Report Form (Cover Sheet) 積 報 告

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平成	年	月	日	

(公財) 会津地域教育・学術振興財団

理事長 宮 森 泰 弘 様

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Brief overview of the Conference

1 事業実績の概要

Leave it as it is (No additional description needed)

別紙のとおり Please see the accompanying sheet

- (1) Description form (Accompanying sheet) (1) 実施報告書(別紙)
- (2) Photo(s) of your presentation (2) 学会発表時の写真
- (3) A photocopy of handouts distributed at the Conference (3) 当日の配付資料の写し
 - ※ ただし、事業の成果がわかる資料添付すること。

Description Form (Accompanying Sheet) 実績報告書(別紙)

(公財)会津地域教育·学術振興財団

理事長 宮森泰弘様

Name

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Brief overview of the Conference

【概要】

Provide a brief overview of the Conference in <u>Japanese</u> in <u>ONE PAGE</u>.

CSE2011(第 33 回ソフトウェアエンジニアリング国際学会が、平成23年XX月XX日(X)からXX日(X)の日程で、XXで開催されました。この学会はXXが主催する最大の学会で、XXXXなどの分野における最新の研究についての知見の交換等を目的としています。

私は、この学会に出席し、「Security Testing Methods and Its system to Mobile Code (モバイルコードのテスト装置及びテスト手法)」という題目で口頭発表を行いました。本研究の目的は、ウェブアプリケーション(ウェブサイト)におけるモバイルコードの脆弱性を自動検知することが可能なモバイルコードテスト装置、モバイルコードテスト方法およびモバイルコードテスト用プログラムを提供することを課題としています。

口頭発表後の質疑応答では、参加者との議論を行い、「XXXXX」といった意見や、「XXXXX」のアドバイスなどがあり、発表内容は概ね好評であったと思います。

また、多様な国々の研究者や技術者と意見を交換し、議論する機会があり、多くのことを学ぶ機会となりました。

今後、本学会に出席し得られた成果を、自らの研究に生かすため励んでいきたいと考えています。そして、会津地域におけるIT産業に貢献すべく、より一層の研究、開発を進めていきたいと思います。

Photo(s) of your presentation





Photocopy of handouts distributed at the Conference

(e.g.) Photocopy of the Conference program <NOTE> Please **HIGHLIGHT** you name.

Room 318-320

Room 321-323

Room 324-326

Room 314

CLEO: QELS-**Fundamental Science** CLEO: Science & Innovations

07:30-12:00 Registration Open, Baltimore Convention Center, Pratt Street, 300 Level Lobby

08:00-09:45 QFA • Plasmonic Metamaterials

Gennady Shvets, The Univ. of Texas at Austin USA, Presider

OFA1 • 08:00

QFA1 + O8:00
Multi-Spectral Plasmon Induced Transparency with Hybridized Metamaterials, Alp
Artan', Almet A. Yanik', Hatice Altag', Electrical
and Computer Engineering, Boston Univ., VAS.
We propose and demonstrate a scheme enabling
construction of a scalable metamaterial supporting multi-spectral electromagnetically induced
transparency-like effects through hybridization
of coupled meta-atoms. Tailoring of intra- and
inter-layer near-field interactions give rise to the
discussed phenomenon.

OFA2 + 08:15

Towards 3D plasmon rulers, Na Liu', Mario Hentschel¹, Thomas Weiss², Harald Giessen², A. Hentschef, Thomas Weiss, Marald Giesser, A. Paul Alfuisatos; Department of Chemistry, Univ. of California, Berkeley, and Materials Sciences Division, Lawrence Berkeley National Lah, USA; 4th Physics hast, Univ. of Studgart, Germany, We demonstrate a prototype 3D plasmon ruler based on coupled plasmonic oligomers in combination with high-resolution plasmon spectroscopy, rendering the retrieval of the complete spatial configuration and dynamics of complex machine. configuration and dynamics of complex macro molecules possible

Fano Resonances in Reduced Symmetry Meta-materials, Chililmi Wir', Alexander B. Khanikaev', Nihal Arju', Burton Neumer', Gennady Shvets'; Physics, UT Austin, USA. We demonstrate the Fano resonance in reduced symmetry metamaterials with both inversion symmetry being broken. Experimental results are presented and demonstrate the onset of Fano resonances.

QFA4 + 0.8:45
Maxwell Fisheye and Eaton Lenses Emulated by
Microdroplets, Igor Smolyaminov¹, Vent Smolyaminov², Alexander Kildishev², Vladimir Shafaev²
Unin: of Maryland, USA; Department of Physics
Astronomy and Gensciences, Towson Unin, USA;
Plandae Unin, USA, We demonstrate that microlenses may act as a two-dimensional fisheye or an
inverted Eaton lens. An asymmetric Eaton lens
may exhibit considerable image magnification,
which has been confirmed experimentally.

08:00-09:45 CFA · Optomechanics II

Kartik Srinivasan, NIST, USA, Presider

CFA1 • 08:00

Full Phononic Bandgap in 2D-Optomechanical Crystals, Thiago P. Mayer Alegre¹, Amir H. Safavi-Nacini¹, Martin Winger¹, Oskar Painter¹; Thomas J. Watson, Sr., Lub of Applied Physics, California Inst. of Technology, USA. We demonstrate simultaneous strong confinement and interaction of photons and phonons in a quasi two-dimensional (2D) slab.

CFA2 + 08:15

CFAZ * 08:15 Low Power Resonant Optical Excitation of an Optomechanical Cavity, Yiyang Goog', Armand Rundquist', Arka Majumdar', Jelena Vuckovic'; Electrical Engineering, Stanford Univ., USA. We demonstrate the actuation of a double beam optomechanical cavity with a sinusoidally varying optical input power. We observe the driven mechanical motion with only 200 nW coupled to the optical cavity mode.

CFA3 • 08:30

Optomechanically-coupled Fishbone-shaped Double-beam Nanoresonators, Seung Hoon Lee', Jong-Bum You', Jee Soo Chang', Yong-Hee Lee', Seung S. Lee', Kwang-Cheol Lee', Bumki Lee', soung's . Lee', soung's . Gue u'ce', nama's . Min'; 'Department of Mechanical Engineering, Korea Advanced Inst. of Science and Technology (KAIST), Republic of Korea; 'Department of Physics, Korea Advanced Inst. of Science and Technology (KAIST), Republic of Korea; 'Korea Research Inst. of Standards and Science, Republic of Korea. We demonstrate gradient-force-induced mechanical oscillations in optomechanically-coupled fish-bone-shaped double-beam nanocavities. Details in design, fabrication, and measurement will be

CFA4 • 08:45

CFA4 * 08:45
Optomechanical coupling in slot-type photonic crystal cavities, Ying Li², Jiangjun Zheng', Hung-Bing Tan', Mehmet Aras', A. Stehr', Be Gao', Jing Shu', Chee Wei Wong'; 'Optical Namostructures Lab, Columbia Univ., USA; 'Brookhaven National Laly, USA. We demonstrate a strong optomechani-cal coupling air-slot photonic crystal cavity (g_{ssc}=940GHz/nm). Optical and mechanical mea-surements are shown. Radio-frequency spectrum is obtained theoretically and experimentally

08:00-09:45 CFB . Integration on Silicon

Amir Nejadmalayeri, MIT, USA, Presider

CFB1 • 08:00 Tutorial

Lasers on Silicon, John E. Bowers, Univ. of California at Santa Barbara, USA. A number of important breakthroughs in the past decade have focused attention on Si as a photonic platform. We review here recent worldwide progress in this field, focusing on efforts to make lasers on or in silicon and on silicon photonic integrated circuits. The impact active silicon photonic integrated circuits could have on data and telecommunications and



John Bowers holds the Fred Kavli Chair in Nanotechnology, and is the Director of the Inst. for Energy Efficiency and a Professor in the De-partment of Electrical and Computer Engineering at UCSB. He is a cofounder of Aurrion, Aerius Photonics and Callent Networks, Dr. Bowers received his M.S. and Ph.D. degrees from Stanford Univ. and worked for AT&T Bell Laboratories and Honeywell before joining UC Santa Barbara. Dr. Bowers is a member of the National Academy of Engineering, a fellow of the IEEE, OSA and the American Physical Society, and a recipient of the OSA Holonyak Prize, the IEEE LEOS William Streifer Award and the South Coast Business and Technology Entrepreneur of the Year Award. He has published eight book chapters, 450 journal papers, 700 conference papers and has received 52 patents. He and coworkers received the EE Times Annual Creativity in Electronics (ACE) Award for Most Pompition Technology for the health? Engineering, a fellow of the IEEE, OSA and the for Most Promising Technology for the hybrid silicon laser in 2007.

08:00-09:45 CFC · Optical Frequency Standards and Signal

Chad Hoyt, Bethel Univ., USA,

CFC1 • 08:00

Dissemination

Portable Acetylene Frequency References inside Sealed Hollow-core Kagome Photonic Crystal Fiber, Chenchen Warg', Natalie V. Wheeler', Jink-ang Lim', Kevin Knabe', Michael Grogan', Yingying Wang', Brian R. Washburre', Fetah Benabid' Kristan L. Corwin'; 'Physics, Kansas State Univ. USA; 'Physics, Univ. of Bath, UK. A continuouswave diode laser is stabilized to a near-infrared acetylene transition inside a sealed kagome photonic crystal fiber. Stability and absolute fre-quency are measured with a frequency comb, and polarization sensitivity is observed.

CFC2 • 08:15

Progress of the 171Yb Optical Lattice Clock at NMIJ, AIST, Masami Yasuda^{1,2}, Takuya Kohno^{1,2}, Kazumoto Hosaka^{1,2}, Hajime Imaba^{1,2}, Yoshiaki Nakajima^{1,2}, Daisuke Akamatsu^{1,3}, Kana Toursand Vanagina", Fong-Lei Hong-L; VMII, AIST, Japan: bwakunii 4, Feng-Lei Hong-L; VMII, AIST, Japan: 2CREST, JST, Japan: 3-bukui Univ. of Technology, Japan; *Keio Univ., Japan. Experimental efforts to reduce the uncertainty of the ytterbium (171Yb) optical lattice clock at NMIJ, AIST are shown. The signal-to-noise ratio of the spectrum was increased by 10 times by an atom number normalization scheme.

Precision Calculation of Blackbody Radiation Shifts for Metrology at the 18th Decimal Place, Marianna Safronova¹, Mikhail Kozlov², Charles W. Clark¹; 'Physics and Astronomy, Univ. of Delaware, USA; 2PNPL Russian Federation; 3[QL NIST and the Univ. of Maryland, USA. We present a new approach for accurate calculation of atomic polarizabilities, apply it to evaluate BBR shifts in optical clock transitions in Al, B and In, and find uncertainties below 10¹⁸ in some cases.

CFC4 • 08:45

Optical direct comparison of two **Sr lattice clocks using a >50km fiber link, Tetsuya Ido*, Miho Fujieda*, Atsushi Yamaguchi*, Motohiro Kumagai*, Hidekazu Hachisu*, Shigeo Nagano*, Tetsushi Takano2, Masao Takamoto2, Hidetoshi Katori2, stem tanamy, susses tokumore, tracesom knowe;

"Natinal Inst. of Information and Communications
Technology, Japan; "Univ. of Tokyo, Japan. >50km
optical fiber link connecting NICT and Univ. of Tokyo has enabled direct comparison of "Sr lattice clocks locating in each site. Transmission instabil-ity 2×10⁻¹⁴@1s unveils sub-10Hz fluctuations of recently developed NICT clock.