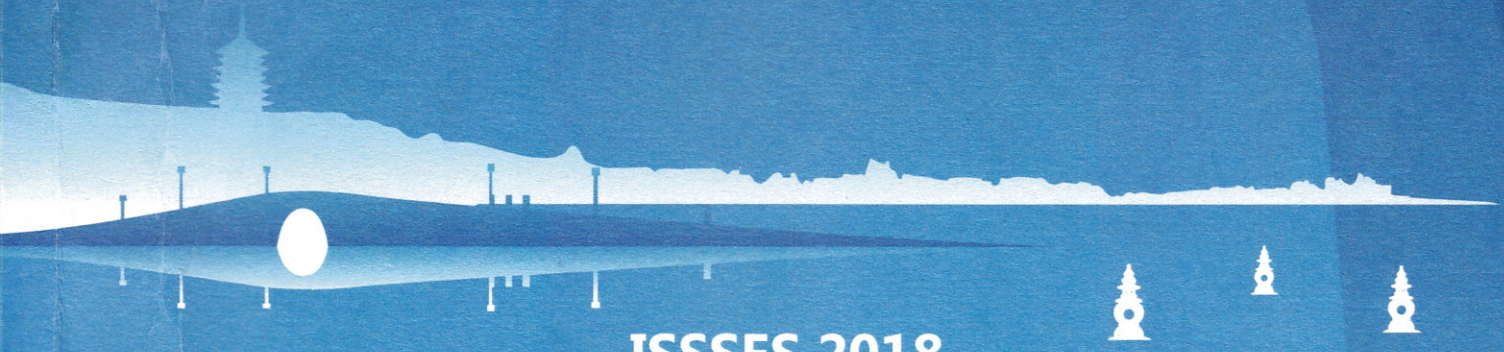
The 3rd International Symposium on Sino-Swiss Evidence Science

"Pursuit of Truth from Different Perspectives"

- Symposium Programme and Abstracts
- Opening keynote address



ISSSES 2018

June 25–27, 2018
ZTC Lakeview Hotel
Hangzhou, China

The 3rd International Symposium on Sino-Swiss Evidence Science

"Pursuit of Truth from Different Perspectives"

Local host:

The Institute of Evidence Law and Forensic Science, China University of Political Science and Law (CUPL)

Guanghua Law School, Zhejiang University (ZJU)

Symposium Partner:

The School of Criminal Justice, Faculty of Law, Criminal Justice and Public Administration, University of Lausanne (UNIL)

The Sino Swiss Evidence Science Research Center (SSESRC)

Sponsors:

- Collaborative Innovation Center of Judicial Civilization, China
- The "111 Plan" of China-Evidence Science Innovation and Talent Base
- John Wiley & Sons

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Local host

The Institute of Evidence Law and Forensic Science,
China University of Political Science and Law (CUPL)

Guanghua Law School, Zhejiang University (ZJU)

Symposium Partner

The School of Criminal Justice, Faculty of Law, Criminal Justice and
Public Administration, University of Lausanne (UNIL)

UNIL | Université de Lausanne
Ecole des sciences criminelles

China University of Political Science and Law

司法文明协同创新中心
Collaborative Innovation Center of Judicial Civilization

Sino Swiss Evidence Science Research Center
中瑞证据科学联合研究中心

The Sino Swiss Evidence Science Research Center (SSESRC)

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- Collaborative Innovation Center of Judicial Civilization, China
- The "111 Plan" of China – Evidence Science Innovation and Talent Base
- John Wiley & Sons

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Joint scientific organizing committee

- Baosheng ZHANG, Professor (CUPL)
- Xu WANG, Professor (CUPL)
- Christophe CHAMPOD, Professor (UNIL)
- Alex BIEDERMANN, Professor (UNIL)
- Yuanfeng WANG, Associated Professor (CUPL)

We started from here ...

Prof. Dominique ARLETTAZ (Rector of the University of Lausanne, left)
and Prof. Baosheng ZHANG (CUPL, right) in 2012.

Symposium Statement

Welcome to Hangzhou! **The 3rd International Symposium on Sino Swiss Evidence Science 2018 (3rd ISSSES)** will be held by the Institute of Evidence Law and Forensic Science (China University of Political Science and Law, CUPL) and Guanghua Law School (Zhejiang University, ZJU) at ZTC Lakeview Hotel Hangzhou from June 25th to 27th 2018.

The symposium provides a forum for discussions on the current breakthroughs and new directions in the field of evidence science. The symposium is jointly organized by the School of Criminal Justice, Faculty of Law, Criminal Justice and Public Administration, University of Lausanne, Switzerland (UNIL) and the Sino Swiss Evidence Science Research Center (SSESRC), chaired by Professor Baosheng ZHANG, who is currently chairman of the Collaborative Innovation Center of Judicial Civilization, China.

The 3rd ISSSES scientific organizing committee is composed of Professors Baosheng ZHANG, Xu WANG and Yuanfeng WANG, in Beijing (China University of Political Science and Law, CUPL) and Professors Christophe CHAMPOD and Alex BIEDERMANN, in Lausanne (UNIL).

The Symposium topic is "**Pursuit of Truth from Different Perspectives**", which includes three subjects – "***Chasing truth from the perspective of social science***", "***Identifying truth from the perspective of natural science***" and "***Pursuing truth from a juridical perspective***". The symposium will promote the interchange of ideas between Chinese and Swiss lawyers, scientists, academics and their foreign counterparts. The symposium will provide a platform where prestigious scholars from Switzerland as well as other overseas countries will share their experience and expertise in the fields of evidence law and forensic science. Their perspective on the advancement of the administration of justice in an interdisciplinary perspective will be of interest to scholars and researchers from both forensic science and evidence law.

The 3rd ISSSES is supported by:

- Collaborative Innovation Center of Judicial Civilization, China
- The "111 Plan" of China – Evidence Science Innovation and Talent Base
- China University of Political Science and Law (CUPL) with its Institute of Evidence Law and Forensic Science
- The University of Lausanne (UNIL) with its School of Criminal Justice (www.unil.ch/esc, SCJ)

In addition to scholars from China and Switzerland, we are delighted to welcome delegates from the United States, Australia and the State of Qatar, in particular:

- Ronald J. ALLEN, John Henry WIGMORE Professor of Law, Northwestern University, Pritzker School of Law, Chicago (USA);
- David CARUSO, Director of the Litigation Law Unit, The University of Adelaide Law School, Adelaide (AUS);
- Thomas MAN, Professor from Practice, School of Transnational Law, Peking University; Adjunct Professor of Law, Institute of Evidence Law and Forensic Science, Chinese University of Political Science and Law;
- Jeff Cheng-Lung LEE, Associate Professor, Qatar Police College (QA).

On behalf of the Hosts and Sponsors, we are delighted you are joining us for the 3rd International Symposium on Sino Swiss Evidence Science 2018 (3rd ISSSES) at ZTC Lakeview Hotel Hangzhou. We are looking forward to fruitful exchanges on evidence and proof for the administration of justice through an interdisciplinary and international exchange.

Baosheng ZHANG, Xu WANG and Yuanfeng WANG
China University of Political Science and Law

Christophe CHAMPOD and Alex BIEDERMANN
University of Lausanne

3rd International Symposium on Sino Swiss Evidence Science

June 25-27, 2018, Hangzhou, China

Day 1: June 25th, 2018 (Monday) Pre-symposium Workshop	
8:30 am	Conference bus to the Guanghua Law School, Zhejiang University Meeting point: the main entrance of
Part 1: Short introductions on legal bases for expert evidence in different legal systems Chair: Ronald ALLEN	
9:00-9:40 am	Expert evidence in Swiss Law (Professor Laurent MOREILLON, Dean, UNIL, School of Law)
9:40-10:10 am	Intermediate summary and discussion
10:10-10:30 am	**Coffee break**
10:30am-	Expert evidence in Australia (Common Law) (David CARUSO, University of Adelaide, Law School)
11:00-11:20 am	Intermediate summary and discussion
11:20-13:00 pm	**Lunch buffet & rest time** **Campus restaurant**
Part 2: Sharing of experience by Swiss and Chinese forensic experts on their court reporting practice Chair: Alex BIEDERMANN	
13:00-13:15 pm	Dr. Williams MAZZELLA (Forensic document examiner, UNIL, School of Criminal Justice)
13:20-13:35 pm	Prof. Geneviève MASSONNET (UNIL, School of Criminal Justice)
13:40-13:55 pm	Prof. Franco TARONI (UNIL, School of Criminal Justice)
14:00-14:15 pm	Associate Professor Li YUAN (CUPL, Institute of Evidence Law and Forensic Science)
14:20-14:35 pm	Associate Professor Bing LI (CUPL, Institute of Evidence Law and Forensic Science)
14:40-14:55 pm	Associate Professor Yuanfeng WANG (CUPL, Institute of Evidence Law and Forensic Science)
Part 3: Bringing together transversal views on legal frameworks in the light of practical experiences Chair: Christophe CHAMPOD	
15:00-15:30 pm	(Group discussion)
15:40 pm	Conference bus to ZTC Lakeview Hotel Hangzhou
18:30-20:30 pm	Welcome banquet Eighth Floor: Lake-View Restaurant （八楼望湖楼餐厅）

Day 2: June 26th, 2018 (Tuesday) Scientific Programme			
8:30 am	Third Floor: Four Seasons Room（三楼四季厅）		
9:00-9:15 am	Opening Ceremony Prof. Xu WANG Prof. Laurent MOREILLON Prof. Jun ZHAO Chair: Yuanfeng WANG		
Session-1 Keynote speech (1) Chair: Christophe CHAMPOD			
9:15-9:40 am	Keynote speech 1 The Future of Evidence and Forensic Science (Prof. Ronald J. ALLEN)		
9:40-10:05 am	Keynote speech 2 On Trends of the Role Transition from Expert Assistant to Expert Witness (Prof. Baosheng ZHANG)		
10:05-10:30 am	Coffee break		
Session-2 Keynote speech (2) Chair: Baosheng ZHANG			
10:30-10:55 am	Keynote speech 3 The expert, the court and the quest for certainty (Prof. Christophe CHAMPOD)		
10:55-11:20 am	Keynote speech 4 Unmanned Aerial Vehicles safety, privacy and surveillance in evidence collection by unregulated civilian operators (Prof. David CARUSO)		
11:20-11:45 am	Keynote speech 5 Burden of Proof in Chinese Commercial Litigation: Statutory Provisions and Judicial Practices (Prof. Thomas Y. MAN)		
11:45-12:10 am	Keynote speech 6 Identifying truth from the perspective of new forensic technologies (Prof. Jeff Cheng-Lung LEE)		
12:10-14:00 pm	Lunch buffet & rest time Ground Floor: Solmer Western Restaurant		
Session-3 Pursuing truth from a juridical perspective Chair: Thomas Y. MAN			
14:00-14:15 pm	Xu WANG (24)	CUPL	New Development on Quality Control of Forensic Science in China.

14:15-14:30 pm	Laurent MOREILLON Mathilde de WURSTEMBERGER (42)	UNIL	The Swiss Federal Code of Criminal Procedure: Assessment of Evidence and some Jurisprudential Developments.
14:30-14:45 pm	Bangda CHEN (11)	ECUPL	Pursuing Truth from the Judicial Perspective.
14:45-15:00 pm	Alex BIEDERMANN (40)	UNIL	Decisional Dimensions in Expert Witness Testimony – A Structural Analysis.
15:00-15:15 pm	Yiyang CAO (18)	WHU	U.S. Rules on Electronic Evidence from Smart Phones and Impacts on China.
15:15-15:30 pm	Wenxiu FANG (7)	YSU	Application of Inference to the Best Explanation in Criminal Case Facts.
15:30-15:45 pm	Coffee break		
Session-4 Identifying truth from the perspective of natural science (1) Chair: Franco TARONI			
15:45-16:00 pm	Li YUAN (3)	CUPL	Mutation analysis of 13 RM Y-STR loci in Han population from Beijing of China.
16:00-16:15 pm	Geneviève MASSONNET (37)	UNIL	A study of background population of foreign fibres on knife blades.
16:15-16:30 pm	Silvia BOZZA (38)	UNIL	The impact of partial probability assignments on measuring uncertainty.
16:30-16:45 pm	Junliang WU(15)	SFRTARF	Pursuing truth of the collision from a juridical perspective: A case report.
16:45-17:00 pm	Wei WANG (27)	LPSD	Fingerprint Image Quality Assessment Algorithm Based on Dynamic Frequency Reconstruction Model of Latent Fingerprint Deposited Region and Deep Learning.
17:00-17:15 pm	Williams MAZZELLA (33)	UNIL	Is magnetic flux a valuable tool for the analysis of electro photographic printed documents?
17:15-17:30	Peng XU(28)	DIFCMPS	Synthetic Cathinones (i.e., “Bath Salts”): Affect, Neurotoxicity and Lethality.
19:00-21:30 pm	Social activity Meeting point: the main entrance of the		

Day 3: June 27st, 2018 (Wednesday) Scientific Programme			
8:30 am	Third Floor: Four Seasons Room（三楼四季厅）		
Session -5 Identifying truth from the perspective of natural science (2) Chair: Dong ZHAO			
8:30-8:45 am	Franco TARONI (36)	UNIL	A discussion on why forensic scientists should be aware of problems of dissonant evidence.
8:45-9:00 am	Eric SAPIN Quentin MILLIET (34)	UNIL	Image localisation using three-dimensional forensic reconstruction.
9:00-9:15 am	Simon BAECHLER Denise SULCA (31)	UNIL	CasuisCrime:An innovative project to make the best of case studies for forensic science education.
9:15-9:30 am	Yanling WANG (13)	CIPUC	Examination and Identification of Questioned Documents in "HS10"Cross-border Smuggling Case
9:30-9:45 am	Yuanyuan LIAN (16)	CUPL	Study of Raman Spectroscopy 3D Profilometry to Determine The Sequence of Black Pen Ink Ceossings.
9:45-10:00 am	Yingchao YU (26)	CUPL	Study on transfer of soil on shoes.
10:00-10:15 am	Yao YAO (20)	CUPL	Biosensor Array Chips for Drug Quick Test on Site.
10:15-10:30 am	Yijing LEI (14)	CUPL	Fundamental Frequency Statistics for Young Female Speakers of Mandarin.
10:30-10:45 am	Coffee break		
Session -6 Chasing truth from the perspective of social science Chair: Jeff Cheng-Lung LEE			
10:45-11:00 am	Dong ZHAO (17)	CUPL	History of forensic science in ancient China.
11:00-11:15 am	Marcelo AEBI (41)	UNIL	On the Relationship between the Decrease of Offline Crime and the Increase of Online and Hybrid Crimes.
11:15-11:30 am	Luping ZHANG (10)	CUPL	Chasing truth from the perspective of History.
11:30-12:00 am	**Closing ceremony** Prof. Baosheng ZHANG Prof. Christophe CHAMPOD **The award ceremony**		
12:00-12:15 pm	Group photo, Farewell (Organizers)		
12:15-14:00 pm	Lunch buffet & rest time Ground Floor: Solmer Western Restaurant		
14:00- pm	Social activity Meeting point: the main entrance of the ZTC Lakeview Hotel		

After symposium: June 28st, 2018 (Thursday)	
9:00 am Bus in front of the main gate of the (only for the invited participants)	
Title	Sino-Swiss Evidence Science Innovation Night
Date/Place	Swissnex Shanghai, Thursday June 28th 2018 22F, Building A, Far East International Plaza 319, Xianxia Road, Shanghai 200051, China 上海市仙霞路319号远东国际广场A栋2210室
Working language	English
5:00 pm	Doors open
5:30 pm	Welcome speech (By representatives of Swissnex, UNIL and CUPL)
5:45 pm	Part 1: Sino-Swiss Evidence Science and beyond: past, present and the future
6:00 pm	Part 2: Footwear mark technology (interactive presentation and hands-on activities for participants) (Presented by Bo LI from the company 'Everspry')
6:45 pm	Break
7:00 pm	Part 3: Innovation in continuing education: UNIL's new MOOC (Massive Open Online Course) on "Challenging Forensic Science" (Presented by Lausanne team)
7:30 pm	Q&A session/discussion
7:45 pm	Networking with buffet
Registration link	Sociotel

Event partner:

swissnex China

www.swissnex.org

Symposium participants and affiliations

Name	Affiliation	Country
Ronald J. ALLEN	Northwestern University	USA
Baosheng ZHANG (张保生)	China University of Political Science and Law	China
David CARUSO	University of Adelaide, Law School	Australia
Xu WANG (王旭)	Institute of Evidence Law and Forensic Science, CUPL	China
Christophe CHAMPOD	University of Lausanne, School of Criminal Justice	Switzerland
Jun ZHAO (赵骏)	Zhejiang University, Guanghua Law School	China
Ming HU (胡铭)	Zhejiang University, Faculty of Social Sciences	China
Jeff Cheng-Lung LEE	Taiwan/Qatar Police College	China
Thomas Yunlong MAN (满运龙)	Peking University，School of Transnational Law	China
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Yuanfeng WANG (王元凤)	Institute of Evidence Law and Forensic Science, CUPL	China
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Name	Affiliation	Country
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The Future of Evidence and Forensic Science

Ronald J. ALLEN

Northwestern University, U.S.A.

Dispute resolution within legal systems and forensic science both pursue one of the same aims more or less, which is the pursuit of truth. However, like England and the United States which are said to be two countries separated by a common language, the methods of forensic science and the legal system are quite (maybe radically) different, and growing farther apart rather than closer together. In addition, the legal system deals through the law of evidence with numerous other matters in addition to the pursuit of truth. The complexity of the law of evidence and its methodological divergence from the forensic sciences highlight one of the central challenges of both fields, which is how to accommodate the differing objectives and methodologies in a way that is likely to enhance accurate and efficient fact finding.

Keywords: Legal systems, Forensic science, Dispute resolution

On Trends of the Role Transition from Expert Assistant to Expert Witness

Baosheng ZHANG, Shuai DONG, Ping YANG
China University of Political Science and Law

In the context of Chinese evidence law, the role of the expert assistant is to “offer opinion on the forensic expertise or specialized issues”. This role is multiple-facet, somewhat similar to a lawyer’s role, and to some extent similar to that of a forensic expert or a witness. For this simple reason, the views on the legal status of opinions of the expert assistant also vary from “cross-examination method”, “forensic expertise” to “witness testimony”. This confusion regarding the role of the expert assistant often results in difficulties in deciding whether to admit the expert assistant opinion as evidence at trial. The regulation that the expert assistant opinion “can be taken as evidence for determining facts of a case after cross-examination” stipulated in Paragraph 2 of Article 15 of the Supreme People’s Court Interpretation of the Law in the Conduct of Environmental Civil Public Interest Litigations promulgated in 2015 could be seen as trends of a transition in the role of the expert assistant towards that of the expert witness. This article attempts to analyze reasons, significance, and prospects of such a transition, and give suggestions to improve the application of examination rules for the expert witness and admissibility rules for scientific evidence.

Keywords: Expert assistant, Expert witness, Role transition, Admissibility rules

The expert, the court and the quest for certainty

Christophe CHAMPOD
University of Lausanne, School of Criminal Justice

How forensic evidence is communicated and received by decision makers is a question that should retain the attention of any scientist seeking to present evidence in court. It would be presumptuous to claim that the task is easy, especially when the forensic evidence is not draped with the illusory attributes of certainty. This presentation will use an uncommon type of forensic evidence, presented for the first time in litigation, to demonstrate how courts are desperately seeking for the certainties that science cannot provide. We will show that, despite the efforts deployed by the scientists in their reports and testimonies to communicate their findings avoiding absolutes, both in first instance and in appeal, the courts struggled with the appreciation of the contribution of the forensic findings. The decision makers were looking for certainties when the forensic findings could only speak in terms of probabilities. That was especially salient when the pieces of evidence were pointing in opposite directions. Dealing with conflicting pieces of information all pointing with probabilities was a challenge. For some the forensic evidence was labelled conclusive, for others, it was deemed totally meaningless. The decision makers coped with the inherent uncertainty by rounding up (conclusive) or watering down (inconclusive) the same findings. Lessons learned from this case allow to provide some advice for the future.

Keywords: Expert, Court, Quest for certainty

Unmanned aerial vehicles safety, privacy and surveillance in evidence collection by unregulated civilian operator

David CARUSO
University of Adelaide, Law School

This paper examines the unregulated use of Unmanned Aerial Vehicles (UAV) by private citizens to collect evidence that is later adduced as evidence in litigation.

UAV, also known as remotely piloted aircrafts or drones, are part of society. UAV were first used in the Viet Nam war but their availability to private civilians has proliferated and ownership of sophisticated UAVs is now commonplace. UAV are used in a range of industries, such as journalism, mining, policing, emergency services, agriculture and scientific research, as well as domestically for art, photography and recreation.

Part I of the paper examines the last-identified use – recreational use – to analyse the types of UAV available for civilian, recreational use. Civil aviation laws govern UAV use, if the UAV type and use falls within a regulated category. The international standards of UAV classification are examined and the categories of UAV excluded from any form of regulation are explained. The purpose of Part I is to explain the extent to which private civilians may own and operate sophisticated UAVs without regulation by the law.

Part II of the paper examines the capabilities of common, privately owned UAV to record and collect data. The data recording technology affixed to UAV (including pictorial, audio, visual and thermal recording is considered together with the widespread availability and usability of such UAV technology by untrained, civilian markets. The purpose of Part II is to comprehend the actual and potential use for UAVs to become unregulated means of evidence collection.

Part III audits cases in which private civilians have gathered evidence using UAVs and then successfully adduced that data in litigation. An audit of Australian and international case law is considered. Part III identifies three categories of evidence collected by UAVs which courts will accept in litigation. The purpose of Part III is to demonstrate the receipt of evidence by courts where that evidence has been privately collected by the unregulated use of a UAV by an individual.

Part IV examines safety issues concerning the unregulated use of UAVs by private operators. Risks arising due to operator error and equipment malfunction are compared. Recent empirical studies conducted by scientific aviation researchers are examined. Part IV demonstrates the unmet safety risks in privately operated UAVs and questions whether courts should readily accept evidence collected by unsafe means.

Part V examines the extent to which privacy and surveillance protections laws apply to privately operated UAVs. Privacy and surveillance protection law limit the presentation of evidence collected in breach of those laws and give can give rise to actionable claims for their breach. This paper, however, demonstrates that evidence collected by UAVs is often beyond the scope of such laws. Where laws, in Australia and the United States, have been reformed to specifically apply to UAV use, the paper considers the inferences to be drawn from such laws with respect to community expectations of privacy and non-observance.

Part VI considers the legal framework and grounds on which courts should consider excluding evidence obtained by privately operated UAV from admission in litigation. Mandatory exclusions in the United States are compared with discretionary exclusion in Australia. The purpose of Part VI is to identify an appropriate standard and guideline for courts to follow when presented with evidence gathered by use of UAV by a private citizen. The principles underpinning the analysis relate to the need for courts to protect the integrity of their decisions by ensuring the security and integrity of the means used to collect evidence on which curial decisions rely.

The paper examines international law and the laws in multiple jurisdictions, with a focus on the laws in Australian and the United States. The content of the paper scrutinises the scientific and engineering capabilities of UAV together with the legal frameworks and laws relevant to their use by civilians, as evidence collection tools and means. The overarching purpose of the paper is to explain the need for courts to consider the circumstances in which UAV collected evidence is gathered so as to ensure public confidence in litigation processes and outcomes.

Keywords: Evidence collection, Unregulated civilian operator, Unmanned aerial vehicles

Burden of Proof in Chinese Commercial Litigation: Statutory Provisions and Judicial Practices

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Allocation of burden of proof is essential to the functioning of the judicial proceedings aimed at resolving commercial disputes. For the last four decades since China initiated its open-up policy in late 1970s, China has developed a comprehensive system of evidentiary proof in commercial litigation. This article reviews the statutory provisions governing the presentation and standards of proof at different stages of commercial litigation, explicating their theoretical foundations and jurisprudential characteristics. Using data from judicial decisions in representative contract dispute cases, it tests the application of statutory provisions in judicial practices and provides an empirical guide to litigants in commercial disputes.

Keywords: Commercial litigation, Burden of proof, Standards of proof

Identifying truth from the perspective of new forensic technologies

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The purpose of this presentation is to use new forensic technologies to identify truth of crime. Those new technologies, for example, as Augmented Reality(AR), Virtual Reality (VR) and 3D animation are developing rapidly in video game industry. However, practical uses for those technologies also can be used in law enforcement and security field. By using AR, VR systems, in criminal investigation, jurors and juries may have a better understanding of the process of how a criminal case might happen. In this presentation, I will identify the truth crime with a Taiwan legal case- Su Jian-He, a notorious criminal case in which three Taiwanese were convicted wrongly due to jurors' lack of spatial perception about the size of the crime scene. We believe that using 3D model to reconstruct the crime scene and developing a VR animation, we can overturn the wrongful conclusion of the judge and help exonerate the three innocent men legitimately in a scientific way.

We will design virtual circumstance combined with the reality by using AR, VR and 3D technology. With the help of new technologies, public can have a better picture of how a crime occurred. Like as the 3D technologies, can be an important tool in crime investigation providing important arguments for court's decision making. Those new technologies give users a chance to realize the circumstance of the moment when the crime happened. Computer-generated three-dimensional (3D) reconstruction of evidence offers encouraging potential in the field of forensic science. They can help in the presentation of complex spatial and temporal data to a non-technical audience. In addition to the 3D technologies, virtual reality is a medium with tremendous potential. The portability of crime scene reconstruction, being fully immersed in experiences, and a virtual reality feeling of being in the scene will open a new channel for criminal investigation.

Keywords: Virtual reality (VR), three-Dimensional (3D), Crime scene reconstruction, Crime scene investigation, Forensic science

New Development on Quality Control of Forensic Science in China

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In recent years, forensic science in China has advanced rapidly and the amount of forensic cases has increased by leaps and bounds. Forensic conclusions have become a type of indispensable evidence in judicial trial. Due to the introduction of anti-trial strategy in the trial-centered litigation system reform, quality control of forensic evidence has become focus in cross-examination. Since 2015, the quality of products is promoted by standardization and developing the national strategy of standardization has become focus in China. The standardization of forensic science is also rising up. This article shows the growth in both number and type of forensic science cases in China in the past ten years in a systematical method, and also the deep qualitative cross-examination brought by the rise of the expert assessor policy towards forensic conclusions in trial. We will also talk about the construction situation of forensic standardization in the Quality Triangle of Forensic Science and further discussed the standardization construction of forensic science, basic research on forensic science and measures to strengthen education, training and communication with judicial circle. These are of vital importance to quality control of forensic science.

Keywords: Forensic science, Quality control, Standardization

The Swiss Federal Code of Criminal Procedure: Assessment of Evidence and some Jurisprudential Developments

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In this talk we will provide a general overview of the Swiss Federal Code of Criminal Procedure (CCP). We will focus on the types of evidence recognized by the CCP and their assessment, including examples of some recent jurisprudential developments.

Keywords: Assessment of evidence, Jurisprudential developments, Swiss federal code of criminal procedure

Pursuing Truth from the Judicial Perspective: Which Model of Expert System should We Choose

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Pursuing truth is one of the most crucial tasks for the judicial activities. Meanwhile, the examining of scientific evidence has always been a difficult task for judges during the trial process. It has become the common difficult task for different countries to improve their judicial abilities of pursuing truth. But how to distinguish scientific evidence from defective forensic reports has become a tough obligation for judges. And how to bridge the knowledge gap between the judicial officials and forensic experts has also become the same problem of various countries. In the US judicial practice, junk science, mixed with scientific evidence, is chaLLENging the judicial ability of pursuing truth. Court-appointed experts and technical advisors were established to assist fact-finders in determining the admissibility of scientific evidence. Court-appointed experts widely practice to help fact-finders deal with complex scientific and technical evidence; aid judges fulfill their duties of "gate keepers" of scientific evidence since the Supreme Court's Daubert decision. Courts seek help from experts currently from two types of experts——the technical advisors, appointed under the district court's inherent authority, and the court-appointed experts, who is appointed under Federal Rules of Evidence 706. The use of such experts was extremely successful in the silicone gel breast implant litigations of the 1990s. Two types of experts exist in the notion of court-appointed experts. Each form of experts has its specific grounds, roles, and proceedings. This system was designed to prevent the partisanship of the adversarial system experts, assist fact-finders in weighting complex scientific evidence, and encourage parties to seek for alternative dispute resolutions. In China, the 2012 amended Criminal Procedural Law article 192 established the expert assistant mechanism, with the purpose of assisting litigants in cross-examining scientific evidence proffered by prosecuting experts, and preventing defective forensic reports from misleading the justice. However, both of these two expert models have their pros and cons. In US, due to its contradiction with the adversarial features, resource consuming, and the bias of school discipline, court-appointed experts were rarely used in practice. In China, some problems exist in the enforcement of the article 192: the qualification of expert assistants is not clear, the rights of this new expert are limited, and it is difficult for litigants to appoint a proper expert assistant. When expert assistants testify before court, the effect of examination of scientific evidence is not ideal. Each country should take the experiences from both legal systems. The partisanship of experts should be avoided while we absorb some adversarial factors in inquisitorial system context. Experts might be biased even when appointed by courts. The promising path is to keep on educating judges, promoting the integration of knowledge of law and education of forensic sciences, thus cultivating adjudicators who can understand both law and science.

Keywords: Court-appointed expert, Technical advisor, Expert witness, Expert assistant, Scientific evidence

Decisional Dimensions in Expert Witness Testimony: A Structural Analysis

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The intricacy of the standard claim that the world we live in is complex critically surfaces at the intersection between forensic science and legal adjudication. It is exemplified by the need to inform fact-finders on issues going beyond the layman's knowledge, which poses chaLLENges both on empirical and normative dimensions, in particular with regards to the specific role and duties of the different participants in the legal process. While rationality is widely upheld as one of the aspirations of the legal process across many modern jurisdictions, a pending question is how to remedy the uneasy relationship between general propositions conditioning experts witness testimony and individualized decisions taken by fact-finders. The focus has hitherto been put on the utilization of model-based and formal methods of reasoning. Regrettably, the concepts of judgments and decision-making have not received equal attention. A first aspiration of our paper will be to further clarify the nature of this systemic relationship in the particular area of the legal process, by conducting a critical transversal analysis of current empirical, normative and doctrinal understandings of expert witness testimony. As a second aim, we will use this insight to argue in favour of the view that structural features of expert witness testimony are embedded in a decision-making process, and that the understanding of this decisional dimension is important for accommodating smooth communication between expert witnesses and fact-finders. To substantiate this perspective, and attest to its growing recognition as a frontier understanding, we will provide real-world examples from forensic science reporting practice and policy documents of professional bodies. In essence, our analysis comes down to and articulates what we will call 'decision structures'. We show that decision structures conceptualize and ascribe content to existing adjudicative practice. They are normative in nature because they explicate and specify legal terms, such as 'proof'. At the same time, decision structures have descriptive potential in that they capture actual adjudicative practice, i.e. the requirement of 'specific evidence'. Central to this argument is that the proposed decisional perspective is not an end in itself, but only a necessary preliminary to understanding the reason for and justification of counter-current positions, such as the call to abandon some traditional expert reporting formats; especially categorical conclusions that usurp the epistemic rights of fact-finders. This result calls into question the extent and scope of some of the current and most longstanding forensic science reporting schemes. To redirect such forensic testimony on its proper track, recipients of expert information need to assume a more active role in the processing of scientific evidence, by explicating that it is their exclusive epistemic duty to reach a normatively structured decision.

Keywords: Expert evidence, Legal process, Decision analysis, Normative approach, Legal epistemology

U.S. Rules on Electronic Evidence from Smart Phones and Impacts on China

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The U.S. Supreme Court made a series of judgment on Riley v. California, etc. which police must obtain a warrant when they wanted to search evidence in the smart phones of the criminal dependents. However, there are also exceptions on warrant search: emergencies and exigent circumstances, consent to search exception and "Plain View" exception. There are no legal regulations on smart phone searches in the procedure law of China, and we should establish the principle of protecting the rights of citizens in the smart phone searches, improve the writ principles of smart phone searches, and perfect the search conditions and procedures, scopes, and establish procedural sanction mechanism.

Keywords: Smart phone search, Warrentless search, Writ principle

Application of Inference to the Best Explanation in Criminal Case Facts

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This article concerns how to reason about the facts of the criminal case with observed evidence through a popular logical thinking. With the complexity of social relations, the traditional formal logical thinking cannot solve the hard cases. But Inference to the Best Explanation, a formal logical model of evidential reasoning with proof standards, is applied to this task. Inference to the best explanation has been introduced to law by many scholars, so as to make up for the shortcomings of the logical thinking method.

The inference model instructs us to infer from the available evidence to the hypothesis, if the hypothesis correct, which can best explain that evidence. More narrowly, firstly, a number of plausible alternative explanations for evidence being observed at trial are generated. Secondly, It enables legal decision-makers to evaluate evidential reasoning by comparing stories on either side of a case, selecting one as the best explanation of the evidence among them. the one we should regard as the more likely to be true. This is a process of elimination. Inference of the best explanation has specific strengths. It happily combine falsification, inference and explanation. While traditional logical reasoning is a process of confirmation. The article details how to apply inference to the best explanation in criminal case facts. The aim is that the judges can ascertain the facts of the case correctly and deal with the difficult cases justly.

Keywords: Inference to the best explanation, Criminal cases, The facts of the case

Mutation Analysis of 13 RM Y-STR loci in Han population from Beijing of China

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Two five-color fluorescence multiplex amplification systems of 13 Y-STR loci (DYF387S1, DYF399S1, DYF403S1a/b, DYF404S1, DYS449, DYS518, DYS526a/b, DYS547, DYS570, DYS576, DYS612, DYS626 and DYS627) were constructed. In order to make sure of the mutation characteristic and application in Chinese group, a survey for mutation rates of the 13 RM Y-STRs was performed by using 501 father-son pairs in the Han nationality of Beijing, China. With 7 515 alleles transmission in 501 father–son pairs, 75 single-step and 2 two-step mutations were observed. Two father-son pairs had mutations at two different loci in 13 Y-STRs. An estimated mutation rate ranged from 2.00×10^{-3} (95 % CI 1.00×10^{-4} to 1.11×10^{-2}) for DYF387S1, DYF403S1b, DYS526a and DYS449 loci to 4.59×10^{-2} (95 % CI 2.93×10^{-2} to 6.81×10^{-2}) for DYF399S1 locus. The average mutation rate was estimated to be 1.02×10^{-2} (95 % CI 8.10×10^{-3} to 1.28×10^{-2}). Among these Y-STR markers, DYF399S1, DYS627, DYF403S1a, DYS547, DYS612 and DYS626 had mutation rates higher than 1.00×10^{-2}.

Keywords: Rapidly mutating, Y chromosome STR, Mutation rate, Han population

A study of background population of foreign fibres on knife blades

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Edged weapons are frequently used to commit violent crimes (e.g. homicides, assaults or sequestrations), both in Switzerland and other countries. Following a stabbing, a fibre transfer from the damaged fabric might occur to the blade. When a group of fibres undifferentiated from the damaged fabric is recovered on a suspected knife blade, it is possible to assess their association with the offence. Nevertheless, it is crucial to investigate whether the target fibres were transferred consecutively to the stabbing or whether they originate from another unrelated event (i.e., part of the background).

The aim of this study is to explore the background population of fibres recovered on knife blades to help the interpretation of the results stemming from the analysis of the fibre evidence in crime cases involving the use of a bladed weapon.

Firstly, a population study was carried out to learn about the distribution, polymorphism and size of the fibre population present on the knife blades. These knives includes items provided by police services and knives used in daily life. After recovery using tapes lifting, stereoscopic examinations are realized to classify around 2000 fibres according to their colour and generic type. The commonest colour/type combinations are: colourless/white cotton, blue cotton and grey cotton fibres. It is one of the few survey considering also white cotton.

Secondly, blue fibres were selected as they represent the second most common colour group. The number and the size of the groups of indistinguishable blue fibres present on each blade were investigated. Blue fibres were described and classified according to their length showing that the large majority of background fibres on knife blades are smaller than 2 mm. Subsequently, a colour block study focused on blue cotton was carry out based on microscopy observations and microspectrophotometry UV-VIS spectra. Only 30% of the knife blades present more than one blue cotton fibre. The number of groups found per knife varies between 1 and 3, each group containing between 2 and 6 fibres.

Findings revealed an important difference between the background fibre populations - in terms of quantity and spatial distributions - and the population of fibres transferred in a stabbing. The collected data can be used in a Bayesian approach to help the interpretation of results.

Keywords: Foreign fibres, Bladed weapon, Background fibre populations

The impact of partial probability assignments on measuring uncertainty

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The evaluation of measurements on characteristics of trace evidence recovered at a crime scene and collected on a suspect for comparative purposes can be performed by the derivation of a Bayes factor. This may represent a demanding task with several sources of uncertainty that are typically due to the complexity of the case, poor information at the investigative authorities' disposal, available background data, sensitivity issues related to model choice and prior assessment, or computational impasses.

While use of the such a metric to assess the probative value of forensic traces is rather well established and largely supported by operational standards in different forensic disciplines, opinions about what should be the most appropriate way to deal with such sources of uncertainty while presenting expressions of evidential value at trial differ. Some quarters promote a position according to which, for sake of transparency and minimizing personal involvement in the case, practitioners should actually state a numeric range of values for what they believe to be the posterior probabilities of the evidence given the competing propositions, and then consequently calculate and report a range of values for the Bayes factor. The aim of this work is to show that such partial probability assignments seem not to make a good use of available evidence in terms of reducing prior uncertainty: it will be shown that the effect will be an augmented posterior uncertainty, at least until a large amount of findings is available.

Keywords: Partial probability assignments, Trace evidence, Bayes factor

Pursuing truth of the collision from a juridical perspective: A case report

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This case report describes the process of exploring the truth about the death traffic accident. The Victim A riding a scooter collided with the microbus in a two-way road and caused the death of Victim A. The litigation is divided into four stages, there are: the first investigation ended with no prosecution, from the first petition for continuing investigation to closed continuing investigation without the prosecution, from the second petition for continuing investigation to the petition was rejected, and the petition pleadings for trail has been submitted to the Court. This report shows the evidence and the exploration process for each litigation stage in the order of occurrence.

The report uses physical evidence to support facts, and combines facts to infer claims. This method of evidence-based, fact-based inference can effectively pursue for the truth of traffic accidents, reveal a large amount of physical evidence, and provide follow-up research.

Keywords: Road traffic accident, Accident reconstruction, Accident investigation, Forensic science

Fingerprint Image Quality Assessment Algorithm Based on Dynamic Frequency Reconstruction Model of Latent Fingerprint Deposited Region and Deep Learning Network of Image Quality Assessment Data-sets by Experts' Visual Cognition

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Since 911, Imperial Scale AFIS (ISA) has become one of the most popular Biometric-System across the globe. Research in the past 2 decades has shown that, as the key factor influencing match efficiency, image data quality control is becoming a 'spiral' which sustains the whole process of construction, management and application of ISA databases all over the world.

As a Key Research Project sponsored by China National Forensic Science Research Foundation, our work basically aims to provide Package Solution of Fingerprint Image Quality Control (CFIQ) for the National Fingerprint Database of Law Offenders (CALO).

Based on the feature and comparison architecture of CALO, we have developed a series Fingerprint Image Quality assessment algorithms (CFIQ) based on the Mdrr Model (a Dynamic Frequency Reconstruction Model on the Deposited Region of Latent Fingerprints) and FQNet (a Deep Learning Network trained with Image Quality Assessment Data from Experts' Visual Cognition).

Keywords: Fingerprint, Image quality control, Frequency reconstruction, Visual cognition, Deep learning

Is magnetic flux a valuable tool for the analysis of electro photographic printed documents?

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The goal of this study was to evaluate the potential for the application of a magnetic flux measuring device as a questioned document screening tool. The specific research questions addressed include:

Can magnetic flux measurements be correlated with toner area?

Does the flux value remain constant over time?

Is there a way to standardize flux measurements to account for variation normally seen in questioned document case work samples?

Keywords: Magnetic flux, Electro photographic, Document screening

Synthetic Cathinones (i.e., "Bath Salts"): Affect, Neurotoxicity and Lethality

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The synthetic cathinones, e.g., methylone, mephedrone, methylenedioxyparavalerone (MDPV), α-pyrrolidinopentiophenone (α-PVP), are representative compounds of a group of drugs based on the naturally occurring cathinone found in the khat plant. These compounds have chemical structures and neurochemical consequences similar to a host of traditional psychostimulants. This class of new psychoactive substances also has clear use and abuse potential coupled with a range of possible adverse effects that include neurotoxicity and lethality. The present review provides a general background of the synthetic cathinones in terms of their basic effects, initial spread and scheduled classification (DEA) as well as their use (motivation, patterns and demographics) and structure-activity relationships. This background is then followed by a review of these drugs' rewarding and aversive effects that contribute to their abuse potential (self-administration) as well as a summary of their reported neurotoxicity and lethality. These characterizations are discussed in the context of other psychostimulants, e.g., amphetamine, methamphetamine, and entactogens, e.g., 3, 4- methylenedioxymethamphetamine.

Keywords: Cathinones, Psychostimulants, Neurotoxicity and lethality

A discussion on why forensic scientists should be aware of problems of dissonant evidence

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Most of the established forensic science research and practice is devoted to the study of the evaluation of single and isolated results of forensic examinations. The study and analysis of several distinct items of scientific evidence, using a formal inference framework, has received only punctual rather than systematic attention. Questions going beyond the relationships between, on the one hand, a target group of usually unobservable competing propositions (e.g. 'person A aggressed person B') and, on the other hand, a collection of observable items of scientific evidence, are (i) the joint probative value of a collection of distinct items of evidence, and (ii) the contribution of each individual item within a given group of pieces of evidence. Such questions represent fundamental areas of research, but are also closely linked to actual forensic practice. In fact, forensic scientists are often required by Courts to inform, for example, about the combined or overall inferential force given further findings or scientific results that have been obtained.

This presentation will emphasise on questions related to the joint evaluation of distinct items of scientific evidence. It focuses on the analysis – through formal methods of reasoning – of an illustrative example of a drastic change, provoked by additional findings, that affected evidential context in a recent Italian criminal case (Tribunale di Venezia, procedimento penale a carico di Monica Bonetto). The analysis and discussion will highlight the notion of inferential interactions due to harmonious and dissonant items of information.

Keywords: Dissonant evidence, Joint probative, Inferential interactions

Image localisation using three-dimensional forensic reconstruction

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Images from satellites, surveillance systems, seized phones or computers, witnesses, bystanders or social networks provide precious information in international investigations. Remote information is particularly valuable when access to the scene is limited or impossible. This article presents how the location of a series of questioned images could be determined in a case example. The localisation relied on the combination of image content, sensor data and knowledge of potential locations. Questioned images were enhanced and merged using image fusion. The resulting image increased the field of view on the scene. This increased vision enabled investigators to search a sign outside premises. They recognize a similar sign in the photograph of a place with a distinctive monument in the centre of a crossroad. This monument was located in a city in Syria. Satellite images from this area were obtained, alongside the photograph and other images recorded in the area. Photogrammetry was used to combine the questioned images with images recorded on the ground and satellite images. As these images were recorded at different periods in time, changes in the road, the pavement and buildings were assessed with the photogrammetric model. This model allowed to reconstruct a portion of the site and to check the coherence of the scene geometry and the contents of images. The reconstruction allowed to determine the location of the questioned images. The first clues from investigators pointed to a possible location. Evidence from the reconstruction provided the location and approximate time of the event, requested to prosecute the crime.

Keywords: Photogrammetry, 3D documentation, Scene geometry, Ppen-source

CasuisCrime: An innovative project to make the best of case studies for forensic science education

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Real case study is a pedagogical strategy commonly used to arouse students' curiosity and encourage their reflexion by guiding them through concrete situations. One of its main strengths is to connect higher education with authentic professional practice. However, handling forensic case studies is not straightforward. On the one hand, professors enrich their courses with their own personal experiences, making it hard to build and develop a pool of cases shared across teachers. Renewing each personal collection of case examples is also an issue. Therefore, teachers must often resort to mock case studies that suffer from several limitations. On the other hand, practitioners don't have time nor methods to formalize very interesting casework they deal with routinely for teaching purposes. For these reasons, sharing experiences and knowledge between practitioners and the university should be optimized to improve learning in forensic science.

The proposed presentation showcases an innovative pedagogical project conducted at the School of Criminal Justice of the University of Lausanne (Switzerland) that aims to provide solutions to this concern. The project promotes and facilitates the use of case studies and real case data within forensic science education to strengthen students' learning experience. The project develops a methodology to collect cases among practitioners, professionals and professors, and to structure them into an innovative and effective teaching material. The case scenarios and data are sustainably memorized and shared through a dedicated database called CasuisCrime in order to be available to all teachers and to support various teaching schemes (jigsaw classroom, roleplay, interactive classroom discussions, serious games, etc.). The methodology is organized around a progression through successive teaching sequences which reconstitute reasoning patterns, decision points and fundamental steps in the processing of complex and serial cases.

CasuisCrime methodology facilitates students' access to a rich universe of knowledge and field experiences. They are engaged in a dynamic process that immerse them into concrete situations, thus mobilizing their theoretical knowledge and problem-solving capacity. It also stimulates their decision-making ability and encourages them to compare their results with peers and practitioners who originally dealt with the case.

Keywords: Forensic science, Education, Case studies, Database, Method, Collaboration

Examination and Identification of Questioned Documents in "HS10"Cross-border Smuggling Case

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Smuggling disturbs foreign trade and economic order and endangers national security. Based on the prosecution of "HS10" smuggling case, this paper gives an overview of the case, handwriting and suspects' situation, discusses the consolidation of over 120 pages questioned handwriting, determination of key suspects, examination and comparison in handwriting identification, and highlights objective analysis of physical evidence and scientifically-based evaluation. The author also shares her understanding of the timing to collect suspects' samples, and establishing a chain of evidence.

Keywords: Cross-border smuggling, Questioned document and handwriting identification

STUDY OF RAMAN SPECTROSCOPY 3D PROFILOMETRY TO DETERMINE THE SEQUENCE OF BLACK PEN INK CEOSSINGS

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This manuscript uses Raman spectroscopy 3D profilometry technique to detect cross strokes formed by two different types of black ink. The sequence of black ink crossings is judged by the 3D model which is generated form the experiment. The experimental results of Raman spectroscopy 3D imaging are discussed in classification, analyzewhether the application of this method to determine the writing order of cross strokes is useful. When preponderance and unanimous heterochromia phenomenon can be observed between the "peaks and valleys", an accurate conclusion can be drawn. When the heterochromia phenomenon is obvious but not incongruent or the phenomenon is not obvious, it need to combine the characteristics of stroke continuity in the 3D model to get the correct conclusion, but the accuracy is greatly influenced by the data processing and the 3D model imaging effect. At the same time, the undetectable situation is summarized, that is, when the Raman spectrum information is unable to be obtained effectively or spectral information those are homology cannot be distinguished, the method is invalid. Based on the analysis and summarize of the experimental result, it can be sure that the Raman spectroscopy 3D profilometry techniques can get relatively objective and accurate judgment on the determination of sequence of black pen ink crossings under certain conditions, and the conclusion is affected little by the appraiser's subjective judgment. It is worth a more thorough and comprehensive study in order to advance the application.

Keywords: Crossing strokes, Sequence of writing, Raman spectroscopy, Raman 3D profilometry imaging

Study on transfer of soil on shoes

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The transfer of soil traces is a critical factor in the evaluation of soil findings in forensic casework. A lot of parameters have a potential influence on soil transfer procedure, due to the complexity of soil sample. Through two series of experiments, this study focused on five factors (shoe profile, shoe size, walker's weight, soil type and soil humidity) and their influence on soil quantity transferred on shoes, in order to reveal the major influential factors. On one hand, design of experiments (DoE) (n=51) was conducted by setting two levels of each factor; on the other hand, further Interaction experiments (n=60) concerning two major influential factors (soil humidity and soil type) were carried out. The transferred soil quantity was obtained to evaluate the effects of each factor. The results indicated that: (i) the model of soil transfer on shoes was more quadratic than simply linear; (ii) soil type and soil humidity were significant individual effects but the quadratic terms of all factors are significant, especially the quadratic terms of soil humidity and soil type; (iii) there was a significant interaction effect between soil humidity and soil type in both DoE and Interaction experiments. The findings demonstrated that soil humidity and soil type are determining factors in the soil transfer procedure, which provided valuable information for forensic science practice.

Keywords: Forensic geology, Soil forensic, Transfer, Design of experiment

Biosensor Array Chips for Drug Quick Test on Site

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The chaLLENge of drug abuse and drug crime is faced by the countries all over the world. In order to crack down on crime and protect the physical and mental health of citizens, these governments have explored methods for the drug quick test. However, these methods have certain shortfalls, such as low efficiency, tedious preparation, lacking of portable quantitative detection tools. That means there is no available method for on-site rapid quantitative detection. Thus, the existing technical level of toxicant identification cannot match the service requirement for basic public security. New theories, new technologies and new methods should be given attention to improve the speed and capacity of toxicant identification. For these reasons, this paper does illustrate a methed that the recognition principle of aptamers and the competitive immunity technical have be integrated with SPRi to achieve array detection of more than 20 types of drugs in biomaterials, including MDMA and cocaine. In preliminary experiments, this method has shown good specificity and high sensitivity.

Keywords: Array chips, Aptamer, SPRi, Competitive immunity

Fundamental Frequency Statistics for Young Female Speakers of Mandarin

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The parameter fundamental frequency (F0) is one of the objective assessments of acoustic voice analysis, whose usefulness for forensic speaker comparison has been an issue for a long time. Because there is few researches on the normative data for female speakers, this article aims to obtain the population statistics for the F0 of 100 young Chinese female speakers in both reading and spontaneous speech. Five descriptive statistics of long-term F0, namely mean, median, mode, standard deviation (SD), and coefficient of variation (CV = SD/mean), are shown in histograms and scatter diagrams. Results show that compared with the statistics for males, the distributions of the F0 means, medians and modes for females are dispersive while only SD and CV statistics are near normal. The results for the F0 statistics in the present study can serve as the reference data on F0 for the young female Chinese population for forensic purposes.

Keywords: Forensic speaker comparison, Fundamental frequency, Female speakers, Mandarin, Population statistics

History of forensic science in ancient China

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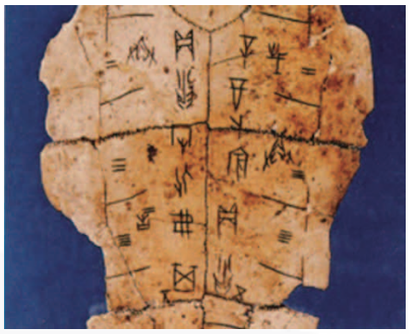
Chinese legal system was initiated in Xia and Shang eras. Crime problems of the judicial trials were then usually solved through divine judgment. The divine law was prevalent in the Shang Dynasty, and the king in the name of God enforced law and legal activities relying on divination.

According to the legendary story, GAO Yao, the punishment officer of Yao (King of the Xia dynasty) was the first judge in ancient China. As recorded, Xiezhi was used by GAO Yao to help identify suspected crimes in judicial proceedings .

皋陶 *GAO Yao (21st Century BC) - the first Chinese judge in ancient legend.*



獬豸 Xiezhi, a legendary creature in acient China, is commonly known as the unicorn. Xiezhi rams the wrong party when it sees a fight, and bites the wrong party when it hears an argument

甲骨文 Oracle is the text engraved or written on turtle shells and animal bones. The majority of the content is royal divination words, so it is also called " inscriptions ", or " divination words ".

Keywords: Forensic science, History, Oracle

On the Relationship between the Decrease of Offline Crime and the Increase of Online and Hybrid Crimes

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This paper analyses the relationship between the drop in traditional crimes in Western highly industrialized societies and the evolution of cybercrime. It includes a review of the criminological debate on the crime drop, which shows that the exchanges between researchers allowed clarifying its extent and limits, but without reaching agreement about its causes and seldom taking into account the trends in cyber-related offences. The paper also reviews the data available on the latter and arrives to the conclusion that European police statistics rarely include them and, when they do, the available data do not allow establishing trends nor conducting comparisons across countries. The difficulties related to the recording of such crimes are discussed and a proposal for a tripartite classification of crimes that distinguishes between offline, online, and hybrid crimes is advanced, together with suggestions on the statistical counting rules that could be applied to measure the frequency of cyber-related offences. Finally, a review of the available victimization surveys shows that cybercrime could currently represent between one-third and half of the crimes committed in a country. Accordingly, the authors consider that the rise of online and hybrid crimes have contributed to the drop of offline crimes. This is a consequence of the development of the Internet, which changed the lifestyle and routine activities of the population, and opened a breach in traditional police-based crime prevention strategies. The new scenario helped consolidating the private security market and, indirectly, led the companies involved to hold a strategic data collection, which could be used to study cybercrime.

Keywords: Decrease of offline crime, Increase of online, Hybrid crimes

Chasing truth from the perspective of History

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This paper analyzes the development processes of the text on the narration of case facts until it finally be ascertained in trial. It is a subtle evolution process from evidence to the list of events and eventually to the factual text. It is a complex task to distinguish the content that would be inexorable once being proved and reached consensus from the content that could only be presented through rhetoric. Meanwhile, this paper compares some existing documents of chronicles, annals and narrative history with the events list and the factual text in Cui Yingjie Case so as to illustrate how the vertical evolution takes place in the description of the case as well as the differences of all evolution stages in judicial practice.

Keywords: Case facts, Historical facts, Annals, Chronicle, Narrative

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