**ISTU2011**  
**11th International Symposium on Therapeutic Ultrasound**  
**Summary Program - supersedes the Preliminary Program**

All events are at the New York Marriott Marquis Hotel (1535 Broadway, New York, New York 10036 USA) on the 5th Floor (Westside Ballroom Complex), unless otherwise indicated.

For further information and updates, please visit the conference website istu2011.org  
For corrections or assistance please send a message to info@istu2011.org

**Co-Chairs**  
Robert Muratore & Elisa Konofagou

**Sunday afternoon, 2011 April 10**

1:00-6:00 PM (13:00/18:00)  
4th Floor Ziegfeld Room  
International Electrotechnical Commission  
IEC SC62D Project Team 60601-2-62

2:00-7:00 PM (14:00/19:00)  
4th Floor Brecht Room  
ISTU Board

5:00-7:00 PM (17:00/19:00)  
5th Floor Registration Booth  
Registration

8:00-10:00 PM (20:00/22:00)  
Carmine's Restaurant  
200 West 44th Street  
Welcome Reception
ISTU211 Summary Program

Monday, April 11 Westside Ballroom North

7:00 --

Registration

Session-Plenary 1
8:00-8:05  Welcome by the President  Larry Crum
8:05-8:15  Welcome by the Meeting Chairs  Robert Muratore & Elisa Konofagou
8:15-8:35  Feng Wu
8:35-8:55  Kathy Ferrara

Session 1A-Bubble enhanced delivery---Chair: Kathy Ferrara
9:00-9:15  Enhancement of Neuroprotective Effects of Erythropoietin by Focused Ultrasound with Microbubbles  Wen-Mei Fu
9:15-9:30  High-intensity Focused Ultrasound-Mediated Doxorubicin Delivery with Thermosensitive Liposomes  Jean-Michel Escoffré
9:30-9:45  Potentiating Chemotherapy with the Antivascular Effects of Ultrasound Stimulated Microbubbles  David Goertz
9:45-10:00  Mechanisms for Vascular Bioeffects Induced by Ultrasound-activated Microbubbles  Hong Chen

10:00-11:00  Coffee Break, Exhibits, and Poster session P1-1

Session 1B-Sonoporation/Particle delivery---Chair: Mathias Finck
11:00-11:15  Prolonging the Expression Duration of Transfected DNA by Combining Sonoporation and PEI Nanoparticles  Wen-Shiang Chen
11:15-11:30  Effects of Biological Conditions on Sonoporation Efficiency in Cancer Cells  Samuel Pichard
11:30-11:45  Pulsed HIFU Enhanced Penetration of Fluorescent Molecules Into Pancreas Tumors in Vivo  Joo Ha Hwang
11:45-12:00  Ultrasound-enhanced Delivery of Antibiotics Into the Eye  Marjan Nabili

12:00-1:00  Lunch

Session 1C-Invited---Chair: Robert Muratore
1:00-1:20  Mickael Tante
1:20-1:40  Kevin Sekins
1:40-2:00  Jamie Tyler

Session 1D-Neurostimulation and transcranial studies---Chair: Jamie Tyler
2:00-2:15  Hippocampal Culture Stimulus with 4-Megahertz Ultrasound  Robert Muratore
2:15-2:30  Inflamed and Neuropathic Tissue is Preferentially Receptive to Stimulation by Intense Focused Ultrasound  Pierre Mourad
2:30-2:45  Study of Thermal Effects of Ultrasound Stimulation on Sympathetic Nerves  Yegor D Sinelnikov
2:45-3:00  Phase Aberration Correction Method for Focused Ultrasound in the Brain  Elena Kaye

3:00-4:00  Coffee Break, Exhibits, and Poster session P1-2 (student award competition)

Session 1E-Brain drug delivery---Chair: Kullervo Hynynen
4:00-4:15  Feasibility Study of a Single-Element Transcranial Focused Ultrasound System for Blood-Brain Barrier Opening  Fabrice Marquet
4:15-4:30  A Pilot Study on BBB Disruption in Nonhuman Primates Using a Clinical MRI-guided Focused Ultrasound System  Nathan McDannold
4:30-4:45  Targeted Delivery of Neural Stem Cells in the Rat Brain Via Focused Ultrasound-Induced Blood-Brain Barrier Disruption  Juyoung Park
4:45-5:00  Delivery of Dopamine Transporter Tracer (PE2I) Through Blood Brain Barrier with Ultrasound and Microbubbles  Sophie Serriere
5:00-5:15  Blood-Brain Barrier Permeability Dependence on Acoustic and Microbubble Parameters  Fotios Vlachos
5:15-5:30  BBB Disruption with Unfocused Ultrasound Alone - a Paradigm Shift  Albert Kyle

6:30-8:30  Monday Reception Marriott Marquis 9th Floor Promenade
ISTU211 Summary Program

Monday, April 11 Westside Ballroom South

7:00 --

Registration

Session-Plenary 1 (Ballroom North)

8:00-8:05
8:05-8:15
8:15-8:35
8:35-8:55

Session 2A- Uterine Fibroid HIFU---Chair: Nathan McDannold

9:00-9:15 1569401193  MR-guided High Intensity Ultrasound Treatment of Uterine Fibroids with Temperature Mapping  Yonghua Xu
9:15-9:30 1569401387  MR-guided HiFU for Treatment of Uterine Fibroids in Patients with Bowel Lies Anterior to Uterus: Six Months Follow-Up  Lian Zhang
9:30-9:45 1569402609  Long-Term Follow-up Results of HIFU Ablation for Uterine Fibroids  Wenzhi Chen
9:45-10:00 1569402519  High Intensity Focused Ultrasound Ablation of Uterine Fibroids: Multi-factor Analysis  Baorang Zhu

10:00-11:00 Coffee Break, Exhibits, and Poster session P1-1

Session 2B-Treatment planning/assessment---Chair: Nick Yin

11:00-11:15 1569387597  [F-18]FDG PET Imaging for Sensitive Tumor Margin Assessment Post MR-HIFU Ablation Treatment  Nicole M Hijnen
11:15-11:30 1569402095  Magnetic Resonance Imaging Evaluation of Patients with Hepatic Hydatid Disease After HIFU Ablation: Short Term Results  Kun Zhou
11:30-11:45 1569401245  Histological Evaluation of HIFU with Lower-Intensity Focused Ultrasound Pre-Exposure on Rabbit VX2 Liver Tumors  Hairong Zou
11:45-12:00 1569403653  Prolonged Enhanced Ablative Responses After HIFU Therapy for Malignant Tumors  Joan Vidal-Jove

12:00-1:00 Lunch

Session 2C-US-guided HIFU---Chair: Emad Ebbini

1:00-1:15 1569403075  In Vivo Thermal Ablation Monitoring by Echo Decorrelation Imaging  Swetha Subramaniam
1:15-1:30 1569401481  Changes in Quantitative Ultrasound Parameters During HIFU Application  Goutam Ghoshal
1:30-1:45 1569387509  Temperature Mapping for Ultrasound Scanner Using Backscattered Changes  Jeremy Cheno
1:45-2:00 1569403015  High-Frequency Ultrasound M-mode Monitoring of HIFU Ablation in Cardiac Tissue  Ronald Kumon

Session 2D-MR-guided HIFU---Chair: Sham Sokka

2:00-2:15 1569402549  Fibroid Shrinkage Following MR-Guided Focused Ultrasound Ablation: Correlation to the Maximum Temperature  Yuexi Huang
2:15-2:30 1569403337  Improvement of Energy Efficiency in Volumetric MR-HIFU Ablation of Uterine Fibroids: Role of Treatment Cell Size  Young-sun Kim
2:30-2:45 1569403741  Non-invasive Estimation of Patient-specific Tissue Acoustic Properties for MRgFUS  Urvi Vyas
2:45-3:00 1569403107  Evaluation of Optic Nerve Function and Structural Integrity After Microbubble-Enhanced FUS Ablation of Brain Regions  Nathan McDannold

3:00-4:00 Coffee Break, Exhibits, and Poster session P1-2 (student award competition)

Session 2E-MR-guided HIFU---Kim Butts-Pauly

4:00-4:15 1569403785  MR-guided Interstitial Thermal Therapy for the Treatment of Brain Tumors with a Multi-Element Ultrasound Probe  Michael Canney
4:15-4:30 1569402597  Precision of a 1MHz MR-guided Ultrasonic Brain Therapy Prototype: Experiments on 12 Fresh Cadavers  Laurent Marsac
4:30-4:45 1569402123  Development of the HIFU System for Use in the Intelligent Operating Room with MRI for Diseased Animal Therapy  Jun Kubota
4:45-5:00 1569402345  A Low-Cost, Easy-To-Handle Calibration Phantom for MR Thermometry in HIFU Fields  Julian Haller
5:00-5:15 1569403023  MRI-Guided Transurethral Ultrasound Therapy Enables Full Prostate Gland Coagulation  William Apoutou N'Dijin
5:15-5:30 1569402901  Acoustic Holography and Nonlinear Modeling Methods to Characterize the Philips MR-Guided HIFU Source  Wayne Kreider

6:30-8:30 Monday Reception Marriott Marquis 9th Floor Promenade
ISTU211 Summary Program
Tuesday, April 12 Westside Ballroom North

7:00 --
Registration

Session 1H-Invited---Chair: Shin Umemura
8:00-8:20 Mathias Fink
8:20-8:40 Constantin Coussios
8:40-9:00 Tom Leslie

Session 1G-Transducers and devices---Chair: Ralf Seip
9:00-9:15 1569403081 Prototype for Expulsion of Kidney Stones with Focused Ultrasound Michael Bailey
9:15-9:30 1569401731 Quantitative Transducer Characterization Using Infrared Thermography Matthew Myers
9:30-9:45 1569402257 Comparison Between 1-3 Piezocomposite and PZT Ceramic for HIFU Transducer Applications Gin-Shin Chen
9:45-10:00 1569402691 Measurement of Therapeutic Intensity Distributions Using an Infra-Red Camera Adam Shaw

10:00-11:00 Coffee Break, Exhibits, and Poster session P2-1

Session 1H-Elasticity and acousto-optic monitoring---Chair: Mickael Tanter
11:00-11:15 1569402993 In Vivo Localized Harmonic Motion Imaging of VX2 Tumors Laura Curiel
11:15-11:30 1569403595 Fundamental Analysis and Ex Vivo Validation of Thermal Lesion Mapping Using HMIFU Gary Hou
11:30-11:45 1569403185 Numerical Simulation of Harmonic Motion Imaging of HIFU Induced Lesion Formation Andrew Draudt
11:45-12:00 1569403641 Acousto-optic (AO) Sensing of HIFU Lesion Formation in Real-Time Robin Cleveland

12:00-1:00 Lunch

Session 1I-Invited---Chair: Elisa Konofagou
1:00-1:20 Hector Lopez
1:20-1:40 Rob Hekkenberg
1:40-2:00 George Likourezos

Session 1J-Tumor drug delivery---Chair: Constantin Coussios
2:00-2:15 1569385215 Low Intensity Ultrasound Substantially Improves the Efficacy of Bisphosphonate Zoledronic Acid in the Breast David Melodelima
2:15-2:30 1569387609 Thermal Ablation by HIFU Using a Toroidal Transducer for the Treatment of Colorectal Liver David Melodelima
2:30-2:45 1569397371 HIFU Treatment of Late Stage Bone and Soft Tissue Malignances LI Min
2:45-3:00 1569402057 Effects of Ultrasound Sonication with Microbubbles on the Tumor Growth Response in Mouse Hsiao-Ching Tseng

3:00-4:00 Coffee Break, Exhibits, and Poster session P2-2

Session 1K-Tumor treatment and drug delivery---Chair: Gail ter Haar
4:00-4:15 1569402937 Investigation of Non-Thermal Pulsed HIFU for Cancer Therapy C-M Charlie Ma
4:15-4:30 1569398937 Mechanical Destruction of Pseudomonas Aeruginosa Bio-films by Ultrasound Exposure Jin Xu
4:30-4:45 1569403005 Enhancement of Docetaxel by Pulsed HIFU for Prostate Cancer Therapy - an In-Vivo Study Lili Chen
4:45-5:00 1569403121 Histotripsy and Metastasis: Assessment in a Renal VX-2 Rabbit Tumor Model William W. Roberts
5:00-5:15 1569403563 SonoKnife: Feasibility of Line-Focused Ultrasound for Thermal Ablation of Advanced Head and Neck Cancers Eduardo G. Moros
5:15-5:30 1569397171 Overcoming Biological Barriers with Ultrasound Natasha Rapoport

7:00-10:00 Dinner Cruise around Manhattan
Registration

Session 2F-Cavitation and Microbubble studies---Chair: Michael Bailey
8:00-8:15 1569402851 Real-Time Two-Dimensional Imaging of Microbubble Cavitation  Francois Vignon
8:15-8:30 1569402579 Monitoring of HIFU Ablation in Ex Vivo Ox Liver by Passive Acoustic Mapping  Carl Jensen
8:30-8:45 1569401897 A Model of an Oscillating Microbubble Inside a Microvessel  Nazanin Hosseinkhah
8:45-9:00 1569403619 The Bubble-dependent Mechanism of FUS-induced Blood-Brain Barrier Opening in Mice in Vivo  Yao-Sheng Tung

Session 2G-Cavitation and Microbubble studies---Chair: Tom Matula
9:00-9:15 1569403405 Spatio-Temporal Mapping and Characterization of Acoustic Cavitation Seeded by Flowing Ultrasound Contrast Agents  James J Choi
9:15-9:30 1569403649 Measurements of Cavitation Thresholds and the Probability of Cavitation Under Short-Pulse HIFU At Four Frequencies  Stephane Labouret
9:30-9:45 1569402913 Statistical Study on Bubble Nucleation in Biological Tissues  Jerome Gatea
9:45-10:00 1569402511 Role of Cavitation in High Intensity Focused Ultrasound (HIFU) Induced Damage of Isolated Blood Vessels  Anna Tokarczyk

Coffee Break, Exhibits, and Poster session P2-1

Session 2H-Physical studies---Chair: Robin Cleveland
11:00-11:15 1569403119 The Role of Nonlinear Propagation Effects in Ablation of Soft Tissue Behind the Rib Cage Using a HIFU Phased Array  Vera A. Khokhlova
11:15-11:30 1569402945 The Bilayer Sonophore  Eitan Kimmel
11:30-11:45 1569403455 Fourier Continuation Methods for High Intensity Focused Ultrasound  Nathan Albin
11:45-12:00 1569405387 Numerical Study of Nonlinear, Transcranial Focused Ultrasound Wave Propagation for Blood-Brain Barrier (BBB) Opening  Noe Jimenez

Lunch

Session 2I-Transducers and devices---Chair: Shin Umemura
1:00-1:15 1569402717 Large Aperture Transducer Designed for MR-HIFU Treatment of Breast Tumors  Charles Mougenot
1:15-1:30 1569402979 Acoustic Characterization of Multi-Element, Dual-Frequency Transducers for High-Intensity Contact Ultrasound Therapy  Mathieu Burtnyk
1:30-1:45 1569401307 Comparison of Hydrophone Phase Response Obtained Via Time Delay Spectroscopy and Hilbert Transformation  Keith A. Wear
1:45-2:00 1569403355 Multiple-focus, Multiple-frequency Phased Array Patterns for Therapeutic Ultrasound  John R Ballard

Session 2J-Sonothrombolysis and hemostasis---Chair: Larry Crum
2:00-2:15 1569401745 Successful Microbubble Sonothrombolysis Without tPA in Rabbits  William C Culp
2:15-2:30 1569403495 Optimizing Ultrasound-Microbubble Sonothrombolysis in Vitro to Minimize Tissue Plasminogen Activator (tPA) Dose  Michael J. Borrelli
2:30-2:45 1569403667 Acoustic Hemostasis of Porcine Superficial Femoral Artery: Simulation and In-vivo Experimental Studies  Xiaozheng Zeng
2:45-3:00 1569402969 Tissue Emulsification Through Ultrasonic Atomization  Oleg A. Sapozhnikov

Coffee Break, Exhibits, and Poster session P2-2

Session 2K-Gene/cell therapy---Chair: Chris Diedrich
4:00-4:15 1569387195 Towards Developing a Plant-Based Experimental Model for Sonoporation-Mediated Gene Therapy: Bioeffects Analysis  Qin Peng
4:15-4:30 1569402601 The Use of mRNA-loaded Microbubbles for Transfection of Dendritic Cells  Heleen Dewitte
4:30-4:45 1569401717 Ultrasonic Microbubble-mediated Angiogenic Gene Delivery Into Endothelial Progenitor Cells  Cheng-Huang Su
4:45-5:00 1569403433 Low-Intensity Pulsed Ultrasound Enhances Differentiation of Osteolineage-Committed Human Mesenchymal Stem Cells  Lawrence Poor
5:00-5:15 1569403149 Mechanism of Intracellular Delivery of Nanoparticles Using Ultrasound  Mercy Afadzi
5:15-5:30 1569400849 Skeletal Muscle Transfection Via the Ultrasound-Microbubble-Targeted Delivery of PEG-PEI Nanocarriers  Caitlin W Burke

Dinner Cruise around Manhattan
ISTU211 Summary Program

Wednesday, April 13 Westside Ballroom North

7:00 --

Registration

Session 1L-Invited---Chair: Narendra Sanghvi

8:00-8:20 Gina Hesley
8:20-8:40 John Hazle
8:40-9:00 Chris Comstock

Session 1M-Breast studies---Chair: Brian Fowlkes

9:00-9:15 1569401711 Anterior Vertical Shift in MRgFUS of Breast Cancer: A Relation Between the Acoustic Energy and the Tissue Interface  Hidemi Furusawa
9:15-9:30 1569403195 Induction of an Immune Response to Breast Cancer with MRg-FUS Tumor Ablation in a Mouse Model  Navid Farr
9:30-9:45 1569403395 Treatment of Invasive Breast Cancer: Initial Clinical Experience Using HIFU Therapy with 3T MR Guidance  Federica Pediconi
9:45-10:00 1569403567 Ultrasound Thermal Ablation System and Methods for Treatment of Breast Cancer  Oliver Kripfgans

Coffee Break, Exhibits, and Plenary 2

10:00-10:05 Short Business Meeting
10:05-10:20 Smith, Lizzi, and Fry Awards announced
10:20-10:30 Next meeting Chair presentation
10:30-10:45 Shin Umemura (2010 Fry awardee)
10:45-11:00 Cyril Lafon (2010 Lizzi awardee)

Session 1N-Clinical studies---Chair: Joo Ha Hwang

11:00-11:15 1569402153 A Clinical Study of Adenomyosis Ablation by High Intensity Focused Ultrasound Combining with Iodized Oil  Yanbing Xiao
11:15-11:30 1569402245 High Intensity Focused Ultrasound Ablation of Children Hepatoblastoma: Preliminary Clinical Experience  Shan Wanç
11:30-11:45 1569402551 Clinical Study of High Intensity Focused Ultrasound Ablation for Advanced Pancreatic Carcinoma  Jing Li
11:45-12:00 1569402377 Noninvasive Treatment of Prostate Cancer: 1st Clinical Experience, 3T MRgFUS in Patients with Monofocal Disease  Alessandro Napoli

12:00-1:00 Lunch

1:00--

Local trips - unconfirmed
ISTU211 Summary Program
Wednesday, April 13 Westside Ballroom South

7:00 --

Registration

Session 2L-Emerging applications—Chair: Sham Sokka
8:00-8:15 1569403591  Successful Treatment of Childhood Neuroblastoma with High Intensity Focused Ultrasound (HIFU)  Marta Garcia-Bernal
8:15-8:30 1569402841  Efficacy of MRgFUS for Chronic Low Back Pain Originating in the Facet Joints in Elderly Patients  Motohiro Kawasaki
8:30-8:45 1569401305  Artificial Cavitation Nuclei to Enhance HIFU-induced Mechanical Damage to Connective Tissue  Michael Molinari
8:45-9:00 1569398937  Mechanical Destruction of Pseudomonas Aeruginosa Bio-films by Ultrasound Exposure  Jin Xu

Session 2M-Prostate clinical studies—Chair: Jean-Yves Chapelon
9:00-9:15 1569384795  Ten-year Biochemical Disease-Free Survival Rates After HIFU for Localized Prostate Cancer  Toyoaki Uchida
9:15-9:30 1569386961  High-intensity Focused Ultrasound as Salvage Therapy for Patients with Recurrent Prostate Cancer After Radiation  Sunao Shoji
9:30-9:45 1569399281  Locally Recurrent Prostate Cancer After Initial Radiation Therapy: Early Salvage-HIFU Improves Oncologic Outcomes  Albert Gelet
9:45-10:00 1569400323  Oncological Outcomes of High-intensity Focused Ultrasound for Localized Prostate Cancer in 1098 Consecutive Patients  Albert Gelet

Coffee Break, Exhibits, and Plenary 2 (Westside Ballroom North)
10:00-10:05
10:05-10:20
10:20-10:30
10:30-10:45
10:45-11:00

Session 2N-Clinical studies—Chair: Feng Wu
11:00-11:15 1569401297  Evaluation of Efficacy and Safety of Focused Ultrasound Treatment of 4315 Patients with Chronic Cervicitis  Chengzhi Li
11:15-11:30 1569402107  Feasibility of High Intensity Focused Ultrasound Ablation for Patients with Hepatocellular Carcinoma Close to the Heart  Chengbing Jin
11:30-11:45 1569402185  Eligibility and Accessibility of Ultrasound-guided HIFU for the Treatment of Uterine Fibroids in Two New HIFU Centers  Kequan Li
11:45-12:00 1569403617  Clinical Development of a Surgical Oncology HIFU Unit in a University Hospital in Spain: Dynamics  Joan Vidal-Jove

12:00-1:00  Lunch

1:00--  Local trips - unconfirmed
Ultrasound-guided High-Intensity Focused Ultrasound (USgHIFU) in Advanced Pancreatic Disease  Gianluigi Orgera
The Focused Ultrasound on Persistent Infection of HR-HPV: The Preliminary Mechanism Study  Chengzhi Li
Effects of Focused Ultrasound Near Field on Proliferation of Endothelial Cell In Vitro  Chengzhi Li
Practical Limits of the Parabolic Approximation for Focused Ultrasound Beams  Joshua Soneson
Enhanced Cytotoxic Effect of Cisplatin Using Diagnostic Ultrasound and Microbubbles in Vitro  Noboru Sasaki
Study of Extracorporeal High Intensity Focused Ultrasound Associating with Laparoscopy in the Treatment of Patients with Breast Cancer  Fei Huang
Effect of High Intensity Focused Ultrasound on the Immunity of Children Solid Tumors  Shan Yang
Microwave and Ultrasound Enhancement of Radiation-Induced Tumour Cell Death in Vivo  Gregory Czarnota
Sonosensitive Nanoparticles for Controlled Instigation of Cavitation and Drug Delivery by Ultrasound  Sarah Wagstaffe
Planning and Evaluation of High-Intensity Focused Ultrasound Therapy Assisted by Three-Dimensional Ultrasound  Kota Yamada
Design and Characterization of Transurethral Ultrasound Transducer for MR-guided Prostate Ablation  Balasundar Raju
Cavitation Generator Combining Two Focused Ultrasound Transducers to Produce a Continuous Thin Spot of Inertial Cavitation  Jean-Louis Metstas
T-cell Mediated Immune Response to HIFU Emulsification of Murine B16 Melanoma  Tatiana Khokhlova
Sonication Accuracy of Volumetric MR-HIFU Ablation for the Treatment of Symptomatic Uterine Fibroids; MR-thermometry Analysis  Young-sun Kim
Cavitation Inception and Growth by Dual-Frequency Excitation Method  Shin Yoshizawa
Pain Palliation of Bone Metastasis: Initial Clinical Experience Using HIFU Therapy with 3T Magnetic Resonance Imaging Guidance  Carlo Catalano
Study on Effects of Low-intensity Pulsed Ultrasound on Proliferation of Bone Mesenchymal Stem Cells  Yan Wang
Three-dimensional Transcranial Focusing Using Two-Dimensional Skull Information  Yun Jing
Pulsed HIFU Targeted Delivery of MR Contrast Agent in a Rabbit Muscle Model Using the MRI-guided ExAblate System  Brian E. O’Neill
Characterization of Calcifications in Ex-Vivo Swine Brain Using MR-ARFI and SWI  Rachelle Bitton
Numerical Simulation of Bubble Jetting and Tissue Deformation in Response to Ultrasound Excitation  Quan Zhang
Development of New HIFU Transducer for Treatment of Lower Extremity Varicose Veins  Kiyoshi Yoshinaka

Acoustic and Thermal Characterisation of Fresh Tissue  Lise Ratat
MR Compatible Cavitation Detection Using a Fabry-Perot Fibre-Optic Hydrophone  Victoria Bull
Acoustically Accessible Window Determination for Ultrasound Mediated Treatment of Glycogen Storage Disease Type Ia Patients  Shutao Wang
Simultaneous Measurements of Thermo-Physical Properties of Egg White Phantoms for HIFU by Using the Step-Wise Transient Plane Source Technique  Jing Gao
Transcranial Threshold of Inertial Cavitation Induced by Diagnostic Ultrasound and Microbubbles  Jinning Liu
The Advantages of Small-Size Focus Mode in Ultrasound Surgery  Dehui Li
The Effect of Pre-Exposure with Non-Ablating Focused Ultrasound on the HIFU Ablation Efficiency of Rabbit Muscle: Preliminary Results  Yan Wang
Predicting the Optimal Estimated Pressure of BBB Disruption From the Pressure Attenuation of Skull Thickness  Chun-Hsein Chang
Covalently Linking Poly(lactic-co-Glycolic Acid) Nanoparticles to Microbubbles Improves Their Ultrasound-Targeted Delivery to Skeletal Muscle  Caitlin W. Burke
Composite Drug-Delivery Agents Comprised of 5FU-Bearing Controlled-Release Nanoparticles Bonded to Microbubbles Inhibit Glioma Growth  Caitlin W. Burke
Dual-modality Image Guided High Intensity Focused Ultrasound Device Design for Prostate Cancer: A Numerical Study  Dexter Hobson
The Control of Bubble-Enhanced Ultrasound Thermal Effects with the Presence of a Phase-Shift Nanoeulsion  Peng Zhang
Effect of Oxytocin on High Intensity Focused Ultrasound Ablation of Uterine Fibroids  Huong
Passive Acoustic Mapping of HIFU-induced Mechanical Disruption of Collagenous Connective Tissue  Michael Molinari
Quantitative Ultrasound Assessment of Thermal Damage in Excised Liver  Jeremy Kemmerer
Microbubble Mediated Sonoporation for Gene Transfection: Difference Between Cells in Suspension and Attachment Status  Yiwei Zhang
Nonlinear Effects in the Radiation Force Generated by Amplitude-Modulated Focused Beams  Nuria González
Development of Cylindrical Ultrasonic Transducers for MRI-Guided and Monitored Cardiac Ablation  Mathew A. F. Carias
3D Volume MR Temperature Mapping for HIFU Heating Trajectory Comparisons  Nick Todd
Cavitation Monitoring and Passive Beamforming Using a Hemispherical Random Sparse Array  Meaghan A. O’Reilly
Influence of Animal Mass on Ultrasound Attenuation Through Rat Parietal Bone  Aidan Muller
Selective Detection and 3D Visualization of Targeted CRGD and VEGFR2 Contrast Agents in Vivo  Xiaowen Hu
Respiratory Motion Compensation by Coagulated Lesion Tracking for US-guided Robotic HIFU System  Joonho Seo
ISTU Summary Program  Monday afternoon, April 11  Poster session P1-2

STUDENT COMPETITION

1569387509  Temperature Mapping for Ultrasound Scanner Using Backscattered Changes  Jeremy Chenot
1569398937  Mechanical Destruction of Pseudomonas Aeruginosa Bio-films by Ultrasound Exposure  Jin Xu
1569400849  Skeletal Muscle Transfection Via the Ultrasound-Microbubble-Targeted Delivery of Polyethyleneglycol PEG-PEI Nanocarriers  Caitlin W. Burke
1569401245  Histological Evaluation of HIFU with Lower-Intensity Focused Ultrasound Pre-Exposure on the Treatment of Rabbit VX2 Liver Tumors  Hairong Zou
1569401299  Mechanisms for Vascular Bioeffects Induced by Ultrasound-activated Microbubbles  Hong Chen
1569401305  Artificial Cavitation Nuclei to Enhance HIFU-induced Mechanical Damage to Connective Tissue  Michael Molinari
1569401897  A Model of an Oscillating Microbubble Inside a Microvessel and the Mechanical Effects on the Microvessel Wall  Nazanin Hosseinkhah
1569401983  Enhanced Cytotoxic Effect of Cisplatin Using Diagnostic Ultrasound and Microbubbles in Vitro  Noboru Sasaki
1569402057  Effects of Ultrasound Sonication with Microbubbles on the Tumor Growth Response in Mouse Ear Model Treated with Liposomal Doxorubicin  Hsiao-Ching Tseng
1569402597  Precision of a 1MHz MR-guided Ultrasonic Brain Therapy Prototype: Experiments on 12 Fresh Cadavers  Laurent Marsac
1569402601  The Use of mRNA-loaded Microbubbles for Transfection of Dendritic Cells  Heleen Dewitt
1569403075  In Vivo Thermal Ablation Monitoring by Echo Decorrelation Imaging  Swetha Subramanian
1569403149  Mechanism of Intracellular Delivery of Nanoparticles Using Ultrasound  Mercy Afadzi
1569403185  Numerical Simulation of Harmonic Motion Imaging of HIFU Induced Lesion Formation  Andrew Draudt
1569403195  Induction of an Immune Response to Breast Cancer with Magnetic Resonance-Guided Focused Ultrasound Tumor Ablation in a Mouse Model  Navid Farr
1569403355  Multiple-focus, Multiple-frequency Phased Array Patterns for Therapeutic Ultrasound  John R. Ballard
1569403433  Low-Intensity Pulsed Ultrasound Enhances Differentiation of Osteolineage-Committed Human Mesenchymal Stem Cells  Lawrence Poon
1569403489  Ultrasound-enhanced Delivery of Antibiotics Into the Eye  Marjan Nabili
1569403595  Fundamental Analysis and Ex Vivo Validation of Thermal Lesion Mapping Using Harmonic Motion Imaging for Focused Ultrasound (HMIFU)  Gary Hou
1569403619  The Bubble-dependent Mechanism of FUS-induced Blood-Brain Barrier Opening in Mice in Vivo  Yao-Sheng Tung
1569403623  Phase Aberration Correction Method for Focused Ultrasound in the Brain  Elena Kaye
1569403741  Non-invasive Estimation of Patient-specific Tissue Acoustic Properties for MRgFUS  Urvi Vyas
1569405387  Numerical Study of Nonlinear, Transcranial Focused Ultrasound Wave Propagation for Blood-Brain Barrier (BBB) Opening  Noe Jimenez
ISTU Summary Program  Tuesday morning, April 12  Poster session P2-1

156938029  Cardiac Optimal Revascularisation  Mohamed Faouzi Al-imam
1569387687  Temperature-dependent Physical Properties of Egg White for HIFU Applications  Yunbo Liu
1569397017  An Ex Vivo Study on Targeted Cell Surgery by High Intensity Focused Ultrasound (HIFU)  Junru Wu
1569397649  Modification of the Edge Wave in Shock Wave Lithotripsy  Yufeng Zhou
1569398735  Focused Ultrasound Exposures with Mechanically Registered Ultrasound Image Guidance for Small Animal Studies  Ali Ziadloo
1569399139  An MR Compatible "smart" Cavitation Detection System for Real Time Remote Assessment of Blood Brain Barrier Disruption  Costas Arvanitis
1569401195  Comparison of Power Measurement Methods in High Intensity Therapeutic Ultrasound (HITU) Fields  Klaus V. Jenderka
1569401213  Measurement of Time-Averaged HITU Power in Burst Mode and Extrapolation to CW Power - Effects of Duty Cycle and Power Level  Klaus V. Jenderka
1569402031  Perfluorocarbon Droplets Based Multiplex Imaging for Minimally Invasive Differential Diagnosis  Rei Asami
1569402103  Optimal Tissue Perforation Using High Intensity Focused Ultrasound  Takashi Mochizuki
1569402113  Study of a Material for Evaluating the Focusing Characteristics of High Intensity Focused Ultrasound  Daping Zeng
1569402159  Comparison of HIFU Ablation for Uterine Fibroids Between in Patients with Anteposition and in Those with Retroposition of the Uterus  Jia He
1569402165  High Intensity Focused Ultrasound Ablation for Uterine Adenomyosis in Symptom Control  Qingrong Wu
1569402231  Chemically Active Cavititation Induction with Phase Change Nano Droplet  Ken-Ichi Kawabata
1569402367  The Effects of Thermal Ablation Using MR-HIFU on Human Cadaver Breast Tissue  Laura Merckel
1569402485  The Ultrasound Fields Estimation Using Uncooled Infrared System  Ying Yu
1569402541  Novel Ultrasonic Contrast Agents for Therapeutic and Imaging Applications  Ksenia Astafyeva
1569402549  Detection and Exploitation of Acoustic Cavitation for Enhancement of MR Guided High Intensity Focused Ultrasound Heating in Ex Vivo Liver  Delphine Elbes
1569402603  Ultrasound Gene Delivery to Mesenchymal Stem Cells: Targeting Tumor Therapy  Tom Haber
1569402667  Feedback Control for Mild Hyperthermia Treatments Using MR Guided HIFU for Solid Tumor Drug Delivery  Ari Partanen
1569402857  Determination of Cytotoxic Thermal Dose During HIFU Ablation  Shao Wang
1569402897  Magnetic Micrombubles for in Vivo Manipulation: Development, Characterisation and Preliminary Application in Vivo  Eleanor P.J. Stride
1569402917  Effects of Microvascular Perfusion on Focused Ultrasound Induced Hyperthermia  Shu Tao Wang
1569403021  Real-time HIFU Ablation Imaging in Cardiac Tissue Using High-Frequency B-mode Ultrasound Imaging  Madhu Sudhan Reddy Gudur
1569403061  Pelvic Bone Heating with MRI-controlled Transrectal Ultrasound Therapy for Prostate Cancer: Results in Gel Phantoms  Xinli Patel
1569403065  Predictors of T2-weighted MR Images At HIFU Ablation for Uterine Fibroids  Wenpeng Zhao
1569403101  Optically Triggered Solid State Driver for Shock Wave Therapy  Alexander P. Duryea
1569403265  Mapping 2D Temperature Simulation with Thermal Strain Thermometry Using a Dual-function Ultrasound Linear Array  Chun-Yen Lai
1569403289  The Efficacy and Safety of Focused Ultrasound Ablation for Type I and II Submucosal Uterine Fibroids: The Mid-Term Results  Ting Wang
1569403331  Nonlinear Modeling of Pulsed and CW HIFU Beams for Dual-mode Ultrasound Arrays  Mohamad Almekawy
1569403343  Continuous Monitoring of Pulsed HIFU Beams Using Dual-mode Ultrasound Array Systems  Andrew Casper
1569403501  Exploration of Focused Ultrasound as a Tool for Affecting Local Tissue Properties in Articular Cartilage Engineering  Adam Nover
Real-time Monitoring of Thermal and Mechanical Tissue Response to Modulated Phased-array HIFU Beams in Vivo Dalong Liu
An Ex Vivo Study of the Relationship Between Acoustic Power and the Exposure Time Needed to Cause Coagulative Necrosis Faqi Li
Numerical Study of Cavitation Threshold by Use of Bifrequency Excitation Jean-Christophe Béra
The Influence of Fluid Compressibility and Viscosity on the Stability of Multi-Bubble Cavitation David Sinden
Temperature Change Due to Oscillating Bubbles Within Large Vessels Under Acoustic Exposure Shaoying Liu
Validation of Tissue Change Monitoring on the Sonablate 500 During HIFU Treatment of Prostate Cancer with Real-time Thermometry Wo-Hsing Chen
MRI-Based Heterogeneity Correction for Large Aperture HIFU Transducers Charles Mougenot
UDP Glycosyltransferase 8 (UGT8) Involvement in a Novel Cancer Therapy That Employs Ultrasound and Microbubbles Azza Al-Mahrouki
Estrogen Receptor and Progesterone Receptor Expressions At the Edge of the Targeted Region of Uterus Fibroids Ablated by Acoustic Power Xuemei He
Temperature Change Due to Oscillating Bubbles Within Large Vessels Under Acoustic Exposure Shaoying Liu
Characterizing the Heat Propagation of HIFU Ablation in Miniature Pig Model San Chao Hwang
Improved Treatment in a Metastatic Breast Cancer Model in the Rat Brain by Enhancing Delivery of Herceptin Eun-Joo Park
Transcranial Doppler Ultrasound and Arterial Blood Pressure Can Usefully Predict Cerebral Perfusion Pressure Pierre Mourad
Dual Frequency Imaging and HIFU Bi-laminar Transducer Using Acoustic Isolation Layer for Application of Endoscopic Surgery Takashi Azuma
Microbubble Potentiated Collagenase Therapy of in Vivo Chronic Total Occlusions David Goertz
Histologic Analysis of Rabbit Liver Cancer Treated by Bulk Ultrasound Ablation Chandrapriya Karunakaran
Effect of Spatial Resolution on Magnetic Resonance Imaging Guided High Intensity Focused Ultrasound (MR-HIFU) Temperature Measurement Jiming Zhang
Focusing Through the Rib Cage for MR-guided Transcostal FUS Jing Gao
Transurethral MR-guided High-intensity Ultrasound System for Focal Ablation of Prostate Cancer Hari Trivedi
Investigations Into the Use of MRI-controlled Focused Ultrasound for Hyperthermia-Mediated Drug Delivery Robert Sturch
The Utilization of the Bubble Pressure Dependent Harmonic Resonance Frequency for Enhanced Heating During HIFU Treatments Amin Jafari Sojahrood
HIFU Treatment Time Reduction Through Focal Zone Size and Spacing Selection Joshua Coon
Targeted Gene Delivery by Sonoporation in Crohn's Disease Jose Tlaxca
Pressure and Microbubble Size Dependence Study of Focused Ultrasound-Induced Blood-Brain Barrier's Opening Reversibility in Vivo Geethimani Samiotaki
Infrared Thermography for Noninvasive Real-Time Monitoring of HIFU Ablation in Cardiac Tissue Yi-Sing Hsiao
The Effect of Pulsed HIFU on the Porosity and Permeability of Collagen Gels: An in Vitro Study Geetha Vipulanandan
Comparison of SAR Estimation Techniques in MRgHIFU Christopher Dillon
Sparse Linear Array Design with the Matrix Pencil Method Kirk Sales
Using FOCUS to Determine the Radiation Impedance for Calculations of Power Radiated by Rectangular Transducers Matthew Jennings
Realtime Monitoring of Tissue Viability During HIU Treatment with DWI Juan Plata
An MR-compatible Phantom for Evaluating the Propagation of High Intensity Focused Ultrasound Through the Skull Venedictos HadiJSavvas
Quasi-Static Elastography and Its Application in Investigation of HIFU Induced Tissue Lesions Bin Wang
Applicator for In-Vitro Ultrasound-activated Targeted Drug Delivery Bjorn Gerold
Optimization of the Shear Stress Induced by Ultrasonically-Stimulated Oscillating Microbubbles: A Theoretical Investigation Amin Jafari Sojahrood