

## Symposium

**Thursday 6th 13:00 – 14:45 Hall I**

### Forensic Expert Opinions in A New Lay-Judge System

– Expert written reports and testimony –

**Organizer:** M. Yoshino (National Research Inst. of Police Sci.)

- S-01 A proposition for expert written reports  
Prosecutor T. Uetomi (Supreme Public Prosecutors Office)
- S-02 A proposition for expert testimony  
Judge J. Akiyoshi (Tokyo District Court)
- S-03 A proposition for expert opinions in forensic medicine  
Professor K. Yoshida (Graduate School of Med., The Univ. of Tokyo)

## Technical Seminars

**Friday 7th 12:45 – 13:15 Hall I**

- T-01 Latest digital imaging and its utilization for forensic technologies  
K. Hakozaiki, K. Yakura and R. Shiono (Leica Microsystems)

**Friday 7th 12:45 – 13:15 Hall III**

- T-02 Real-time PCR technology and its application to forensic caseworks  
M. Hasegawa (Applied Biosystems Japan Ltd.)

## Oral Presentations

### Forensic Biology (A)

**Thursday 6th Hall I**

**09:00 – 09:44**

**Chairperson:** K. Sakurada (National Research Inst. of Police Sci.)

- A-01 Establishment of new criteria for sex determination from the skull –The reliability of the craniometric approach-  
○Y. Ogawa, S. Miyasaka, K. Imaizumi, M. Yoshino (National Research Inst. of Police Sci.)
- A-02 Forensic examination of hair samples  
○R. Iwamoto<sup>\*1</sup>, R. Kawaguchi<sup>\*2</sup> (Scientific Invest. Lab.<sup>\*1</sup>, Criminal Ident. Div.<sup>\*2</sup>, Aomori Pref. Police H.Q.)
- A-03 Proof of human urine from the sample camouflaged with tea  
○F. Momota, T. Nakazono, A. Tsujita, S. Fukushima (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.)
- A-04 Identification of human body fluid by ELISA using Immunostick  
○K. Matsumura, Y. Uchimura (Forensic Sci. Lab., Kumamoto Pref. Police H.Q.)

**09:49 – 10:33**

**Chairperson:** *T. Nakazono (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.)*

- A-05 Validation of SPERM HY-LITER™ kit in application to forensic evidential samples (II)  
○H. Okamoto, T. Tago, K. Sakai, K. Kanda, H. Hosoe (Criminal Invest. Lab., Mie Pref. Police H.Q.)
- A-06 A study of the efficiency and automation of the DNA extraction using QIAcube™  
○Y. Kurasawa, K. Tsukada, M. Shimizu, Y. Harayama, K. Kasahara (Criminal Invest. Lab., Nagano Pref. Police H.Q.)
- A-07 DNA extraction and STR-typing of the buccal cavity cell using PrepMan Ultra Reagent  
○R. Ando, T. Saito, Y. Yamamoto (Criminal Invest. Lab., Saitama Pref. Police H.Q.)
- A-08 Evaluation of new kit for rapid and easy DNA extraction from bone and tooth samples  
○K. Sekiguchi<sup>\*1</sup>, N. Mizuno<sup>\*1</sup>, H. Nakahara<sup>\*1</sup>, K. Fujii<sup>\*1</sup>, T. Kitayama<sup>\*1</sup>, S. Miyasaka<sup>\*1</sup>, Y. Ogawa<sup>\*1</sup>, K. Kasai<sup>\*1</sup>, H. Fukushima<sup>\*1</sup>, H. Asamura<sup>\*2</sup>, Y. Fukuma<sup>\*3</sup>, K. Nagasaki<sup>\*3</sup>, H. Yoshida<sup>\*3</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Dept. of Legal Med, Shinshu Univ. School of Med.<sup>\*2</sup>, Hitachi Software Engineering Co.,Ltd.<sup>\*3</sup>)

**10:38 – 11:22**

**Chairperson:** *T. Komuro (Dept. of Legal Med., Nihon Univ. School of Dentistry)*

- A-09 A study on the development of a new automatic retrieval and comparison system using a 3D database of facial images  
○S. Miyasaka, Y. Ogawa, K. Imaizumi, M. Yoshino (National Research Inst. of Police Sci.)
- A-10 Application of postmortem 3D CT images for forensic diagnosis  
○A. Sakuma<sup>\*1</sup>, M. Ishii<sup>\*2</sup>, S. Yamamoto<sup>\*3</sup>, K. Kobayashi<sup>\*1</sup>, H. Motani<sup>\*1</sup>, M. Hayakawa<sup>\*1</sup>, D. Yajima<sup>\*1</sup>, H. Takeichi<sup>\*1</sup>, H. Iwase<sup>\*1</sup> (Dept. of Legal Med., Graduate School of Med., Chiba Univ.<sup>\*1</sup>, Forensic Sci. Lab., Chiba Pref. Police H.Q.<sup>\*2</sup>, Dept. of Radiology, Graduate School of Med., Chiba Univ.<sup>\*3</sup>)
- A-11 The usefulness of 3D CT images for the skull superimposition  
○M. Ishii<sup>\*1</sup>, T. Tomioka<sup>\*1</sup>, K. Yayama<sup>\*2</sup>, A. Sakuma<sup>\*3</sup>, M. Hayakawa<sup>\*3</sup>, H. Motani<sup>\*3</sup>, D. Yajima<sup>\*3</sup>, S. Yamamoto<sup>\*4</sup>, H. Iwase<sup>\*3</sup> (Forensic Sci. Lab., Chiba Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Kyoto Pref. Police H.Q.<sup>\*2</sup>, Dept. of Legal Med., Graduate School of Med., Chiba Univ.<sup>\*3</sup>, Dept. of Radiology, Graduate School of Med., Chiba Univ.<sup>\*4</sup>)
- A-12 Data fusion for 3D reconstruction model of craniofacial to reduce the metal artifact  
○S. Katsumura<sup>\*1</sup>, T. Ogawa<sup>\*2</sup>, T. Ikawa<sup>\*2</sup>, Y. Shigeta<sup>\*2</sup>, K. Sato<sup>\*3</sup> (Dept. of Anatomy<sup>\*1</sup>, Dept. of Fixed Prosthodontics<sup>\*2</sup>, Dept. of Forensic Med. and Dentistry<sup>\*3</sup>, Tsurumi Univ.)

## **Friday 7th Hall I**

**09:00 – 09:33**

**Chairperson:** *T. Murakawa (Scientific Invest. Lab., Aomori Pref. Police H.Q.)*

- A-13 Effect of detection methods of latent fingerprints on STR typing  
○K. Fujii<sup>\*1</sup>, K. Hibino<sup>\*2</sup>, M. Ito<sup>\*2</sup>, T. Morita<sup>\*2</sup>, T. Kitayama<sup>\*1</sup>, H. Nakahara<sup>\*1</sup>, N. Mizuno<sup>\*1</sup>, K. Sekiguchi<sup>\*1</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, National Police Agency<sup>\*2</sup>)
- A-14 Search method of the tissue using dyeing reagents (II) -The influence that tissue staining gives to DNA yield-  
○T. Ami, T. Sasahara (Scientific Invest. Lab., Fukushima Pref. Police H.Q.)
- A-15 Construction of a serial analysis method of personal identification and drug analysis from urine: methamphetamine analysis and DNA typing  
○T. Nakazono<sup>\*1</sup>, S. Fukushima<sup>\*1</sup>, A. Matsusue<sup>\*2</sup>, K. Hara<sup>\*2</sup>, S. Kubo<sup>\*2</sup> (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.<sup>\*1</sup>, Dept. of Forensic Med., Faculty of Med., Fukuoka Univ.<sup>\*2</sup>)

**09:38 – 10:33****Chairperson:** N. Mizuno (National Research Inst. of Police Sci.)

- A-16 Study of dog (*Canis familiaris*) identification by single nucleotide polymorphisms (SNPs) of 5-HTR1B gene  
 ○S. Nakaki<sup>\*1</sup>, M. Miyoshi<sup>\*1</sup>, D. Hino<sup>\*1</sup>, H. Nakayama<sup>\*1</sup>, H. Moriyoshi<sup>\*1</sup>, T. Morikawa<sup>\*1</sup>, K. Itohara<sup>\*1</sup>, I. Sato<sup>\*2</sup>, K. Murata<sup>\*3</sup> (Forensic Sci. Lab., Hiroshima Pref. Police H.Q.<sup>\*1</sup>, Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*2</sup>, Dept. of Wildlife Sci., College of Bioresource Sci., Nihon Univ.<sup>\*3</sup>)
- A-17 Discrimination of *Tribolium castaneum* (red flour beetles) collected in the different areas, by analyzing DNA polymorphism.  
 ○H. Yamauchi<sup>\*1</sup>, M. Harada<sup>\*1</sup>, A. Miyanoshita<sup>\*2</sup> (Safety Science Inst., Quality Assurance Div., Suntory Ltd.<sup>\*1</sup>, Food Safety Div., National Food Research Inst.<sup>\*2</sup>)
- A-18 Analysis of the peak near the Amelogenin locus in AmpFISTR Identifier kit  
 ○N. Takada, T. Takayama, R. Suzuki, Y. Watanabe (Criminal Invest. Lab., Gifu Pref. Police H.Q.)
- A-19 A single inconsistency in the Mendelian inheritance pattern at D19S433 observed in caseworks  
 ○A. Nakajima<sup>\*1</sup>, H. Ohtaki<sup>\*2</sup>, M. Morino<sup>\*3</sup>, Y. Yagi<sup>\*4</sup>, N. Mizuno<sup>\*5</sup>, K. Sekiguchi<sup>\*5</sup> (Forensic Sci. Lab., Chiba Pref. Police H.Q.<sup>\*1</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*2</sup>, Forensic Sci. Lab., Wakayama Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Nagasaki Pref. Police H.Q.<sup>\*4</sup>, National Research Inst. of Police Sci.<sup>\*5</sup>)
- A-20 A case report of D18S51 variant allele  
 ○T. Murakawa, N. Ohta, S. Aiba, S. Akiba, E. Munakata, R. Iwamoto (Scientific Invest. Lab., Aomori Pref. Police H.Q.)

**10:38 – 11:33****Chairperson:** H. Ikegaya (Dept. of Legal Med., Kyoto Pref. Univ. of Medicine)

- A-21 Analysis of "drug-type" cannabis sativa L. by loop-mediated isothermal amplification  
 ○M. Kitamura, J. Tanaka, S. Chinaka, N. Takayama (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.)
- A-22 Discrimination of plant species based on sequence variation of nuclear internal transcribed spacer regions of ribosomal DNA - Development of nuclear DNA quantification method in plant by means of quantitative PCR procedure -  
 ○A. Yano<sup>\*1</sup>, N. Araki<sup>\*1</sup>, M. Shigyo<sup>\*2</sup> (Forensic Sci. Lab., Yamaguchi Pref. Police H. Q.<sup>\*1</sup>, Faculty of Agriculture, Yamaguchi Univ.<sup>\*2</sup>)
- A-23 Rapid species identification of poisonous mushrooms by using real-time PCR  
 ○K. Maeta<sup>\*1,2</sup>, T. Ochi<sup>\*3</sup>, K. Tokimoto<sup>\*4</sup>, N. Simomura<sup>\*3</sup>, N. Maekawa<sup>\*3</sup>, N. Kawaguchi<sup>\*5</sup>, M. Nakaya<sup>\*6</sup>, Y. Kitamoto<sup>\*7</sup>, T. Aimi<sup>\*3</sup> (Scientific Crime Invest. Lab., Tottori Pref. Police H.Q.<sup>\*1</sup>, The United Graduate School of Agricultural Sci., Tottori Univ.<sup>\*2</sup>, Faculty of Agriculture, Tottori Univ.<sup>\*3</sup>, The Tottori Mycological Inst. Lab.<sup>\*4</sup>, Biological Business Department, Ichimasa Kamaboko Co., Ltd.<sup>\*5</sup>, Hokkaido Forest Products Research Inst.<sup>\*6</sup>, Sci. Lab., Asano Industry Co. Ltd.<sup>\*7</sup>)
- A-24 Development of on-site detection techniques for biological warfare agents  
 ○Y. Kurosaki, J. Yasuda (National Research Inst. of Police Sci.)
- A-25 Properties of bacteria resembling the human sperm head in shape  
 ○T. Nakagawa<sup>\*1</sup>, T. Ohno<sup>\*1</sup>, M. Doi<sup>\*1</sup>, H. Miyake<sup>\*1</sup>, T. Okiura<sup>\*1</sup>, H. Nishimukai<sup>\*2</sup> (Criminal Invest. Lab., Ehime Pref. Police H.Q.<sup>\*1</sup>, Dept. of Legal Med., Graduate School of Med., Univ. of Ehime<sup>\*2</sup>)

## Forensic Toxicology (B)

### Thursday 6th Hall I

14:50 – 15:34

*Chairperson: M. Iwamoto (Forensic Sci., Lab., Miyazaki Pref. Police H.Q.)*

- B-01 Development of new titania-coated monolithic silica spin column for rapid and easy extraction of phosphorus-containing amino acid herbicides.  
○H. Ohta<sup>\*1</sup>, D. Watanabe<sup>\*1</sup>, Y. Kazui<sup>\*1</sup>, O. Ohtsuru<sup>\*1</sup>, S. Miyazaki<sup>\*2</sup>, M. Ohira<sup>\*2</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, GL Sciences Inc.<sup>\*2</sup>)
- B-02 Selective extraction of glyphosate and its metabolite using Titansphere<sup>®</sup> Phos-TiO Kit  
○H. Mohri, A. Gohda, K. Wakigawa, S. Fukushima (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.)
- B-03 Analysis of phosphorus-containing amino acid-type herbicides by capillary electrophoresis  
○Y. Narita (Forensic Sci. Lab., Hokkaido Police Hakodate Regional H.Q.)
- B-04 Simple and rapid method for the determination of paraquat and diquat intentionally mixed in beverages  
○Y. Suzuki, S. Kogure, T. Kaneko (Forensic Sci. Lab., Chiba Pref. Police H.Q.)

15:39 – 16:23

*Chairperson: H. Ohta (National Research Inst. of Police Sci.)*

- B-05 An analytical study in a fatal case by sulfuryl fluoride (Vikane<sup>™</sup>) inhalation  
○Y. Nozawa, Y. Ehara, H. Hinohara, K. Otsuka, H. Sekine (Criminal Invest. Lab., Saitama Pref. Police H.Q.)
- B-06 Dichloroaniline derivatization and GC/MS(NCI) analysis of monofluoroacetic acid in biological samples  
M. Honda, ○A. Yamashita, M. Sato, M. Kikuchi, T. Ito (Criminal Invest. Lab., Niigata Pref. Police H.Q.)
- B-07 Analyses of xylene and methylbenzene in serum using HPLC  
○M. Yoshida<sup>\*1</sup>, A. Akane<sup>\*1</sup>, M. Katagi<sup>\*2</sup>, H. Tsuchihashi<sup>\*2</sup> (Dept. of Legal Med., Kansai Medical Univ.<sup>\*1</sup>, Forensic Sci. Lab., Osaka Pref. Police H.Q.<sup>\*2</sup>)
- B-08 High sensitive and selective determination of hypochlorite using electrophilic addition reaction by GC/MS  
○K. Wakigawa, A. Gohda, S. Fukushima (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.)

### Friday 7th Hall II

09:00 – 09:44

*Chairperson: M. Katagi (Forensic Sci. Lab., Osaka Pref. Police H.Q.)*

- B-09 General Unknown Screening by LC-ESI/MS (3) - Throughput improvement –  
○Y. Adachi (Forensic Sci. Lab., Hokkaido Police Asahikawa Regional H.Q.)
- B-10 Screening of drugs by Triage<sup>™</sup> and GC/MS  
○M. Iwamoto, T. Arikawa (Forensic Sci., Lab., Miyazaki Pref. Police H.Q.)
- B-11 Accurate Mass Analysis of low volatile toxic substances using IAMS  
○T. Hashimoto<sup>\*1</sup>, H. Maruyama<sup>\*2</sup>, Y. Shiokawa<sup>\*2</sup>, Y. Mishima<sup>\*3</sup> (Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*1</sup>, Canon Anelva Technix Corporation<sup>\*2</sup>, Tsurui Chemical Co., Ltd.<sup>\*3</sup>)
- B-12 Simultaneous determination of pesticides using MonoTrap<sup>™</sup>  
○K. Suga, T. Shibayama, M. Kumihashi (Research Inst. of Scientific Criminal Invest., Kagawa Pref. Police H.Q.)

**09:49 – 10:33**

**Chairperson:** E. Tanaka (Dept. of Legal Med., Tsukuba Univ.)

- B-13 A case study of hydrogen sulfide suicide  
○M. Hata, S. Yoshiyagawa (Forensic Sci. Lab., Hokkaido Kushiro Area Police H.Q.)
- B-14 Analysis of dimethylsulfide using HS-GC/MS  
○K. Otsuka, Y. Nozawa, H. Sekine (Criminal Invest. Lab., Saitama Pref. Police H. Q.)
- B-15 Research on generated toxic gases in hydrogen sulfide suicide case using lime sulfur, and disposing of reaction mixture  
○K. Tsuge, M. Kanamori, I. Ohsawa, S. Kishi, A. Komano, K. Sato, Y. Urushibata, T. Ohmori, Y. Seto (National Research Inst. of Police Sci.)
- B-16 Development of allyl isothiocyanate detector tube  
○T. Ishiwata, E. Norimine, F. Ishizawa (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)

**10:38 – 11:11**

**Chairperson:** T. Kanamori (National Research Inst. of Police Sci.)

- B-17 Preparation of an etizolam metabolite using recombinant yeast expressing human cytochrome P450  
○K. Kanazawa<sup>\*1</sup>, H. Sekine<sup>\*1</sup>, S. Ikushiro<sup>\*2</sup>, T. Sakaki<sup>\*2</sup> (Criminal Invest. Lab., Saitama Pref. Police H.Q.<sup>\*1</sup>, Dept. of Biotechnology, Faculty of Engineering, Toyama Pref. Univ.<sup>\*2</sup>)
- B-18 Drug analysis of solution in dripping bag  
○A. Watanabe, T. Ikeda (Forensic Sci. Lab., Kitami Area Hokkaido Pref. Police H.Q.)
- B-19 Determination of antidepressants by non-aqueous capillary electrophoresis (2)  
○Y. Sasajima, K. Suenami, K. Sato, Y. Takekoshi (Criminal Invest. Lab., Gifu Pref. Police H.Q.)

**11:11 – 11:33**

**Chairperson:** T. Mukai (Forensic Sci. Lab., Nara Pref. Police H.Q.)

- B-20 A basic study of hydration of MDMA hydrochloride by thermal analysis and IR  
○K. Tsujikawa, H. Arai, R. I. Hiyoshi, K. Kuwayama, H. Miyaguchi, T. Kanamori, Y. T. Iwata, H. Inoue (National Research Inst. of Police Sci.)
- B-21 Synchrotron X-ray powder diffraction on intact tablets of abuse drug  
○K. Miura<sup>\*1</sup>, T. Matsumoto<sup>\*1</sup>, T. Ninomiya<sup>\*1</sup>, T. Sugimura<sup>\*2</sup> (Japan Synchrotron Radiation Research Institute<sup>\*1</sup>, Univ. of Hyogo School of Science<sup>\*2</sup>)

**12:45 – 13:18**

**Chairperson:** M. Yoshida (Dept. of Legal Med., Kansai Medical Univ.)

- B-22 Metabolism and urinary excretion of *N*-hydroxy MDMA  
○T. Kamata, K. Nakanishi, K. Zaitzu, N. Shima, H. Kamata, M. Katagi, A. Miki, H. Tsuchihashi (Forensic Sci. Lab., Osaka Pref. Police H.Q.)
- B-23 Studies on analyses of *N*-hydroxy-MDMA including MDMA  
○R. Iio<sup>\*1</sup>, Y. Iwamuro<sup>\*1</sup>, S. Chinaka<sup>\*1</sup>, N. Takayama<sup>\*1</sup>, M. Katagi<sup>\*2</sup>, H. Tsuchihashi<sup>\*2</sup> (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Osaka Pref. Police H.Q.<sup>\*2</sup>)
- B-24 Can urinary 5-HTOL/5-HIAA be applied for a drinking marker in Japanese people?  
○K. Umetani<sup>\*1</sup>, H. Matsumoto<sup>\*2</sup> (Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*1</sup>, Dept. Legal Med., Sapporo Med. Univ.<sup>\*2</sup>)

**13:23 – 13:56**

**Chairperson:** M. Amemiya (Criminal Invest. Lab., Saitama Pref. Police H.Q.)

- B-25 Discrimination of methamphetamine by stable-isotope ratio analysis  
○Y. T. Iwata, K. Kuwayama, K. Tsujikawa, H. Miyaguchi, T. Kanamori, H. Inoue (National Research Inst. of Police Sci.)

- B-26 Rapid and sensitive determination of methamphetamine in hair by gas chromatography/mass spectrometry  
○H. Miyaguchi, Y. T. Iwata, T. Kanamori, K. Tsujikawa, K. Kuwayama, H. Inoue (National Research Inst. of Police Sci.)
- B-27 A rapid analysis of methamphetamine, MDMA and related compounds by capillary electrophoresis  
○K. Nishida, M. Narihara (Criminal Invest. Lab., Oita Pref. Police H.Q.)

**13:56 – 14:29**

*Chairperson: Y. T. Iwata (National Research Inst. of Police Sci.)*

- B-28 Consideration on the unusual unstability of trifluoroacetyl derivative of *N*-methylephedrine in solution  
○M. Aizawa, H. Ohsaki, K. Murakami (Forensic Sci. Lab., Hiroshima Pref. Police H.Q.)
- B-29 Cross-reactivities of various phenethylamine-type drugs to Instant-View and the evaluation of the newly-developed test kit  
○A. Miki, K. Nakanishi, K. Zaitso, H. Kamata, N. Shima, M. Katagi, H. Tsuchihashi (Forensic Sci. Lab., Osaka Pref. Police H.Q.)
- B-30 Analysis of phenethylamines by on-column derivatization 2. A study on trimethylsilylation  
○R. Miyamoto, T. Abe (Criminal Invest. Lab., Metropolitan Police Department)

## Forensic Chemistry (C)

**Thursday 6th Hall II**

**09:00 – 09:33** *Chairperson: A. Watanabe (Forensic Sci. Lab., Hokkaido Police Kitami Regional H.Q.)*

- C-01 Rapid, easy and highly accurate qualitative and quantitative analyses of sulfuric acid by using Raman spectrometry  
○D. Watanabe, H. Ohta, Y. Kazui, O. Ohtsuru (National Research Inst. of Police Sci.)
- C-02 Volatility of thinner mixed up with water  
○T. Yoshida, K. Miyata (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)
- C-03 Discoloration of a beverage including natural coloring matter by adding poison  
○T. Mukai<sup>\*1</sup>, M. Kusatani<sup>\*1</sup>, Y. Itou<sup>\*2</sup> (Forensic Sci. Lab., Nara Pref. Police H.Q.<sup>\*1</sup>, Kirin Holding Co. Ltd.<sup>\*2</sup>)

**09:38 – 10:11**

*Chairperson: K. Tsuge (National Research Inst. of Police Sci.)*

- C-04 Rapid analysis of amino acid drinks  
○S. Kurata, K. Ichikawa (Criminal Invest. Lab., Metropolitan Police Dep.)
- C-05 Application of MonoTrap<sup>TM</sup> to analyzing cresols in water sample  
○T. Hamamoto, H. Ishii, M. Sato (Forensic Sci. Lab., Chiba Pref. Police H.Q.)
- C-06 Comparison study of microextraction techniques (IV)  
○A. Kohiyama, M. Sato, T. Kaneko (Forensic Sci. Lab., Chiba Pref. Police H.Q.)

**10:16 – 11:22**

*Chairperson: Y. Higashikawa (National Research Inst. of Police Sci.)*

- C-07 Discrimination of polyolefins by evolved gas analysis (EGA) – MS using pyrolysis-GC/MS  
○A. Hosaka<sup>\*1</sup>, C. Watanabe<sup>\*1</sup>, S. Tsuge<sup>\*1,2</sup> (Frontier Laboratories Ltd.<sup>\*1</sup>, Aichi Institute of Technology<sup>\*2</sup>)

- C-08 Development of database of imported car paints  
○K. Otsuki, Y. Saito (Forensic Sci. Lab., Hyogo Pref. Police H.Q.)
- C-09 Examination of forensic identification method of Silicone foul release coatings: II  
○A. Kurisu, A. Sato, S. Tomiya, Y. Yamazaki (Japan Coast Guard Research Center)
- C-10 Analysis of excipient distribution in the tablet with FTIR-ATR Imaging  
○A. Ohnishi, Y. Akatsuka, H. Kimura-Suda, M. Morimoto (PerkinElmer Japan Co., Ltd.)
- C-11 Discrimination of craft tapes by two-dimensional Fourier transform  
○S. Sasaoka, K.Saito, N.Tachiiri, K.Usui, K.Miura (Forensic Sci. Lab., Miyagi Pref. Police H.Q.)
- C-12 Forensic identification of adhesive cloth tapes using high sensitive X-ray fluorescence analysis  
○A. Goto, A. Hokura, I. Nakai (Faculty of Sci., Tokyo Univ. of Sci.)

**14:50 – 15:45**

**Chairperson:** K. Saito (Forensic Sci. Lab., Miyagi Pref. Police H.Q.)

- C-13 Trace elemental analysis of single fibers from car trunk mats by total reflection x-ray fluorescence spectrometry and high energy synchrotron radiation x-ray fluorescence spectrometry  
○Y. Nishiwaki, N. Miyamoto, S. Watanabe, O. Shimoda, S. Muratsu, M. Takatsu, T. Nakanishi (Forensic Sci. Lab., Hyogo Pref. Police H.Q.)
- C-14 Study on identification of trunk mat fibers by using LA-ICP-MS analysis  
○Y. Hiroma, A. Hokura, I. Nakai (Faculty of Sci., Tokyo Univ. of Sci.)
- C-15 Identification of small bits of natural leather  
○K. Ichikawa, S. Kurata (Criminal Invest. Lab., Metropolitan Police Department)
- C-16 Discrimination of white cotton fibers by the detection of residual surfactants in fibers  
○T. Kato, M. Hasegawa, M. Kagawa, C. Maseda (Criminal Invest. Lab., Shimane Pref. Police H.Q.)
- C-17 Forensic discrimination of silks from domestic silkworms and wild silkworms  
T. Goto, ○Y. Nagatani, Y. Matsuyama (Forensic Sci. Lab., Shizuoka Police H.Q.)

**15:55 – 16:28**

**Chairperson:** Y. Suzuki (National Research Inst. of Police Sci.)

- C-18 Extraction of information for criminal investigation from small amount of soil samples.(V)  
-Usefulness of biotite particle to identify the surface layer soil in Miyazaki Pref. –  
○K. Naganuma<sup>\*1</sup>, T. Arikawa<sup>\*1</sup>, M. Iwamoto<sup>\*1</sup>, T. Udatsu<sup>\*2</sup>, Y. Nagatomo<sup>\*2</sup> (Forensic Sci. Lab., Miyazaki Pref. Police. H.Q.<sup>\*1</sup>, Faculty of Agriculture, Miyazaki Univ.<sup>\*2</sup>)
- C-19 Discrimination of granitic saprolite by elemental analysis of accessory minerals  
○R. Sugita, S. Suzuki (National Research Inst. of Police Sci.)
- C-20 Classification of a seaside sand in Shizuoka prefecture by a chemical component of feldspar group  
Y. Matsuyama, ○T. Goto, T. Harama (Forensic Sci. Lab., Shizuoka Pref. Police H.Q.)

**16:38 – 17:11**

**Chairperson:** K. Naganuma (Forensic Sci. Lab., Miyazaki Pref. Police. H.Q.)

- C-21 Species identification of aged plant samples by DNA analyses  
○H. S. Kikkawa<sup>\*1</sup>, R. Sugita<sup>\*1</sup>, R. Matsuki<sup>\*2</sup>, S. Suzuki<sup>\*1</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Central Research Institute of Electric Power Industry<sup>\*2</sup>)
- C-22 Determination of plant pigments by GC-MS  
○H. Ohashi (Scientific Crime Lab., Tottori Pref. Police H.Q.)
- C-23 The difference identification of cigarette by GC/MS  
○T. Nakamura, K. Nanjo, K. Aoyama (Analysis Center, Hokkaido Kantei Co., Ltd.)

**Friday 7th Hall I**

**13:23 – 13:56**

**Chairperson:** *Y. Mandai (Japan Coast Guard Research Center)*

- C-24 Analyses of peculiar oils  
○F. Ishizawa, E. Norimine (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)
- C-25 Identification of unheated automotive gasoline  
○S. Watanabe (Forensic Sci. Lab., Hyogo Pref. Police H.Q.)
- C-26 Discrimination between Pyrolyzed plastics like Kerosene and Kerosene  
Y. Kobayashi<sup>\*1</sup>, ○N. Kawamoto<sup>\*1</sup>, Y. Kaneko<sup>\*1</sup>, F. Yokoyama<sup>\*2</sup> (Analysis Center Co.,Ltd. <sup>\*1</sup>, Japan Specialist in Law Engineering Corporation <sup>\*2</sup>)

**14:06 – 14:50**

**Chairperson:** *A. Mochizuki (Forensic Sci. Lab., Yamanashi Pref. Police. H.Q.)*

- C-27 Evaluation of the analytical procedure for a trace amount of vegetable oil using SPME fiber  
○T. Mikuma, T. Kaneko (Forensic Sci. Lab., Chiba Pref. Police H.Q.)
- C-28 A facile separation method of kerosene-higher fatty acid mixture  
○Y. Kaneko, N. Kawamoto, N. Kawabata, T. Sato, Y. Kobayashi (Analysis Center CO. LTD.)
- C-29 Analysis of lubricity improver in gas oils by mass spectrometry  
○Y. Mandai<sup>\*1</sup>, T. Uno<sup>\*1</sup>, T. Asahara<sup>\*1</sup>, M. Taki<sup>\*1</sup>, M. Ubukata<sup>\*2</sup> (Japan Coast Guard Research Center <sup>\*1</sup>, Analytical Instrument Division, JEOL Ltd. <sup>\*2</sup>)
- C-30 GC / TOF - MS analysis of explosives  
○I. Abe, M. Kazama, M. Kudo, (Criminal Invest. Lab., Metropolitan Police Department, Tokyo)

**15:00 – 15:33**

**Chairperson:** *T. Yoshida (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)*

- C-31 Forensic application of SEM-EDS analytical system equipped with transition edge sensor microcalorimeter X-ray detector  
○Y. Ono<sup>\*1</sup>, Y. Nishiwaki<sup>\*2</sup>, K. Tanaka<sup>\*3</sup>, S. Nakayama<sup>\*3</sup>, I. Nakai<sup>\*1</sup> (Dept. of Appl. Chem., Facul. of Sci., Tokyo Univ. of Sci. <sup>\*1</sup>, Hyogo Pref. Police H.Q. <sup>\*2</sup>, SII Nano Technology Inc. <sup>\*3</sup>)
- C-32 Analysis of trace bone fragments by X-ray fluorescence spectrometry -Discrimination of shell and bone fragments using phosphorus and strontium as indexes-  
○H.Iida, K.Koyanagi, T.Sakai, M.Taniguchi (Forensic Sci. Lab., Hokkaido Pref. Police H.Q.)
- C-33 Deformation of nail by heat  
○M.Taniguchi, T.Sasaki, T.Sakai, (Forensic Sci. Lab., Hokkaido Pref. Police H.Q.)

## Forensic Engineering (D)

### Speech and Acoustic

Thursday 6th Hall III

09:00 – 10:06

*Chairperson: M. Tanimoto (Japan Urban Security Research Institute)*

- D-01 Speaker recognition using formant bandwidth (1)  
○N. Miyamoto<sup>\*1</sup>, K. Nishidate<sup>\*2</sup>, K. Sugawara<sup>\*3</sup>, T. Suwa<sup>\*4</sup>, S. Otsuka<sup>\*5</sup>, M. Takao<sup>\*6</sup>, J. Minami<sup>\*7</sup>, H. Makinae<sup>\*8</sup>, T. Kamada<sup>\*8</sup>, T. Osanai<sup>\*8</sup> (Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*3</sup>, Criminal Invest. Lab., Saitama Pref. Police H.Q.<sup>\*4</sup>, Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*5</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*6</sup>, Forensic Sci. Lab., Osaka Pref. Police H.Q.<sup>\*7</sup>, National Research Inst. of Police Sci.<sup>\*8</sup>)
- D-02 Speaker recognition using formant bandwidth (2)  
○T. Suwa<sup>\*1</sup>, K. Nishidate<sup>\*2</sup>, K. Sugawara<sup>\*3</sup>, S. Otsuka<sup>\*4</sup>, M. Takao<sup>\*5</sup>, J. Minami<sup>\*6</sup>, N. Miyamoto<sup>\*7</sup>, H. Makinae<sup>\*8</sup>, T. Kamada<sup>\*8</sup>, T. Osanai<sup>\*8</sup> (Criminal Invest. Lab., Saitama Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*3</sup>, Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*4</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*5</sup>, Forensic Sci. Lab., Osaka Pref. Police H.Q.<sup>\*6</sup>, Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*7</sup>, National Research Inst. of Police Sci.<sup>\*8</sup>)
- D-03 Speaker recognition using formant bandwidth (3)  
○K. Nishidate<sup>\*1</sup>, K. Sugawara<sup>\*2</sup>, T. Suwa<sup>\*3</sup>, S. Otsuka<sup>\*4</sup>, M. Takao<sup>\*5</sup>, J. Minami<sup>\*6</sup>, N. Miyamoto<sup>\*7</sup>, H. Makinae<sup>\*8</sup>, T. Kamada<sup>\*8</sup>, T. Osanai<sup>\*8</sup> (Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*1</sup>, Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*2</sup>, Criminal Invest. Lab., Saitama Pref. Police H.Q.<sup>\*3</sup>, Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*4</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*5</sup>, Forensic Sci. Lab., Osaka Pref. Police H.Q.<sup>\*6</sup>, Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*7</sup>, National Research Inst. of Police Sci.<sup>\*8</sup>)
- D-04 A use of local spectral peaks on text-dependent speaker verification for bone-conducted speech  
○T. Osanai, T. Kamada, H. Makinae (National Research Inst. of Police Sci.)
- D-05 A use of MFCC on text-dependent speaker verification for telephony speech  
○H. Makinae, T. Kamada, T. Osanai (National Research Inst. of Police Sci.)
- D-06 Effects of digital compression technique on speaker verification in noisy environment  
○T. Kamada, T. Osanai, H. Makinae (National Research Inst. of Police Sci.)

### Traffic Accidents

Thursday 6th Hall III

10:16 – 11:00

*Chairperson: J. Matsumoto*

*(Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.)*

- D-07 Study of offset collision accident in real car clash test  
○R. Oga<sup>\*1</sup>, N. Takubo<sup>\*1</sup>, M. Kihira<sup>\*1</sup>, K. Kato<sup>\*1</sup>, H. Ishikawa<sup>\*1</sup>, T. Okuno<sup>\*1</sup>, K. Nakano<sup>\*2</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*2</sup>)
- D-08 Study of car-bicyclist accident in real car clash test  
○K. Kato<sup>\*1</sup>, N. Takubo<sup>\*1</sup>, M. Kihira<sup>\*1</sup>, R. Oga<sup>\*1</sup>, H. Ishikawa<sup>\*1</sup>, T. Okuno<sup>\*1</sup>, K. Nakano<sup>\*2</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*2</sup>)
- D-09 Study of angle collision accident in real car clash test  
○T. Okuno<sup>\*1</sup>, N. Takubo<sup>\*1</sup>, M. Kihira<sup>\*1</sup>, R. Oga<sup>\*1</sup>, K. Kato<sup>\*1</sup>, H. Ishikawa<sup>\*1</sup>, K. Nakano<sup>\*2</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*2</sup>)

- D-10 Behavior of electric powered wheelchair in collision  
○H. Toda<sup>\*1</sup>, T. Ogura<sup>\*1</sup>, N. Nishiyama<sup>\*1</sup>, R. Oga<sup>\*2</sup>, N. Takubo<sup>\*2</sup>, M. Kihira<sup>\*2</sup>, K. Kato<sup>\*2</sup>,  
T. Okuno<sup>\*2</sup> (Forensic Sci. Lab., Mie Pref. Police H.Q.<sup>\*1</sup>, National Research Inst. of Police Sci.<sup>\*2</sup>)

**14:50 – 15:45**

**Chairperson:** R. Oga (National Research Inst. of Police Sci.)

- D-11 Research on metrology of deformed shape of accident car  
○K. Taneda (Automobile Traffic Accident Analysis Science Laboratory)
- D-12 Graph indication of the collision speed  
○J. Matsumoto, Y. Kokubun, H. Yamamoto, S. Tanaka (Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.)
- D-13 Estimation of an automobile speed with information from the yaw mark taken into account  
○M. Matsui<sup>\*1</sup>, T. Kumamoto<sup>\*1</sup>, S. Satoh<sup>\*2</sup>, K. Ohashi<sup>\*2</sup>, T. Makihara<sup>\*2</sup> (Criminal Invest. Lab.<sup>\*1</sup>, Traffic Invest. Division<sup>\*2</sup>, Aichi Pref. Police H.Q.)
- D-14 Coefficient of friction on grass at rapid brake of car  
○K. Akita, N. Abiko, H. Fukushima, K. Suzuki, K. Nishidate, R. Uchida (Forensic Sci. Lab., Hokkaido Pref. Police H.Q.)
- D-15 The study of the vertical behavior of moving vehicle over the irregular road  
○T. Fukawa, J. Morishita, E. Teratsuji (Forensic Sci. Lab., Hyogo Pref. Police H.Q.)

**15:55 – 16:28**

**Chairperson:** Y. Kuchimoto (Forensic Sci. Lab., Miyazaki Pref. Police. H.Q.)

- D-16 Study on basic characteristics of event data recorder (EDR)  
○N.Takubo<sup>\*1</sup>, T.Okuno<sup>\*1</sup>, K.Kato<sup>\*1</sup>, R.Oga<sup>\*1</sup>, H.Ishikawa<sup>\*1</sup>, K.Nakano<sup>\*2</sup>, T.Ikari<sup>\*3</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*2</sup>, National Agency for Automotive Safety & Victims' Aid<sup>\*3</sup>)
- D-17 Low speed record of the electricity-type small tachograph  
○S. Tanaka, Y. Kokubun, J. Matsumoto, H. Yamamoto (Scientific. Crime Invest. Lab., Kanagawa Pref. Police H.Q.)
- D-18 Analysis of vehicle speed by freeze frame data in on-board diagnostics  
○K. Nakano<sup>\*1</sup>, R. Oga<sup>\*2</sup>, K.Kato<sup>\*2</sup>, N. Takubo<sup>\*2</sup> (Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*1</sup>, National Research Inst. of Police Sci.<sup>\*2</sup>)

## **Firearms**

**Thursday 6th Hall IV**

**09:22 – 10:06**

**Chairperson:** H. Kato (Criminal Invest. Lab., Tottori Pref. Police H.Q.)

- D-19 Internet resources for firearms identification (2)  
○M. Nagai (National Research Inst. of Police Sci.)
- D-20 Examination of power source for toy guns  
○K. Shibasaki (Forensic Sci. Lab., Chiba Pref. Police H.Q.)
- D-21 Some examples of measuring power of quasi air guns  
○M. Kondo (Criminal Invest. Lab., Aichi Pref. Police H.Q.)
- D-22 Comparison on penetration ability of various 6mm spherical projectile for woodfree paper and aluminum sheet  
○H. Sekimori (Forensic Sci. Lab., Nagano Pref. Police H.Q.)

10:11 – 11:06

*Chairperson: K. Shibasaki (Forensic Sci. Lab., Chiba Pref. Police H.Q.)*

- D-23 Examination of gunshot residue by video image  
○M. Kazama, R. Ai, I. Abe, M. Kudo (Criminal Invest. Lab., Metropolitan Police Dept.)
- D-24 Comparison experiment on bullet penetration hole of wood  
○H. Kato<sup>\*1</sup>, K. Nishidate<sup>\*2</sup>, K. Shibasaki<sup>\*3</sup>, M. Miura<sup>\*4</sup>, S. Hirakawa<sup>\*5</sup>, K. Sato<sup>\*6</sup>, M. Nagai<sup>\*7</sup>  
(Criminal Invest. Lab., Tottori Pref. Police H.Q.<sup>\*1</sup>, Criminal Invest. Lab., Hokkaido Police H.Q.<sup>\*2</sup>, Criminal Invest. Lab., Chiba Pref. Police H.Q.<sup>\*3</sup>, Criminal Invest. Lab., Shimane Pref. Police H.Q.<sup>\*4</sup>, Criminal Invest. Lab., Nagasaki Pref. Police H.Q.<sup>\*5</sup>, Criminal Invest. Lab., Oita Pref. Police H.Q.<sup>\*6</sup>, National Research Inst. of Police Sci.<sup>\*7</sup>)
- D-25 Study of 38SPL. bullet path calculation related to firing angle  
S. Hirakawa<sup>\*1</sup>, S. Satoyama<sup>\*2</sup>, Y. Imai<sup>\*3</sup> (Forensic Sci. Lab., Nagasaki Pref. Police H.Q.<sup>\*1</sup>, Traffic Guidance Division, Nagasaki Pref. Police H.Q.<sup>\*2</sup>, Graduate School of Engineering Prof., Nagasaki Univ.<sup>\*3</sup>)
- D-26 A study on the measuring method for rifling angle of bullet  
○M. Mizumoto (Forensic Sci. Lab., Kumamoto Pref. Police H.Q.)
- D-27 Difference of firing pin and breechface markings observed among different brand cartridges  
○T. Uchiyama (National Research Inst. of Police Sci.)

## Fire Investigation

Friday 7th Hall III

09:00 – 09:44

*Chairperson: T. Ikegami (Forensic Sci. Lab., Shizuoka Pref. Police H.Q.)*

- D-28 Fuel property and evaporation of gasoline  
○H. Sugimoto<sup>\*1</sup>, K. Akita<sup>\*2</sup>, S. Sasaki<sup>\*3</sup>, A. Yamashita<sup>\*4</sup>, T. Harama<sup>\*5</sup>, H. Sato<sup>\*6</sup>, M. Takao<sup>\*6</sup>, S. Kamihirata<sup>\*7</sup>, M. Miura<sup>\*8</sup>, K. Isawa<sup>\*9</sup>, Y. Iwatsu<sup>\*10</sup>, S. Takeda<sup>\*11</sup>, T. Kohatsu<sup>\*12</sup>, K. Miwa<sup>\*13</sup>, K. Okamoto<sup>\*13</sup>, N. Watanabe<sup>\*13</sup>, Y. Hagimoto<sup>\*13</sup> (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Forensic Sci. Lab., Aomori Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Niigata Pref. Police H.Q.<sup>\*4</sup>, Forensic Sci. Lab., Shizuoka Pref. Police H.Q.<sup>\*5</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*6</sup>, Forensic Sci. Lab., Nara Pref. Police H.Q.<sup>\*7</sup>, Criminal Invest. Lab., Shimane Pref. Police H.Q.<sup>\*8</sup>, Forensic Sci. Lab., Tokushima Pref. Police H.Q.<sup>\*9</sup>, Criminal Invest. Lab., Oita Pref. Police H.Q.<sup>\*10</sup>, Criminal Invest. Lab., Kagoshima Pref. Police H.Q.<sup>\*11</sup>, Forensic Sci. Lab., Okinawa Pref. Police H.Q.<sup>\*12</sup>, National Research Inst. of Police Sci.<sup>\*13</sup>)
- D-29 Analysis of evaporated gasoline using GC/MS  
○H. Satoh<sup>\*1</sup>, K. Akita<sup>\*2</sup>, S. Sasaki<sup>\*3</sup>, A. Yamashita<sup>\*4</sup>, T. Harama<sup>\*5</sup>, H. Sugimoto<sup>\*6</sup>, M. Takao<sup>\*1</sup>, S. Kamihirata<sup>\*7</sup>, M. Miura<sup>\*8</sup>, K. Isawa<sup>\*9</sup>, Y. Iwatsu<sup>\*10</sup>, S. Takeda<sup>\*11</sup>, T. Kohatsu<sup>\*12</sup>, Y. Hagimoto<sup>\*13</sup>, N. Watanabe<sup>\*13</sup>, K. Okamoto<sup>\*13</sup>, K. Miwa<sup>\*13</sup> (Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Forensic Sci. Lab., Aomori Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Niigata Pref. Police H.Q.<sup>\*4</sup>, Forensic Sci. Lab., Shizuoka Pref. Police H.Q.<sup>\*5</sup>, Forensic Sci. Lab., Ishikawa Pref. Police H.Q.<sup>\*6</sup>, Forensic Sci. Lab., Nara Pref. Police H.Q.<sup>\*7</sup>, Criminal Invest. Lab., Shimane Pref. Police H.Q.<sup>\*8</sup>, Forensic Sci. Lab., Tokushima Pref. Police H.Q.<sup>\*9</sup>, Criminal Invest. Lab., Oita Pref. Police H.Q.<sup>\*10</sup>, Criminal Invest. Lab., Kagoshima Pref. Police H.Q.<sup>\*11</sup>, Forensic Sci. Lab., Okinawa Pref. Police H.Q.<sup>\*12</sup>, National Research Inst. of Police Sci.<sup>\*13</sup>)
- D-30 Evaporation and diffusion behavior of gasoline in various spill conditions  
○M. Miura<sup>\*1</sup>, K. Akita<sup>\*2</sup>, S. Sasaki<sup>\*3</sup>, A. Yamashita<sup>\*4</sup>, T. Harama<sup>\*5</sup>, H. Sugimoto<sup>\*6</sup>, H. Sato<sup>\*7</sup>, M. Takao<sup>\*7</sup>, S. Kamihirata<sup>\*8</sup>, K. Isawa<sup>\*9</sup>, Y. Iwatsu<sup>\*10</sup>, S. Takeda<sup>\*11</sup>, T. Kohatsu<sup>\*12</sup>, K. Miwa<sup>\*13</sup>, K. Okamoto<sup>\*13</sup>, N. Watanabe<sup>\*13</sup>, Y. Hagimoto<sup>\*13</sup> (Criminal Invest. Lab., Shimane Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Forensic Sci. Lab., Aomori Pref. Police

H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Niigata Pref. Police H.Q.<sup>\*4</sup>, Forensic Sci. Lab., Shizuoka Pref. Police H.Q.<sup>\*5</sup>, Forensic Sci. Lab., Ishikawa Pref. Police H.Q.<sup>\*6</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*7</sup>, Forensic Sci. Lab., Nara Pref. Police H.Q.<sup>\*8</sup>, Forensic Sci. Lab., Tokushima Pref. Police H.Q.<sup>\*9</sup>, Criminal Invest. Lab., Oita Pref. Police H.Q.<sup>\*10</sup>, Criminal Invest. Lab., Kagoshima Pref. Police H.Q.<sup>\*11</sup>, Forensic Sci. Lab., Okinawa Pref. Police H.Q.<sup>\*12</sup>, National Research Inst. of Police Sci.<sup>\*13</sup>)

- D-31 Computational simulation of evaporation and diffusion behavior of gasoline spill  
○K. Okamoto<sup>\*1</sup>, K. Akita<sup>\*2</sup>, S. Sasaki<sup>\*3</sup>, A. Yamashita<sup>\*4</sup>, T. Harama<sup>\*5</sup>, H. Sugimoto<sup>\*6</sup>, H. Sato<sup>\*7</sup>, M. Takao<sup>\*7</sup>, S. Kamihirata<sup>\*8</sup>, M. Miura<sup>\*9</sup>, K. Isawa<sup>\*10</sup>, Y. Iwatsu<sup>\*11</sup>, S. Takeda<sup>\*12</sup>, T. Kohatsu<sup>\*13</sup>, K. Miwa<sup>\*1</sup>, N. Watanabe<sup>\*1</sup>, Y. Hagimoto<sup>\*1</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Forensic Sci. Lab., Aomori Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Niigata Pref. Police H.Q.<sup>\*4</sup>, Forensic Sci. Lab., Shizuoka Pref. Police H.Q.<sup>\*5</sup>, Forensic Sci. Lab., Ishikawa Pref. Police H.Q.<sup>\*6</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*7</sup>, Forensic Sci. Lab., Nara Pref. Police H.Q.<sup>\*8</sup>, Criminal Invest. Lab., Shimane Pref. Police H.Q.<sup>\*9</sup>, Forensic Sci. Lab., Tokushima Pref. Police H.Q.<sup>\*10</sup>, Criminal Invest. Lab., Oita Pref. Police H.Q.<sup>\*11</sup>, Criminal Invest. Lab., Kagoshima Pref. Police H.Q.<sup>\*12</sup>, Forensic Sci. Lab., Okinawa Pref. Police H.Q.<sup>\*13</sup>)

**09:44 – 10:06** *Chairperson: Y. Takabayashi (Forensic Sci. Lab., Tochigi Pref. Police H.Q.)*

- D-32 Investigation for accident of instantaneous water heater  
○A. Ogawara, K. Arai, S. Ohtsuka, A. Ueda (Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.)
- D-33 Case study on fire accident of 24-hour bath system (household filtering circulator of warm water)  
○T. Hijikata (Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.)

**10:11 – 10:55** *Chairperson: N. Miyamoto (Forensic Sci. Lab., Wakayama Pref. Police H.Q.)*

- D-34 Electrostatic hazards in refueling gasoline to a portable container  
○K. Miwa, K. Okamoto, N. Watanabe, Y. Hagimoto (National Research Inst. of Police Sci.)
- D-35 Sustained arcing short on a PVC-insulated cord preheated by an overcurrent  
○Y. Hagimoto, N. Watanabe, K. Okamoto, K. Miwa (National Research Inst. of Police Sci.)
- D-36 Influence of combustibles on immersion heaters with safety device  
○H. Takeshita, Y. Nishijima, A. Hirashima, K. Toyama, A. Miyamoto (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.)
- D-37 Identification of a melted hole on a metal gas-pipe triggered by a lightning strike  
○Y. Takabayashi<sup>\*1</sup>, S. Sato<sup>\*2</sup>, S. Nishimura<sup>\*3</sup> (Forensic Sci. Lab., Tochigi Pref. Police H.Q.<sup>\*1</sup>, Utsunomiya Univ.<sup>\*2</sup>, Nippon Inst. of Technology<sup>\*3</sup>)

## Engineering, General

### Friday 7th Hall III

**11:00 – 11:44** *Chairperson: K. Kurosawa (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.)*

- D-38 Heat history analysis using positron spectroscopy – Influence of oxidation for Cu  
○K. Kuroki, K. Tsuchiya, N. Akiba (National Research Inst. of Police Sci.)
- D-39 Interaction between fingerprint detection method using UV laser and other examinations  
○N. Akiba<sup>\*1</sup>, K. Kuroki<sup>\*1</sup>, K. Tsuchiya<sup>\*1</sup>, Y. Akao<sup>\*1</sup>, K. Hibino<sup>\*2</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Identification Div., National Police Agency<sup>\*2</sup>)
- D-40 Estimation of person's height during walking and running 2  
○Y. Miyazaki (Criminal Invest. Lab., Metropolitan Police Department)

- D-41 Cloning hard disk and development of cloning equipments  
○K. Fujita<sup>\*1</sup>, T. Hirakata<sup>\*2</sup>, M. Igarashi<sup>\*2</sup>, N. Takido<sup>\*2</sup>, K. Taira<sup>\*2</sup> (Faculty of Science and Engineering, Ryukoku Univ.<sup>\*1</sup>, YEC<sup>\*2</sup>)

## Image Processing

### Friday 7th Hall III

**13:23 – 14:07**                      *Chairperson: K. Fujita (Faculty of Science and Engineering, Ryukoku Univ.)*

- D-42 Discriminating numbers on low-resolution number plate by using moment characteristics  
○T.Hirata, K.Fujita (Faculty of Science and Engineering, Ryukoku Univ.)
- D-43 Application of discrimination method for low-resolution licence plate to the criminal investigation  
○Y. Kida<sup>\*1</sup>, A. Yoshikawa<sup>\*2</sup>, K. Kadono<sup>\*1</sup>, K. Fujita<sup>\*3</sup>, N. Nakamori<sup>\*4</sup> (Forensic Sci. Lab. Shiga Pref. Police H.Q.<sup>\*1</sup>, Konan Univ.<sup>\*2</sup>, Ryukoku Univ.<sup>\*3</sup>, Kyoto Institute of Technology<sup>\*4</sup>)
- D-44 Subjective evaluation experiments for effective image quality improvement processing  
○N. Kounishi<sup>\*1</sup>, K. Kurosawa<sup>\*2</sup> (Identification Div.<sup>\*1</sup>, Forensic Sci. Lab.<sup>\*2</sup>, Ishikawa Pref. Police H.Q.)
- D-45 Restoration of blurred digital video image 2  
○K. Tsuchiya, N. Akiba, K. Kuroki (National Research Inst. of Police Sci.)

**14:12 – 14:56**                      *Chairperson: Y. Miyazaki (Criminal Invest. Lab., Metropolitan Police Department)*

- D-46 Image analysis for measurement and recognition of real world using real image and high resolution image  
○T. Ogura (Forensic Science Lab., Mie Pref. Police H.Q.)
- D-47 Enhancement of cloth stain by using PCA  
○K. Fujita<sup>\*1</sup>, ○S. Oketani<sup>\*2\*3</sup>, Y. Kuga<sup>\*3</sup>, N. Nakamori<sup>\*3</sup>, K. Morimoto<sup>\*3</sup> (Ryukoku University<sup>\*1</sup>, Kyoto Pref. Technology Center<sup>\*2</sup>, Kyoto Inst. of Technology<sup>\*3</sup>)
- D-48 Visualization of blast-wave propagation by using background (II)  
○ M. Kudo, M. Kazama, I. Abe (Criminal Invest. Lab., Metropolitan Police Dept.)
- D-49 Individual camera identification using inhomogeneous nature of CCD charge transfer lines  
○K. Kurosawa<sup>\*1</sup>, K. Kuroki<sup>\*2</sup>, N. Akiba<sup>\*2</sup>, K. Tsuchiya<sup>\*2</sup>, Dong-Min Kim<sup>\*3</sup> (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.<sup>\*1</sup>, National Research Inst. of Police Sci.<sup>\*2</sup>, Forensic Sci. Div., Supreme Prosecutor's Office in Korea<sup>\*3</sup>)

## Mechanical Engineering

### Friday 7th Hall III

**15:01 – 15:56**                      *Chairperson: M. Mizumoto (Forensic Sci. Lab., Kumamoto Pref. Police H.Q.)*

- D-50 Estimation of fracture strength based on mechanical properties  
○M. Ohashi (National Research Inst. of Police Sci.)
- D-51 Study on Fatigue Crack Growth under Two-Step Load Condition  
K. Furukawa<sup>\*1</sup>, ○M. Ishii<sup>\*1</sup>, T. Nitobe<sup>\*1</sup>, K. Akita<sup>\*2</sup>, M. Hashimoto<sup>\*3</sup>, Y. Motomiya<sup>\*4</sup>, T. Kumamoto<sup>\*5</sup>, H. Toda<sup>\*6</sup>, H. Kageyama<sup>\*7</sup>, R. Uchino<sup>\*8</sup>, Y. Fujita<sup>\*9</sup>, Y. Kuchimoto<sup>\*10</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Forensic Sci. Lab., Hokkaido Pref. Police H.Q.<sup>\*2</sup>, Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*3</sup>, Forensic Sci. Lab., Niigata Pref. Police H.Q.<sup>\*4</sup>, Criminal Invest. Lab., Aichi Pref. Police H.Q.<sup>\*5</sup>, Forensic Sci. Lab., Mie Pref. Police H.Q.<sup>\*6</sup>, Forensic Sci. Lab., Osaka Pref. Police H.Q.<sup>\*7</sup>, Forensic Sci. Lab., Nagasaki Pref. Police H.Q.<sup>\*8</sup>, Forensic Sci. Lab., Oita Pref. Police H.Q.<sup>\*9</sup>, Forensic Sci. Lab., Miyazaki Pref. Police H.Q.<sup>\*10</sup>)

- D-52 A study on dynamic response of structural member - Analysis of beam vibration by central difference method –  
○T.Ishihara (Criminal Invest. Lab., Aichi Pref.Police H.Q.)
- D-53 A new method for identification of split object – part 1 –: A case of plastic cap  
○T. Tatsushima<sup>\*1</sup>, A. Suemoto<sup>\*2</sup>, S. Mizuta<sup>\*1</sup> (Forensic Sci. Lab.<sup>\*1</sup>, Identification Div.<sup>\*2</sup>, Fukui Pref. Police H.Q.)
- D-54 Problems and countermeasures in measurement and evaluation of impact force which a human body receives  
○Y. Ito<sup>\*1</sup>, T. Kimura<sup>\*2</sup>, M. Matsui<sup>\*2</sup>, T. Ogura<sup>\*3</sup>, H. Toda<sup>\*3</sup>, M. Onodera<sup>\*1</sup>, T. Tetsuya<sup>\*1</sup>, H. Matsuura<sup>\*1</sup>, H. Yamashita<sup>\*4</sup> (National Institute for Longevity Sciences<sup>\*1</sup>, Criminal Invest. Lab., Aichi Pref. Police H. Q.<sup>\*2</sup>, Criminal Invest. Lab., Mie Pref. Police H. Q.<sup>\*3</sup>, Tokyo Measuring Instruments Laboratory Co., Ltd.<sup>\*4</sup>)

## Crime Scene Identification (E)

**Thursday 6th Hall IV**

**14:50 – 15:34** *Chairperson: T. Ishikawa (Identification Div., Kanagawa Pref. Police H.Q.)*

- E-01 Visualization of ninhydrin developed fingerprint using indium trichloride - effectiveness and practicality -  
○K. Murota<sup>\*1</sup>, T. Masaki<sup>\*1</sup>, S.Hiratsuka<sup>\*1</sup>, F.Hayashi<sup>\*1</sup>, H.Masago<sup>\*1</sup>, A.Namigata<sup>\*1</sup>, K.Hibino<sup>\*2</sup>, N. Sumida<sup>\*3</sup>, O. Shimoda<sup>\*4</sup>, M. Takatsu<sup>\*4</sup> (Identification Div., Metropolitan Police Dept.<sup>\*1</sup>, Identification Div., National Police Agency<sup>\*2</sup>, Identification Div., Hyogo Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*4</sup>)
- E-02 Development of latent fingerprint by iron dispersion liquid added Fluorochemical surfactant - Effect of decreasing surface tension of liquid -  
○Y. Saitoh, M. Honma (Identification Div., Niigata Pref. Police H.Q.)
- E-03 Application of polycyanoacrylate/DMAB (or DMAC) method  
○H. Teranishi<sup>\*1</sup>, K. Hibino<sup>\*2</sup>, K. Matsumoto<sup>\*3</sup>, S. Okao<sup>\*3</sup>, O. Shimoda<sup>\*4</sup>, M. Takatsu<sup>\*4</sup> (Sky Science Co., Ltd.<sup>\*1</sup>, Identification Div., National Police Agency<sup>\*2</sup>, Identification Div., Hyogo Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*4</sup>)
- E-04 The principles underlying the cyanoacrylate method for latent fingerprint development.  
○K. Hibino<sup>\*1</sup>, H Aoyama<sup>\*1</sup>, M Gokita<sup>\*1</sup>, T Morita<sup>\*1</sup>, M Ito<sup>\*1</sup>, S Takeuchi<sup>\*2</sup>, T Tsukame<sup>\*3</sup>, O Shimoda<sup>\*4</sup>, M Takatsu<sup>\*4</sup>, M Ishii<sup>\*5</sup>, K Furukawa<sup>\*5</sup>, N Akiba<sup>\*5</sup>, K Kuroki<sup>\*5</sup> (Identification Div. National Police Agency<sup>\*1</sup>, Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*2</sup>, Criminal Invest. Lab., Saitama Pref. Police H.Q.<sup>\*3</sup>, Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*4</sup>, National Research Inst. of Police Sci.<sup>\*5</sup>)

**15:44 – 16:28** *Chairperson: H. Takayama (Identification Div., Metropolitan Police Department)*

- E-05 Search method of the tissue using dyeing reagents I -The examination of the method collecting sample-  
○K. Ito<sup>\*1</sup>, T. Ami<sup>\*2</sup>, Y. Unno<sup>\*2</sup> (Identification Div.<sup>\*1</sup>, Scientific Invest. Lab.<sup>\*2</sup>, Fukushima Pref. Police H.Q.)
- E-06 Footprint transparency photography method by polarized-light filters  
○I. Mitsumochi (Identification Div., Kanagawa Pref. Police H.Q.)
- E-07 Basic study on using characteristics (Wear characteristics) : Formation and mechanism of the wear  
○T. Suzuki, T. Tsujiyama (Identification Div., Miyagi Pref. Police H.Q.)

- E-08 Basic study on examination of footwear impression: The variation between the questioned impression and the known impression on the examination of footwear impression  
○T. Tsujiyama, T. Suzuki (Identification Div., Miyagi Pref. Police H.Q.)

**16:38 – 17:22**

**Chairperson:** F. Ishizawa (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)

- E-09 Contrivance of using superimposed sheet to judge the trace of car license plate number  
○S. Kuroda<sup>\*1</sup>, H. Tateishi<sup>\*2</sup> (Identification Division, Toyama Pref. Police H.Q.<sup>\*1</sup>, Information Technology Center, Tokai Univ.<sup>\*2</sup>)
- E-10 The development of “tracer powder” for secret identification.  
T. Mochizuki<sup>\*1</sup>, ○K. Kurata<sup>\*2</sup>, T. Harama<sup>\*2</sup>, Y. matsuyama<sup>\*2</sup> (Identification Div.<sup>\*1</sup>, Forensic Sci. Lab.<sup>\*2</sup>, Shizuoka Pref. Police H.Q.)
- E-11 Examination of effectiveness of height measurement that uses vanishing point  
○K. Takezaki<sup>\*1</sup>, H. Tateishi<sup>\*2</sup> (Identification Div., Okayama Pref. Police H.Q.<sup>\*1</sup>, Information Technology Center, Tokai Univ.<sup>\*2</sup>)
- E-12 Development of bio diesel fuels detector tube  
○E. Norimine, T. Ishiwata, F. Ishizawa (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)

## Forensic Psychology (F)

**Friday 7th Hall IV**

**09:00 – 09:44**

**Chairperson:** K. Watanabe (National Research Inst. of Police Sci.)

- F-01 Factors of suspects, crimes, and interrogators that facilitate confession to denying suspects  
○Y. Otsuka, T. Wachi, K. Yokota, K. Watanabe (National Research Inst. of Police Sci.)
- F-02 What kind of meanings do the disposals of dead bodies have in the context of murder?  
○T. Kasuya<sup>\*1</sup>, H. Suzuki<sup>\*1</sup>, T. Suzuki<sup>\*2</sup>, M. Nishimura<sup>\*1</sup>, A. Ishihara<sup>\*1</sup>, T. Suzuki<sup>\*1</sup> (Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*1</sup>, Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*2</sup>)
- F-03 Can the victim-offender relationship predict the concealment of dead bodies?  
○T. Suzuki<sup>\*1</sup>, T. Kasuya<sup>\*1</sup>, H. Suzuki<sup>\*1</sup>, A. Ishihara<sup>\*1</sup>, T. Suzuki<sup>\*2</sup>, M. Nishimura<sup>\*1</sup> (Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*1</sup>, Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*2</sup>)
- F-04 Is it possible that the victim-offender relationships explain the "respectful" disposal of the dead body?  
○T. Suzuki<sup>\*1</sup>, T. Kasuya<sup>\*2</sup>, H. Suzuki<sup>\*2</sup>, T. Suzuki<sup>\*2</sup>, A. Ishihara<sup>\*2</sup>, M. Nishimura<sup>\*2</sup> (Scientific Crime Invest. Lab., Kanagawa Pref. Police H.Q.<sup>\*1</sup>, Criminal Invest. Lab., Metropolitan Police Dept.<sup>\*2</sup>)

**09:54 – 10:38**

**Chairperson:** R. Suzuki (Forensic Sci. Lab., Chiba Pref. Police H.Q.)

- F-05 A case that mental disability was proved after the polygraph test  
○N. Tsuji, R. Ikegaya (Forensic Sci. Lab., Hokkaido Pref., Police H.Q.)
- F-06 Effects of smoking in polygraph testing  
○ M. Shimizu, H. Yasuki (Forensic Sci. Lab., Fukuoka Pref. Police H.Q.)

- F-07 Effects of coffee on the polygraph test  
 ○S. Gamou<sup>\*1</sup>, A. Hanayama<sup>\*2</sup>, T. Tateuchi<sup>\*3</sup>, Y. Nagai<sup>\*4</sup>, A. Nakashima<sup>\*5</sup>, S. Osaka<sup>\*6</sup> (Forensic Sci. Lab., Ehime Pref. Police H.Q.<sup>\*1</sup>, Forensic Sci. Lab., Aomori Pref. Police H.Q.<sup>\*2</sup>, Forensic Sci. Lab., Chiba Pref. Police H.Q.<sup>\*3</sup>, Criminal Invest. Lab., Shimane Pref. Police H.Q.<sup>\*4</sup>, Forensic Sci. Lab., Fukuoka Pref. Police H.Q.<sup>\*5</sup>, Japan Ground Self-Defense Force<sup>\*6</sup>)
- F-08 Examination about the relation of “attribute of a question” and “responses patterns”  
 ○N. Fukada (Scientific Invest. Lab., Fukushima Pref. Police H.Q.)

**10:48 – 11:43**

**Chairperson:** T. Ogawa (National Research Inst. of Police Sci.)

- F-09 An analysis of superimposed SCR in the experimental CIT  
 ○T. Tateuchi, R. Suzuki (Forensic Sci. Lab., Chiba Pref. Police H.Q.)
- F-10 Is the finger pulse wave reliable for the measurement of heart rate at the field polygraph test?  
 ○M. Fujii<sup>\*1</sup>, K. Oshima<sup>\*2</sup> (Criminal Invest. Lab., Gifu Pref. Police H.Q.<sup>\*1</sup>, Criminal Invest. Lab., Okayama Pref. Police H.Q.<sup>\*2</sup>)
- F-11 Relationship between skin conductance activity and normalized pulse volume in the field polygraph test  
 ○N. Yamamoto<sup>\*1</sup>, M. Kobayashi<sup>\*2</sup> (Criminal Invest. Lab., Yamagata Pref. Police H. Q.<sup>\*1</sup>, Criminal Invest. Lab., Miyagi Pref. Police H. Q.<sup>\*2</sup>)
- F-12 Eye-blink and eye-movement in the polygraph test: The influence of observation  
 ○K. Sugawa, M. Ishikawa (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.)
- F-13 Late positive brain potential in the Concealed Information Test: Is it P3?  
 ○I. Matsuda<sup>\*1</sup>, H. Nittono<sup>\*2</sup>, A. Hirota<sup>\*1</sup>, T. Ogawa<sup>\*1</sup>, N. Takasawa<sup>\*3</sup> (National Research Inst. of Police Sci.<sup>\*1</sup>, Graduate School of Integrated Arts and Sciences, Hiroshima Univ.<sup>\*2</sup>, Dept. of Sociology and Human Studies, Edogawa Univ.<sup>\*3</sup>)

## Questioned Documents (G)

**Friday 7th Hall IV**

**13:23 – 14:07**

**Chairperson:** M. Kondo (Forensic Sci. Lab., Niigata Pref. Police H.Q.)

- G-01 Strategies used for the observational handwriting classification  
 ○Y. Seki (National Research Inst. of Police Sci.)
- G-02 Study of handwriting analysis by using angle data  
 ○H. Sakakibara, T. Ohuchi (Criminal Invest. Lab., Aichi Pref. Police H.Q.)
- G-03 Writer verification using weighted direction index histogram method and background propagation method  
 ○K. Misaki<sup>\*1</sup>, H. Matsumoto<sup>\*2</sup>, M. Umeda<sup>\*2</sup> (Forensic Sci. Lab., Hyogo Pref. Police H.Q.<sup>\*1</sup>, Graduate School of Engineering, Osaka Electro-Communication Univ.<sup>\*2</sup>)
- G-04 Examination of writing time with a digital pen  
 ○M. Shimoyama, K. Kobayashi (Forensic Sci. Lab., Hyogo Pref. Police H.Q.)

**14:12 – 14:56**

**Chairperson:** T. Izawa (Forensic Sci. Lab., Shizuoka Pref. Police H.Q.)

- G-05 Writer identification based on character geometry (Case of numeric character)  
 ○K. Tokiwa<sup>\*1</sup>, K. Fukue<sup>\*2</sup> (Criminal Invest. Lab., Metropolitan Police Department<sup>\*1</sup>, Tokai Univ. Research and Information Center<sup>\*2</sup>)

- G-06 Writer identification based on character geometry (Identification accuracy and writing date dependency)  
 ○R. Okubo<sup>\*1</sup>, K. Tokiwa<sup>\*2</sup>, K. Fukue<sup>\*1</sup> (Tokai Univ. Research and Information Center<sup>\*1</sup>, Criminal Invest. Lab., Metropolitan Police Department<sup>\*2</sup>)
- G-07 Writer identification based on character geometry (Dependency of sexuality and age)  
 ○A. Hosina<sup>\*1</sup>, R. Okubo<sup>\*1</sup>, K. Tokiwa<sup>\*2</sup>, K. Fukue<sup>\*1</sup> (Tokai Univ. Research and Information Center<sup>\*1</sup>, Criminal Invest. Lab., Metropolitan Police Department<sup>\*2</sup>)
- G-08 Detecting disguised document 2: From quantitative perspective of literary  
 ○N. Hasegawa (Criminal Invest. Lab., Aichi Pref. Police H.Q.)

**15:01 – 15:34** *Chairperson: Y. Otori (Forensic Sci. Lab., Miyagi Pref. Police H.Q.)*

- G-09 Influence of the chemicals for the fingerprint detection to the ballpoint handwriting  
 ○T. Kuramochi (Scientific Crime Invest. Lab., Tottori Pref. Police H.Q.)
- G-10 Detection of spur mark using infrared scanner and estimation for out-of-focus PSF  
 ○T. Furukawa, N. Nemoto, H. Kawamoto (Forensic Sci. Lab., Ibaraki Pref. Police H.Q.)
- G-11 Study on the groove number of 2D hologram applied to security documents  
 ○Y. Akao, A. Yamamoto, Y. Higashikawa (National Research Inst. of Police Sci.)

**15:39 – 16:23** *Chairperson: K. Sugawa (Forensic Sci. Lab., Ishikawa Pref. Police H.Q.)*

- G-12 Identification of job-placement journal by template matching using genetic algorithm  
 ○M. Ueda<sup>\*1</sup>, S. Tanaka<sup>\*1</sup>, T. Kamitani<sup>\*2</sup>, Y. Marutani<sup>\*2</sup> (Forensic Sci. Lab., Kyoto Pref. Police H.Q.<sup>\*1</sup>, Faculty of Engineering, Osaka Sangyo Univ.<sup>\*2</sup>)
- G-13 The examination method of comparison for seal by superimposing -The examination method of matching rate and matching the residual rate-  
 ○T. Yamamoto<sup>\*1</sup>, T. Yoshimura<sup>\*1</sup>, M. Yoshida<sup>\*2</sup> (Forensic Sci. Lab., Fukui Pref. Police H.Q.<sup>\*1</sup>, Questioned Document Identification Research Society<sup>\*2</sup>)
- G-14 Dynamics of surface shape on Japanese box seals affected by environmental conditions  
 ○M. Suzuki, H. Muto (Criminal Invest. Lab., Tokyo Metropolitan Police Dept.)
- G-15 Case report: Forged certificates of seal registration used for documentary evidence by a financial institution trial  
 ○R. Wakatsuki (Kansai Document & Forensic Sci. Lab.)