



INTERNATIONAL CONFERENCE

**MUSIC TECHNOLOGY:
SOLUTIONS TO CHALLENGES**

**The interface between
music, engineering, special needs and neuroscience**

**Royal Hospital for Neuro-disability, London SW15 3SW
11th – 12th June 2010**

This conference offers an opportunity to share knowledge and information about technology relating to musical expression and experiences. Presentations will address the use of technology to meet special needs and measure responses to music. Professionals involved in using, designing and researching music technology for use in clinical, educational, and community settings will give presentations covering topics in the following three themes:

Clinical Practice, Engineering & Design and Measurement & Evaluation

Cost per delegate after April 1st: £250 / Student £200

Early bird rate before April 1st: £200 / Student £140

All fees plus VAT. Student places limited.



Main Themes of the Conference:

Clinical practice

Work involving electronic music technologies in practice with people with special needs e.g. music therapists; music teachers working in special education; community musicians; computer music scientists

Engineering and design

Those involved in developing music technologies and assistive technologies with a potential application in clinical/community settings.

Measurement and evaluation

Those involved in developing/ using technology for measuring musical responses e.g. brain imaging/PET/ EEG; clinical evaluation systems

Key Note Presentations

Brain-Computer Music Interfacing: From Basic Research to the Real World of Special Needs

Prof Eduardo R. Miranda,

Interdisciplinary Centre for Computer Music Research (ICCMR), University of Plymouth, UK

A brain-computer interface (BCI) allows a person to control electronic devices by means of commands expressed by signals read directly from their brain using appropriate brain scanning technology. We are interested in developing brain-computer music interfacing (BCMI) technology aimed at people with complex physical needs but able brain function. BCMI technology has the potential to enable active participation in music-making activities for recreational and therapeutic purposes. Despite recent advances of BCMI technology worldwide, this technology has seldom been trialled with the sector of the population that really needs them. The author will make a case that the time is ripe to trial such technology in the real world of special needs. This talk will begin with a brief survey of the field of BCMI. Then it will introduce proof-of-concept systems developed at ICCMR, followed by a glance of the ongoing research into trialling BCMI systems with patients at RHN.

Musically Assisted Rehabilitation Systems: utilizing music technology to enhance therapy.

Dr. David W. Ramsey

Board Certified Music Therapist and a member of the American Music Therapy Association

Special Projects Consultant , Institute for Music and Neurologic Function, USA

Co-Founder , Musically Assisted Rehabilitation Systems, Inc. USA

Engaging patients in expressive, meaningful, music-centered experiences, while at the same time addressing psychosocial, physical and neuro-cognitive needs has long been the hallmark of music therapy. In a world of multiple, exciting technologies, therapists must exercise discernment as to the precise way a particular technology addresses client needs. Guidelines that provide a list of music technologies, their features and how these features can be employed therapeutically, can be helpful. Musically Assisted Rehabilitation Systems (MARS) are musical instruments that require movements similar to those exercised during Occupational/Physical Therapy. MARS instruments are designed to highlight the somatosensory elements of expressive music making. Computer MIDI information is directly linked to physical function (range of motion, motor timing, and velocity/muscle strength) during music making so that a quantitative record of rehabilitation progress can be captured. When these systems are combined with existing music software programs, the music therapist can address multiple goals: psychotherapy, neuro-cognitive, social and physical.



Provisional Programme

FRIDAY	
8.30	<i>Registration and refreshments</i>
9.00	Keynote Presentation - <i>Brain-Computer Music Interfacing: From Basic Research to the Real World of Special Needs - Prof Eduardo R. Miranda</i>
10.00	Plenary Sessions – Clinical Practice
11.00	<i>Morning Refreshments</i>
11.30	Plenary Sessions – Engineering & Design
12.30	<i>Lunch with Poster Presentations</i>
14.30	Plenary Sessions – Measurement & Evaluation
16.00-16.45	Plenary Session: Emerging Collaborations and Discussions
18.00	Social Event
SATURDAY	
8.30	<i>Registration and Refreshments</i>
9.00	Keynote Presentation - <i>Musically Assisted Rehabilitation Systems: utilizing music technology to enhance therapy - Dr. David W. Ramsey</i>
10.00	Plenary Sessions – Clinical Practice
11.00	<i>Morning Refreshments</i>
11.30	Plenary Sessions – Engineering & Design
12.30	<i>Lunch with Poster Presentations</i>
14.30	Plenary Sessions – Measurement & Evaluation
16.00	Closing Session: Emerging Collaborations and Discussions

Plenary sessions will provide a mix of 30 minute oral presentations; 60 minute workshops; and 90 minute symposia. There will be poster presentations throughout the conference.

For enquiries regarding the content of the conference or if you are interested in exhibiting/sponsorship opportunities for this conference please contact:

Phili Denning, Conference Organiser

E: institute@rhn.org.uk Tel: +44 208 780 4500 x5140

http://www.rhn.org.uk/nec_001.asp#5

Organising Committee: Chair -**Dr Wendy Magee**, International Fellow in Music Therapy, Institute for Neuropalliative Rehabilitation, RHN; **Mark Baker**, MSc, PGDN (Distinction), DHSM, BNur, International Fellow in Nursing in Complex Disabilities, Institute of Neuropalliative Rehabilitation, RHN; **Sophie Dupont** PhD, Head of Research, RH N; **Kate Heath**, GRSM, LRAM, Music Therapist, Newham Centre for Mental Health, East London NHS Foundation Trust; **Mark Hildred**, MEng MSc MIET, Creative Director, Apollo Creative; **Damien Murphy** MSc (Hons), MSc, DPhil, MAES, Senior Lecturer, AudioLab, University of New York; **Diane Paterson**, BA Hons, PGCE, LRSM, Inclusive Music Team Leader, ArtForms - Leeds

Scientific Committee: Chair - **Dr Wendy Magee**, International Fellow in Music Therapy, Institute for Neuropalliative Rehabilitation, RHN; **Professor Jaako Erkkilä** PhD, Head of Music Department, University of Jyväskylä; **Andy Hunt** PhD (MusTech), Senior Lecturer, Electronics Dept, University of York; **Suzanne Hanser**, Ed.D., MT-BC, Chair Music Therapy Department, Berklee College of Music; **Professor Adam Ockelford** PhD ARAM, Professor of Music, Roehampton University; **Elaine Streeter**, AGSM, PGCS, MA Music, PGDip Music Therapy, Adv Dip Psychodynamic Counselling, Senior Research Fellow in Music Therapy, Dept of Music, University of York

