and more young students get involved gambling, including horse racing, slot and casino; (3) they perceived positive impacts including economic and socio-cultural dimensions. Meanwhile, they agreed that problem gambling is the most serious negative impacts brought by gaming industry in Macao

Lyon, Caitlin, and **Joseph Tindale**, University of Guelph, Canada, and **Joan Norris**, Wilfrid Laurier University, Canada

- **Title:** Gambling and the Emerging Adult: An Examination of the Gambling Attitudes and Beliefs of Persons Aged 20 to 39 Years Old
- **Presentation Date:** Tuesday, May 26, 4:15-5:45
- **Abstract:** Gambling activities have become integrated into Canadian society, specifically in Ontario. The emerging adult population is a unique group with their own gambling behaviours and views. However, this group has been neglected in much of the research. In this study, 129 men and women between the ages of 20 and 39 years old were surveyed from mid-sized cities in southwest Ontario, Canada. The Gambling Attitude Scales, Canadian Problem Gambling Index (CPGI) and the Guelph gambling scales were utilized to understand their gambling habits. These persons begin gambling early in life and primarily for entertainment and to socialize, but also to win. They prefer lottery tickets and internet gambling. Casinos are not enticing this group to gamble, with just over 30% of each gender going to a casino every few years. As measured by the CPGI, 5% of participants are problem gamblers, which is consistent with a large scale Canadian survey. Gender differences are apparent as males cited winning as a more prominent reason to gamble than did women. Women tend to choose instant win scratch tickets or Nevada tickets more than men. Young adults hold positive attitudes towards gambling, specifically playing lottery tickets, horse racing and casinos, even though they do not necessarily participate in them. This research adds to the growing body of work on emerging adulthood. Findings indicate that these adults can be distinguished from teens, baby boomers and older adults in their gambling preference. It will

be important for researchers and service providers to understand these differences.

Macur, Mirna, Faculty of Applied Social Studies, Slovenia

- **Title:** Evaluation of the System of Help Offered to People with Gambling Problems in Slovenia
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** Slovenia, country located in the heart of Europe, has considerable number of casinos and gambling halls, especially near Italian and Austrian border. That is why it is not immune to gambling problems. First big study, revealing the number of problem and pathological gamblers in Slovenia, was conducted in autumn 2008. It raised various questions on how do we deal with this problem and how successful we are in this. Social and health care system in Slovenia gradually recognized the problem but is not capable to offer help to all the people in need. We compared some forms of organized help to problem and pathological gamblers in Slovenia with help offered in neighboring countries.

Makarovic, Matej, Faculty of Applied Social Studies, Slovenia

- **Title:** Gambling in Slovenian Public Discourse: From Moralistic-Nationalist to Socio-Economic Concerns
- **Presentation Date:** Wednesday, May 27, 2:00-3:30
- **Abstract:** The paper is based on the analysis of the discourse on gambling in the Slovenian media covering the period from May 2007 till October 2008. It demonstrates how major events in that period have been reflected in and constructed by the media. It includes especially (1) the period of the heated discussions concerning the plans of the major investment by Harrah's Entertainment and the leading Slovenian company HIT to build the gambling destination resort in Slovenia; (2) the period when new gambling facilities were opened in various parts of Slovenia; (3) the period when HIT reported significant declines in profits and implied that many jobs could be lost, partially as a result of the growing economic crisis. The first period was characterized by the rise of 'moralistic' discourse against gambling and nationalist (or even xenophobic) discourse against the presence of the large American company. On the other hand, there was virtually no 'anti-gambling' reaction when four new casinos opened in different parts of Slovenia in December, 2007. The emphases in the discourse have changed again in the third period when socio-economic concerns about the job loss in the casino companies and the related socio-economic problems clearly dominated the discourse and concerns about gambling as such virtually disappeared. The analysis demonstrates that the dominant attitudes towards gambling in Slovenia are constantly subject to change depending on the wider social circumstances that mostly do not have much to do with gambling issues as such.

Makarovic, Matej, Faculty of Applied Social Studies, Slovenia

- **Title:** Problem Gambling in a Country with Export Oriented Gambling: The Case of Slovenia
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** The paper analyses the results of the first Slovenian national Problem Gambling Prevalence Survey conducted in autumn 2008 by the Faculty of Applied Social Studies. Legalized casino gambling in Slovenia has already been established during the communist times as an ‘export oriented’ industry, which has latter become quite significant in the European terms. The recent plan to initiate a major casino resort in Slovenia by the American based Harrah’s Entertainment and the local company HIT has failed but it has helped stimulate research on that matter which has been virtually absent before. The survey results reveal a comparatively low problem gambling rates in the Slovenian population according to the South Oaks Gambling Screen: 0.5 per cent of the representative national sample of 10,001 respondents reported gambling problems (SOGS scores of five or more). Because of the dominance of the classical games (especially lottery) among the Slovenian population the classical games contribute the most to the problem gambling in absolute terms. In relative terms, however, casino gambling seems to be more risky since greater percentages of those engaged in it reported gambling problems. The significantly higher presence of casino and internet gambling as well as general gambling related problems among the people younger than 30 may indicate the rise of new behavior patterns not typical for the older generations. One may thus expect a significant increase of the problems in the future unless more systematic responsible gambling policies are introduced.

Maki, Todd, and **Don Feeney**, Minnesota State Lottery

- **Title:** Characteristics of Internet Gamblers in Minnesota
- **Presentation Date:** Tuesday, May 26, 2:15-3:45
- **Abstract:** The Minnesota Gambling Survey, taken annually since 1993 by the Minnesota State Lottery and the survey research laboratory of St. Cloud State University (with sample sizes of 2000 or more), has asked respondents about Internet gambling since 1998. With completion of the 2009 survey in February, we will have 12 years of data on the frequency of Internet gambling and the characteristics of Minnesota Internet gamblers. While the number of internet gamblers in any one sample is small, the number surveyed over the 12 year period is large enough to make statistically reliable conclusions. Among the topics to be presented are the demographic characteristics of Internet gamblers, differences between Internet gamblers, and non-Internet gamblers (and non-gamblers), changes over time in the profile of Internet gamblers, and the non-Internet gambling practices of Internet gamblers. While several researchers (notably M. Griffiths, A. Parke, and J. Parke) have studied Internet gamblers in Europe and elsewhere in the world, data on North American Internet gamblers are rare, in part because of the uncertain legal status of Internet gambling in the U.S. and Canada. A recent Nevada study of Internet gamblers did cover a U.S. population, but was limited by a small sample size. To the best of the authors’

knowledge, the Minnesota study is the only one to report on Internet gambling over an extended period of time.

Mallios, W.R., California State University and **R.R. Mallios**, University of California, San Francisco

- **Session Title:** Exploiting Inefficiencies in Financial and Sports Gambling Markets: Adaptive Drift Modeling
- **Presentation Date:** Friday, May 29, 8:30-10:00
- **Abstract:** Adaptive drift modeling (ADM) is applied to cointegrated time series that are associated with both short term price changes in financial markets and game outcomes in sports gambling markets. Such modeling, expressed in terms of higher order ARMA models with time varying coefficients, allows for both gradual, Darwinian-type drift associated with low to moderate volatility and punctuated, Gould-type drift associated with high volatility. Model forecasts are intended to capitalize on periods of short-term market inefficiency which is characterized by irrational behavior by market participants. Modeling results are discussed in light of the current financial crisis—particularly, reported failures of the *quant* hedge funds and the likely entry and regulation of sports hedge funds. Enlightened sports hedge funds would likely have capitalized on spreads on many games including the inefficiency of the point spread on the Patriot-Giant encounter in the 2008 Super Bowl. An ADM forecast for this game is given in the following table.

The Point Spread on Super Bowl 2008: NE Patriots v. NY Giants +12.

ADM Forecast: NYG expected winning margin: 4.7 points.

Outcome: NYG won by 3 points.

<u>Possible Outcomes</u>	<u>Odds to \$1</u>	<u>Probability</u>
Patriots to win by more than 7 points	\$2.45 to 1	.29
Game decided by at most 6 points	\$7.28 to 1	.11
<u>Giants to win by more than 7 points</u>	<u>\$.67 to 1</u>	<u>.60</u>

Our short-term modeling objectives/proposals in these markets conflict and repudiate *France's efforts to instill moral values in the global market economy by urging policy makers to consider fresh ways of combating financial short-termism*. (Financial Times 1/3/09)

Marks, Robert, San Jose, California

- **Title:** Are More Tickets Always Better?
- **Presentation Date:** Tuesday, May 26, 2:15-3:45
- **Abstract:** This paper is about optimizing one's return in casino promotional drawings. Many of these drawings have a tiered prize structure, where prizes of increasing value are awarded as the drawing proceeds, and participants are only allowed to win once. Drawing tickets are typically earned by playing casino games and are often awarded in proportion to how much action the casino receives from a given participant. It is not uncommon for advantage players to acquire a significant fraction of all the tickets entered in a drawing, and thus, it is possible for one to have "too many tickets" so to speak. Under such conditions, a participant will be more likely to win a smaller prize, thus making

himself or herself ineligible for larger prizes. This paper describes a method for determining the optimum amount of tickets to enter into a raffle drawing. Other factors such as playing as a team and whether or not it is advantageous to try and keep all tickets localized near one another or spread about the drawing barrel are also addressed. Finally, some techniques for estimating the total number of tickets in a drawing barrel are described.

Marotta, Jeff, Oregon Health and Sciences University, and **Marcia Mattoso**, Problem Gambling Consultant, and **Peter Walsh**, Problem Gambling Consultant, Oregon

- **Title:** Problem Gambling In-Reach: Residential Client Assistance Program
- **Presentation Date:** Tuesday, May 26, 10:45-12:15
- **Abstract:** This presentation will describe the Residential Client Assistance Program (RCAP) which is conceptually modeled after the Residential Student Assistance Program (RSAP), a SAMHSA best practice program. The RCAP is designed to address high-risk chemically dependent adults living in residential treatment facilities who may also be undiagnosed or at-risk problem gamblers. RCAP was developed and implemented in the Portland Metro Area and represents a partnership between ten residential treatment facilities, which had limited problem gambling prevention expertise and Problem Gambling Solutions, Inc. (PGS), which has extensive expertise in the problem gambling prevention and intervention field. The project's goals were to (a) enhance the ability of at-risk clients to remain free from gambling problems; (b) identify and refer consumers of alcohol and drug (A&D) residential facilities who are; at-risk problem gamblers, pathological gamblers, and concerned others of problem gamblers, to incorporate gambling behavior into their recovery plans, and (c) to train and consult with residential facility staff and coordinate problem gambling interventions and policies of the facility. First year evaluation results across ten facilities found a quarter (25%) of residential A&D clients in Portland metro area programs had problem gambling comorbidity and findings supported the utility and efficacy of the Residential Client Assistance Program.

Marotta, Jeff, Oregon Health and Sciences University and **Jodi Tyson**, Department of Health and Human Services, Nevada

- **Title:** Nevada's Problem Gambling Prevention Strategic Plan
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** This presentation will describe the strategic planning process by the Nevada Department of Health and Human Services (DHHS) for the development and delivery of problem gambling prevention services within the State of Nevada. The result of this effort was a five-year strategic plan for problem gambling prevention that identified goals, methods and processes it will take to address problem gambling issues in Nevada and, as such, is both a roadmap and a benchmark against which legislators, agency administration, advisory boards, the public and other stakeholders can measure the effectiveness of the system as it matures. This plan was developed via a comprehensive, thorough and structured process. A national expert on problem gambling

services facilitated the project under DHHS' direction and a large number of key stakeholders were included in the plan's development.

The plan includes a mission, "to support effective problem gambling prevention, education, treatment, and research programs throughout Nevada", a vision "to improve the public health of Nevadans through a sustainable and comprehensive system of programs and services that reduce the impact of problem gambling" and a set of guiding principles against which efforts can be evaluated.

In addition to discussing Nevada's approach to strategic planning, a more general conversation will take place on the importance of strategic planning in the development of services and systems to reduce gambling related harm.

Martino, Stephen, Kansas Racing and Gaming Commission, and **William R. Eadington**, University of Nevada, Reno

- **Title:** Allocation of Gaming Licenses and Establishment of Bid Processes: The Case of Kansas
- **Presentation Date:** Tuesday, May 26, 10:45-12:15
- **Abstract:** This paper looks at the recent history of allocation of exclusive franchise or limited franchise casino licenses in jurisdictions throughout the world and comments on the strengths and weaknesses, as well as successes and failures, of various strategies that have been undertaken. The paper then examines the Kansas legalization and bidding process that emerged between 2006 and 2008 as a case study in evaluating the effectiveness of various principles that had emerged via the legislation and subsequent procedural decisions. The authors offer the opinion that many of the principles and processes developed in Kansas were based on those that had been implemented in bid processes in other jurisdictions. In spite of the inability or unwillingness of a number of the winning bidders to act upon their winning bids in Kansas in 2008, following the severe economic downturn that affected the casino industry, the authors suggest the Kansas model provides an excellent template for other jurisdictions to develop and execute such processes in the future.

Matilainen, Riitta, University of Helsinki, Finland

- **Title:** Changing Perception of Gambling in Finland from the 1920s to the 1970s
- **Presentation Date:** Tuesday, May 26, 10:45-12:15
- **Abstract:** The paper focuses on the changing perception of gambling in Finland from the 1920s to 1970s. In international comparison, Finland as a small, Lutheran and rather homogenous Scandinavian nation offers an excellent example of a society that started to engage in legal gambling quite early in the 20th century. The gambling revenues raised by the gambling monopolies have played an important part in the funding of the Nordic welfare state. The cultural, social and moral re-evaluation processes of gambling began in the 1920s as legalisation of gambling in the forms of money lotteries and tote started. Founding of gambling monopolies (RAY, i.e. Finland's Slot Machine Association in 1938 and Veikkaus Oy Ab in 1940) was an essential part of this development. The process culminated in the 1970s as the game of Lotto was introduced in 1971. I am out to prove that the Finnish state was able with the

help of gambling monopolies to tame gambling, which was once considered a sin or at the very least inappropriate behaviour, into a “modern” and “normal” way of Finnish everyday life. The many reasons behind this changing perception of gambling are discussed in the paper: e.g. the advertising, the improved living standards, the radical changes in Finns’ lifestyles and a more equal relation between women and men and different social classes. The source material of my paper consists of elicited written data of people’s gambling experiences. I will also use official papers and memoranda to illustrate the changing perception of gambling.

Maughan, Nick, Raph Di Guisto, Vassil Kriakov, and Aaron Brown

- **Title:** The Economics of “Regressive Lottery Auction” Betting
- **Presentation Date:** Thursday, May 28, 10:30-12:00
- **Abstract:** In this paper we examine the economics of a new partial information Internet gambling game that is rapidly gaining popularity in Europe. This has only recently been offered in the US. The largest provider of the game can be found at swoopo.com, though similar games can be found at a handful of other sites including madbid.com, grababid.com, spreadbid.com and bidtime.co.il. The game is multi-player, it is played against other players but collectively all players are against the house. It combines qualities of pool betting, lotteries and auctions; sums of money and electronic goods are the most common prizes. We discuss an efficient game hypothesis for how each game should play out given rational participation; empirical evidence shows our model does not hold. Furthermore, we present a formula for computing the expected value of a bet, which we use to construct a positive equity indicator. Back-testing on a sample of 100 games of data shows predictable instances of quantifiably positive expected value per bet. Such instances exist because the game is played inefficiently; rather than being an *a priori* function of the game’s rules. Our evidence shows that the inefficiency of the average player’s decision making offers fertile ground for the advantage player.

McDermott, Marc and Ethan Tower Gaming Standards Association, **Mark Liparelli,** Nevada State Gaming Control Board, and **Lyle Bell**

- **Session Title:** The Effect of Open Communication Standards on the Player Experience and their use in Expanding the Patron Base
- **Presentntation Date:** Tuesday, May 26, 4:15-5:45
- **Abstract:** Communications in a gaming environment has been segregated into several isolated sections. This communication architecture limits the capability of the casino to successfully market to their patrons, provide the conveniences and perks their patrons prefer, and to effectively run their operation. Attempts to correct this communication bottleneck have been uncoordinated and, for the most part, have not come close to reaching their full potential. The two primary difficulties have been in differences in the way the separate parts of the organization communicate and in an inadequate means of accessing the information. The casino communications network can be broken down into several different parts: floor network that comprises the gaming machines, a retail

network that encompassing mall space on or off property that is associated with the property, casino internal operations network that covers security, the player loyalty system, casino accounting etc, and a hotel network. Information in one section has typically not been visible in any other section. Additionally, access to the information from the casino floor has been limited even further to very specific access within that particular network. The result is that the casino's ability to understand the dynamics of their patrons is inhibited and the ability to effectively tune their organization to take advantage of opportunities available to enhance their current clientele's experience and to expand their patron base is compromised. GSA has a set of open standards that can remove the boundaries between different communication networks in the casino and enable applications that will provide more opportunity for operators to reach their existing and future customers. This panel will focus on the problems associated with removing the communication bottlenecks in general, the benefit of better communications and how the adoption of the GSA standards can assist in both of these areas.

McDonald, David C.J., Ming-Chien Sung, and Johnnie E.V. Johnson, University of Southampton, United Kingdom

- **Title:** A Reinterpretation of the Favourite-Longshot Bias: Estimating the Winning Probabilities of Strong Favourites
- **Presentation Date:** Thursday, May 28, 8:30-10:00
- **Abstract:** This paper develops a method of identifying those favourites in horserace betting markets which represent more profitable betting opportunities. In particular, prices are used to categorize strong favourites in the UK bookmaker market. Many empirical studies have found a favourite-longshot bias in racetrack betting markets, where bettors consistently overestimate the chances of longshots. This paper finds that, in addition to a favourite-longshot bias, there also exists a pricing anomaly such that the probability of favourites, with the same market price, winning a race, depends on the makeup of the rest of the field (even in markets with the same bookmaker over-round). Specifically, strong favourites, in races where each competitor has a low probability of winning, can offer better value. An empirical study, using a dataset of 11,496 races across 35 UK racetracks, demonstrates that indeed strong favourites have significantly higher winning probabilities. A Kelly betting strategy is employed to show improved returns when limiting choices to these strong favourites. This paper adds to the existing favourite-longshot bias literature, illustrating not only that favourites provide better value in general, but further that stronger favourites can be identified which are even more profitable.

McHale, Ian, and David Forrest, Centre for the Study of Gambling, The University of Salford, United Kingdom

- **Title:** The Relationship Between Happiness Scores and Engagement in Gambling
- **Presentation Date:** Tuesday, May 26, 4:15-5:45
- **Abstract:** Employing data on 22,900 residents of England, the paper explores the relationship between self reported happiness scores (a proxy for utility) and engagement in gambling. Ordinary least squares estimation reveals that lottery

and bingo players of both genders are particularly likely to report that they are happier than would be expected, allowing for age, income, health, marital and employment status and other controls. Similarly, happiness tends to be higher for those who take part in more modes of gambling. However, in instrumental variables estimation results, albeit with imperfect instruments, no causal impact on happiness is found from engagement in gambling, implying that correlation is likely to be explained by happier people choosing to consume more gambling services rather than vice versa. Incidental results provide information on socio-economic determinants of the decision to gamble. Findings from the paper are placed in the context of the ongoing debate on restricting gambling.

McMillan, Matthew, Te Kahui Hauora O Ngati Koata Trust, New Zealand (*being presented by Cynthia Orme, Problem Gambling Foundation of New Zealand*)

- Title:** Is Culture Being Exploited by Gambling
- Presentation Date:** Thursday, May 28, 4:00-5:30
- Abstract:** At one level gambling is a set of game rules on which people wager. However, it's also a set of social rules that exist within a cultural context. Cultural rules may not be explicit, but they still contribute to the vulnerability and resilience that populations have towards problem gambling. The uneven prevalence of problem gambling in indigenous and immigrant populations illustrates the influence of culture and cultural conflict on vulnerability and resilience to gambling problems. These populations may experience economic inequalities, dislocation from land or homeland and discrimination from the dominant culture. This presentation is of the conceptual work on a comparative study of indignant and immigrant populations in NZ, North America and Europe that will explore the positive and negative **Cultural Protective Factors** that exist in these groups and is based on the PhD program of the lead author. The unique gambling environment in New Zealand and our Public Health approach to gambling and the health effects of gambling on indigenous and immigrant populations are described and contrasted to the effects of alcohol on these groups. This presentation will be of interest to the gambling industry and those interested in the cultural basis of gambling and problem gambling and will be presented in ways that encourage the contribution of participants to this formative investigation.

McNeilly, Dennis P., University of Nebraska Medical School

- Title:** Mindful of the Mind: Assessing the Older Problem Gambler
- Presentation Date:** Thursday, May 28, 4:00-5:30
- Abstract:** As gambling counselors increasingly see older adults present in their client and patient population, it becomes additionally important that assessment for this population is both accurate and appropriate. This presentation discusses and describes the problems associated with older adults who access problem gambling treatment, considerations the treatment professional must consider with this age group, and suggests appropriate and accurate assessment measures for problem gambling in older adults. At the conclusion of this presentation, participants will be familiar with common cognitive and mood assessment in the

geriatric population, and how to apply them to the older problem gambler population. **PRESENTATION GOALS** 1. To describe the problems associated with older adults who may exhibit problem gambling behaviors and to highlight the potential impact gambling may have on this population. 2. To describe the assessment questions the clinician ought to consider as part of an assessment of an older adult problem gambler. 3. To demonstrate the available cognitive and mood assessment measures for problem gambling in older adults. 4. To review and discuss participant questions **PRESENTATION OBJECTIVES** By the end of this presentation, the attendee will be familiar with: 1. the common cognitive and mood problems associated with older adults who may exhibit problem gambling behaviors and to highlight the potential impact gambling may have on this population. 2. the assessment questions the clinician ought to consider as part of an assessment of an older adult problem gambler. 3. the use and utility of available cognitive and mood assessment measures for problem gambling in older adults.

Meister, Alan P., Analysis Group, Inc., Los Angeles

- Title:** The Fiscal Impact of Indian Gaming
- Presentation Date:** Thursday, May 28, 10:30-12:00
- Abstract:** It is often claimed that Indian gaming has no positive fiscal impact because Native American tribes do not pay taxes. A couple sections of this report find that Indian gaming does have a positive fiscal impact. First, Indian gaming has a significant impact on tribal governments. Second, Indian gaming has a fiscal impact on non-tribal governments through revenue sharing and multiplier effects. State-by-state revenue sharing data are presented. An economic impact analysis is also conducted to estimate multiplier effects and the resulting contribution of Indian gaming to the U.S. economy.

Meister, Alan P., Analysis Group, Inc., Los Angeles and **Steven Light**, Institute for the Study of Tribal Gaming Law and Policy, University of North Dakota

- Session Title:** Off-Reservation Indian Gaming
- Presentation Date:** Thursday, May 28, 4:00-5:30
- Abstract:** In 2008, the Bureau of Indian Affairs at the U.S. Department of the Interior issued a memorandum titled, "Guidance on taking off-reservation land into trust for gaming purposes." The guidance memo signaled a significant change in the department's position on Indian gaming on newly acquired trust lands or "off-reservation" gaming, a change that had been brewing for more than four years. Several legal and economic questions are raised by the guidance memo. This article questions the memo's procedural genesis and substantive "guidance."

Miller, Jr. Thomas W., and **David Rapach**, Saint Louis University, Missouri

- Title:** Efficiency Implications of the Intra-Week Evolution of Three Sequential NFL Betting Lines
- Presentation Date:** Thursday, May 28, 8:30-10:00

Abstract: We study the intra-week evolution of price efficiency in the 1972 NFL betting market. Our unique data set provides weekly observations for three sequential betting lines: (i) an “Outlaw Line” set by single agent at the beginning of the week; (ii) Tuesday’s “Opening Line” shaped by bets from a group of 8–10 agents; and (iii) a game-time “Closing Line” formed by subsequent bets placed by the wider public. We analyze the information content and efficiency of these three betting lines as more agents participate in the market and as more information becomes available. Conventional statistical tests fail to detect significant information differences across the betting lines. However, forecast encompassing tests clearly show that information content efficiently increases as the betting line evolves from the Outlaw to the Opening and to the Closing. Using a sequential regression framework, however, we also uncover significant evidence of pricing inefficiencies related to various measures of sentiment. In addition, actual bets made by a number of “professional” gamblers appear profitable, which suggests that informed bettors can exploit inefficiencies and/or possess information advantages. Overall, our results show that while betting lines evolved in a manner consistent with a degree of efficient information processing, significant inefficiencies emerged in the price-setting process.

Mills, John R., and Sonja Pippin, College of Business, University of Nevada, Reno

- **Title:** Identifying Relevant Financial Information for Evaluating New Gaming Proposals
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** Recent issuance of new gaming licenses in the United States as well as in the international gaming markets have been through the use of a competitive bidding process using the basic “Request For Proposals, RFP”. A typical RFP requires the bidder to submit information which addresses the type of casino property to be built, the corporate structure of the bidder, the cost of the facility and the capability of the corporate structure to finance and develop the property. Additional information includes the operating details and management personnel and equivalent management experience. This paper addresses the problems that can be encountered when evaluating each bidder’s financial viability. It specifically addresses the evaluation process when dealing with different corporate entities ranging from corporations, sub-S corporations, partnerships, and joint ventures.

Missens, Richard and Joanne Goodpipe, First Nations University of Canada, Saskatchewan

- **Title:** What is the “Indian” in Indian Gaming: The Saskatchewan Example
- **Presentation Date:** Thursday, May 28, 8:30-10:00
- **Abstract:** First Nations in Canada have continued expand their gaming enterprises and have done so as an expression of their tribal sovereignty and to seek the economic benefits of gaming. Research has shown that economic success in First Nations’ communities requires, among other things, that there be a cultural “fit” between the economic initiative and the prevailing First Nations cultural values, protocols and Practices. Using the Saskatchewan First Nations approach to gaming this paper will explore the cultural considerations and their

impact on the manner and approach to gaming that First Nations have taken in Saskatchewan. We examine how “cultural fit” has impacted the management, operations, wealth creation, institution building, and governance of the First Nations gaming industry in Saskatchewan.

Monaghan, Sally, and Alex Blaszczyński, The University of Sydney, Australia

- **Title:** Impact of Responsible Gambling Signs for Electronic Gaming Machines on Regular Gamblers: Mode of Presentation and Message Content
- **Presentation Date:** Wednesday, May 27, 2:00-3:30
- **Abstract:** Increasing efforts are being made by key stakeholders worldwide to implement harm-minimisation measures, with a particular focus on electronic gaming machines (EGMs) due to their association with problem gambling. However, responsible gambling signs are often based on signs used in a range of public health domains (e.g., alcohol and tobacco consumption), or at face value of their effectiveness rather than derived from empirical data. There is little to no evidence supporting the effectiveness of currently mandated static signs on EGMs in shifting gamblers’ perceptions/knowledge of the chances of winning. Based on previous research, this study aimed to investigate the impact of mandated static messages as compared to pop-up messages on EGMs (causing a break in play) and examine the most effective message content. Regular gamblers (N=124) were recruited from gambling venues in Sydney and played computer-simulated EGMs containing a responsible gambling sign that varied by mode of presentation (static vs. pop-up) and message content (informative, self-appraisal or control/blank). Questionnaires (pre, post, and two-week follow-up) were used to examine the self-reported impact of signs on gamblers’ thoughts and behaviour during the experimental session and in subsequent gambling sessions. Results showed pop-up messages encouraging self-appraisal were recalled more frequently and accurately and had the greatest impact on gambling-related thoughts and behaviours both within the simulated session and in subsequent gambling sessions. The study supports the use of pop-up messages encouraging self-awareness as an effective responsible gambling strategy to minimise the harm associated with EGMs by encouraging players to play responsibly within their own appropriate limits.

Moodie, Crawford, University of Stirling, Scotland

- **Title:** The Marketing of Gambling: Learning from Alcohol and Tobacco Marketing and Future Directions
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** As is the case for tobacco and alcohol, marketing has transformed gambling consumption and is integral for the continued growth of gambling markets (in both advanced and developing economies). Yet, gambling marketing has received scant attention within the literature and the exclusive focus tends to be on advertising, even though this is only one facet of the ‘marketing mix’. A broader overview of marketing, and what can be learned from the marketing of other addictive behaviours, such as tobacco and alcohol, will be given. Marketing does not only serve to normalise addictive behaviour and influence

consumption however, it can also be employed to raise awareness of associated harms and influence policy makers to introduce appropriate gambling control measures; this is alluded to as social marketing. Although social marketing has been widely applied to tobacco and alcohol, it has seldom been applied to gambling, and this will also be discussed.

Nordlinder, Carolina, National Institute of Public Health, Sweden

- **Title:** Health Effects of Computer Gaming
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** The Problem gambling unit has, beside the work with problem gambling, drawn attention to excessive gaming associated with TV- and computer games e.g. massive multiplayer online role-playing games (MMORPG). The link between problem gambling and gaming is unexplored. This review will broaden the field of knowledge. The presentation aims at presenting and clarifying the relationship between health effects and TV- and computer gaming through a systematic review of scientific studies. The literature search will be conducted without pre-defined health outcomes. Eight databases will be used in the search. This systematic review will up-date a previous review; “*Health effects of video and computer game playing*” (Lager & Bremberg, 2005). The review evaluates study designs that use methods of randomised controlled trials (RCT), of cross-sectional experiments and of longitudinal studies. Certain aspects of video- and computer game playing cannot be studied in experiments and some studies do not fulfil the criteria for randomisation or pre-measurement. In these aspects, the scientific basis consists of cross-sectional or longitudinal studies. Longitudinal studies contain some degree of control over the direction of the causal link since exposure precedes the outcome in time. To ensure adequate reliability, the studies also must control for possible confounders. A large proportion of children and young people in Sweden regularly play TV- or computer games. The public debate in media often claims an increasing number of persons who suffer severe consequences of TV- or computer gaming. This review aims both at examining the link between health and gaming and at highlighting a broad public health perspective on gaming. The concept of health in the review is applied in a broad sense, including mental, physical, social aspects and problematic usage.

Nower, Lia, Center for Gambling Studies, Rutgers University and **Alex Blaszczynski**, University of Sydney, Australia

- **Title:** A Statewide Study of Older Adults Who Ban Themselves from Casinos
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** Little is known about the gambling behavior of older adults, despite recent increases in their rates of gambling participation. Higher rates of problem gambling have been reported among ethnic minorities, veterans, and those who frequent buses to casinos, senior centers, and bingo halls. Few older adults present for gambling treatment. It is therefore important to identify venues where older adult problem gamblers may initiate help-seeking and to develop a framework for facilitating access to services. A de-identified data set of

individuals (N=1601) applying to ban themselves from 11 Missouri casinos or three Gaming Commission offices between January 1, 2001 and March 31, 2003 was used for these analyses. The sample was categorized as younger adults (ages 21 to 35; n=490), middle-aged adults (ages 36 to 55; n=950) and older adults (ages 56 to 79; n=161). Older adults were more likely than other groups to be Caucasian and unemployed, to initiate gambling later in life, and to gamble longer (mean=17 years) before self-excluding. Overall, women reported a later age of onset than men, which was particularly significant among older adults. Compared to younger adults and/or middle-aged adults, older adults were more likely to have gambled longer before self-exclusion, to be married and/or unemployed, and to express a strong preference for non-strategic forms of play (slots, lottery, video poker). They were also up to five times as likely to self-exclude in an effort to prevent suicide. Implications for prevention, intervention, and treatment will be discussed.

Nower, Lia, Center for Gambling Studies, Rutgers University, New Jersey

- **Title:** Setting the National Agenda for Problem Gambling Research
- **Presentation Date:** Thursday, May 28, 10:30-12:00
- **Abstract:** Despite the recent proliferation of legalized gambling, there currently is no federally-sponsored funding programs for problem gambling research in the U.S. The limited funding that exists is largely provided by the gaming industry, which drives the research agenda through requests for grant proposals. In contrast, a number of countries internationally have established clear, long-term research priorities and an active agenda of ongoing empirical research. The purpose of the current study, commissioned by the National Council on Problem Gambling, was to identify key areas to guide the development of a national research agenda in the U.S. A total of 206 participants (58 researchers/policymakers, 206 national conference participants), completed an internet survey to prioritize eight domains and 47 sub-domains from the research literature. An additional 67 participants in five focus groups identified areas of research need with particular relevance to state program administrators and treatment providers. This presentation will summarize findings from the quantitative and qualitative portions of the study and discuss a proposed framework to guide future research priorities.

Oikonomidis, Anastasios, and Johnnie E.V. Johnson, University of Southampton, United Kingdom

- **Title:** An Exploration of Influences on Transaction Costs in Betting Markets
- **Presentation Date:** Thursday, May 28, 2:00-3:30
- **Abstract:** The aim of this study is to investigate whether the magnitude of transaction costs in betting markets is determined by similar factors to those which are influential in wider financial markets. Data concerning bookmaker fixed odds on 50,000 football games that took place in the major European leagues during the period 1999-2008 are investigated. It is found that in betting markets, trading costs tend to differ significantly across countries with different betting volumes, increase as variability of prices increases and systematically

decreased through time. All these observations are corresponding with findings concerning transaction costs in stock markets that have been reported in the literature. We discuss reasons for these similarities and conclude that market operators seem to show similar attitude towards pricing problems independently from the market setting in which they act.

Perlman, Evan, Maryland Institute for Policy Analysis and Research, University of Maryland, Baltimore County

- **Title:** A Fixed-Effects Analysis of the Impact of Casinos on County Unemployment Rates
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** Most previous estimates of the economic impacts of casino gambling on county employment have focused on only a few counties and short periods of time, and have only been concerned with the total increase in casino and related employment. They also are typically "broad but shallow," covering a variety of impacts but using weak or suspect methodologies (such as simple before-and-after comparisons of means, or input-output models). In this paper, I focus on a county level time-series data set, and estimate a fixed-effects model to account for unobservable county-specific heterogeneity while measuring the impact of the presence of a casino. I also control for other observable factors related to unemployment such as a county's rural or urban status, which may affect the magnitude of a casino's employment impact, as well as other economic and demographic factors. The results will allow me to draw some conclusions about the employment impact of a casino on its host county, and it will help county and state jurisdictions better know what to expect when planning to add casino gambling to the mix.

Pessanha Luis, Legislative Assembly of the Macau SAR

- **Title:** Land Grants for Gaming in Macau
- **Presentation Date:** Thursday, May 28, 8:30 – 10:00
- **Abstract:** The profile of Macau as one of the world's leading gaming jurisdictions has been rising steadily in the last few years and as a result a number of aspects of the relevant gaming law have been discussed thoroughly and are reasonably well known. One issue, however, that has not always received the attention and care that it may deserve is the legal framework applicable to the concession of land for the development of gaming operations in Macau. It merits to be highlighted that since the opening up of the local casino industry in 2001/2002 there has been a rush of sizeable investments in Macau that allowed for new upscale properties to be constructed. This more often than not was done on public land granted to the casino operators for the purpose of the execution of a certain investment project. Such is not surprising, given that most unoccupied land in Macau has been obtained by means of lands reclamations. This being true, it may worth to consider what are the regulations that apply to the granting of land for gaming in Macau and which are the specific legal risks associated with them, namely in case that the investment projects are not complied with. The purpose of this paper is to review the legal

framework applicable for the granting of public land for private use in Macau and to highlight the problems and challenges that the use of land for gaming will have to face. Reference will be made to law and recent practice in Macau.

Posner, Isreal, Brian Tyrrell, Janet Wagner, and Deborah Figart, Stockton College, New Jersey

- **Title:** Developing a Data Dashboard for the Atlantic City Casino Industry: College/Industry/Political Collaboration Addresses Gaming Industry Downturn
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** Atlantic City, “the gaming capital of the east coast”, is heading into its second year of declining revenues, and is in what some describe as “its worst slump ever”. Seeking to address this situation, Atlantic County’s state senator, James Whelan, approached the region’s only 4-year college, Stockton College, to become an independent clearinghouse for the region’s economic and tourism data focusing on the societal impacts of legalized gaming in New Jersey. This paper will discuss the options and eventual choices for the dashboard indicators, presents a methodology for a single “NJ gaming index”, explores data sources, and describes what led to the final presentation of the results. The paper will then discuss how the dashboard was used within the larger initiative to support Atlantic City casino industry and will explore the impacts, both positive and negative, of this college/ industry/ political collaboration. We explore the feasibility of expanding this effort to create similar dashboards for other regions with significant casino activity.

Prentice, Catherine, Victoria University, Australia

- **Title:** Emotional Intelligence and the Service Performance of Casino Frontline Employees
- **Presentation Date:** Tuesday, May 26, 2:15-3:45
- **Abstract:** Emotional intelligence is a nascent psychological construct that has attracted substantial interest in both popular literature and within academia. A major appeal of emotional intelligence lies in its possibility of contributing to a portion of the remaining variance in job performance that traditional cognitive intelligence leaves unexplained. However, the predictive validity of emotional intelligence varies considerably and depends on the context and criterion of interest. In this regard, it has been claimed that there is a positive relationship between emotional intelligence and job performance in the case of roles that are associated with emotional labour, such as customer service. From the perspective of predictive validity, this paper explores the impact of emotional intelligence on frontline employee service performance in the casino industry. In particular, it applies emotional intelligence to the context of the casino high-end market and analyses its relationship with the service performance of casino service representatives in that setting. The data used in the paper were gathered from questionnaires distributed within a VIP gaming room of one of the world’s largest casino located in Asia. A sample of 152 usable employee responses was obtained. Multiple regression analysis and other statistical techniques are employed to show

that emotional intelligence is indeed positively related to the service performance of casino frontline employees in the high-end market.

Pritsos, Chris, University of Nevada, Reno

- **Title:** Gambler Smoking Rates and Risk Analyses of Worker Exposure at Nevada Casinos
- **Presentation Date:** Thursday, May 28, 2:00-3:30
- **Abstracts:** Objectives: To determine the percentage of gamblers who smoke while gambling at three major Nevada gambling destinations, Las Vegas, Reno/Sparks and Lake Tahoe. Determine the workplace exposure of Nevada casino workers to secondhand smoke and conduct a risk analysis of this workforce for lung cancer and coronary heart disease mortality using this exposure data. Methods: Teams of 2 people counted the number of smokers and total number of gamblers at various Nevada Casinos. The total number of gamblers observed smoking was then multiplied by three to determine the total number of smokers. Plasma samples from 95 non-smoking Nevada casino workers (not living with a smoker) were analyzed for cotinine. NV. Using 222 individual cotinine values collected from the 95 participants, we estimated the secondhand smoke air pollution associated with each of these values. A combined heart disease and lung cancer mortality risk for casino workers was conducted. Results: We observed a total of 14,052 gamblers at the three sites of which a total of 947 were smoking. We estimated the percentage of smokers at three gaming tourist centers in Nevada (Las Vegas, Reno/Sparks, and Lake Tahoe). The percentage of smokers at Las Vegas ($20.3\% \pm 95\% \text{ CI } 0.9$) and Reno/Sparks ($21.5\% \pm 95\% \text{ CI } 1.2$) did not significantly differ from the U.S. population percentage of smokers ($20.9 \pm 95\% \text{ CI } 0.6$) ($p > 0.05$). However, at Lake Tahoe the percentage of smokers ($16.4\% \pm 95\% \text{ CI } 1.8$) was significantly lower than the published U.S. population smoker percentage ($p < 0.0001$). Mean percentage of smokers by location did not significantly differ ($p = 0.43$) Mean plasma cotinine levels for these Nevada casino workers was 1.52 ng cotinine/ ml plasma. The calculated personal inhaled secondhand-smoke respirable particle levels for workers had a geometric mean of $299 \mu\text{g}/\text{m}^3$ and an arithmetic mean of $438 \mu\text{g}/\text{m}^3$. Casino indoor air was not compliant with federal 24-hr National Ambient Air Quality Standards. Casino workers exceeded the OSHA significant risk level for combined heart disease and lung cancer mortality by factors ranging from 10 to 250. It is estimated that 331 casino workers die from lung cancer and heart disease each year nationwide due to this second-hand smoke exposure. Conclusions: The results of this study suggest that the percentage of gamblers who smoke was less than or not different than the overall U.S. percentage of a population who smoke. Casino workers are exposed to high levels of SHS which increases their risk of lung cancer and heart disease mortality. Together these findings provide strong evidence to question the exemption to smoking bans for casinos.