

# Plenary Sessions and Major Sessions

An exciting program of plenary sessions and major sessions features outstanding and thought-provoking presenters.

## PLENARY SESSION 1:

Monday 11.00 am, 11 February

### Opening Ceremony

Keynote Address by Professor Peter Doherty, Australian Nobel Prize winner and Chair, Department of Immunology, St Jude Children's Research Hospital, USA

## PLENARY SESSION 2:

Tuesday 9.00 am, 12 February

What global trends and demographics are impacting on science centres? How will these shape science centres in the future?

Plenary Address by Annie Macbeth, Futurist and Principal, Annimac Consultants, Perth, Western Australia, followed by brief panel inputs by prominent science centre leaders from around the globe, chaired by Walter Witschey, Director, Science Museum of Virginia, USA. Each panelist will respond to the question 'What are the three most important issues impacting on your science centre?'

## PLENARY SESSION 3:

Wednesday 9.00 am, 13 February

How will existing and emerging technologies impact on science centres in the future? How can science centers capitalise on these technologies?

Panel presentation by Dr Hiroaki Kitano, Scientific Advisor, National Museum for Emerging Science and Innovation, Japan and President, RoboCup Federation; and by Dr Derrick de Kerckhove, Director, The McLuhan Program in Culture and Technology, Canada.

## PLENARY SESSION 4:

Thursday 9.00 am, 14 February

Leadership in a creative environment. What leadership trends are occurring in leading edge organisations? What can science centres learn from this?

Panel presentation by Dr Goran Carstedt, Global SOL (Society for Organisational Learning) Network, Sweden; and by Roy Shafer, Principal, The Roy L Shafer Company: Strategies for Organisational Change, USA.

## MAJOR SESSION:

Visions of new paradigms for the science centre field

Panel presentation by Dr Mamoru Mohri, Director, National Museum of Emerging Science and Innovation, Japan; by Emlyn Koster, President & CEO, Liberty Science Centre, USA; by John Durant, Director, at-Bristol, UK; and by David Ellis, President and Director, Museum of Science, Boston, USA.



Please note that this is a preliminary program. The International Program Committee may vary the plenary session program. Check the Congress website [www.questacon.edu.au/iiiscwc.html](http://www.questacon.edu.au/iiiscwc.html) for the latest information.

# Parallel Session Program

The Parallel Session Program is designed not only for presenters to contribute, but also for participants to share their ideas.

## TYPES OF SESSIONS ARE:

- **Workshop:** presenters actively involve participants in learning new skills and techniques.
- **Panel discussion:** two or more presenters provide short presentations on a particular topic, followed by discussion.

- **Roundtable discussion:** a convenor facilitates small group discussions followed by reports to the larger group on a particular topic.
- **Exhibition marketplace:** presenters provide information about exhibits and related services.
- **Speakers corner:** Presenters give short presentations on topics of their own choice.
- **Science show:** Presenters perform live science shows.

## LEADING AND MANAGING SCIENCE CENTRES INTO THE FUTURE

### Panel Discussion: Crisis management

We all face unexpected situations in our institutions – a sudden fall in visitor numbers, bad reviews of a temporary exhibition, cessation of a sponsorship collaboration or accidents on site with visitors badly hurt. How should we cope in these situations? Panelists will share their experiences of crisis management.

**Session leader:** Per Lindhal, CEO, Swedish Museum of Natural History, Sweden

### Roundtable Discussion: Facing the challenge of organisational change

What are science centres doing to structure their own organisations to respond to changes in their environment (eg market forces, visitor expectations, sponsor/stakeholder expectations, human resource development). Specifically geared for CEOs to share an issue which generated the biggest challenge to their organisational change.

**Session leader:** Seddon Bennington, Director, Carnegie Science Centre, USA

### Panel Discussion: Global statistics of science centres

Network representatives of ASTC, ECSITE, ASPAC, NCSM, RedPOP, JCSM, CAST, and SAASC will present statistics on science centres in their region, including the number of science centres, attendances and budgets. This will enable us to paint a picture of the current global situation, providing a concise summary of the state and extent of the worldwide science centre industry.

**Session leader:** Per-Edvin Persson, Director, Heureka, Finland

### Panel Discussion: How to handle controversies

During the Y2K, La Cité created several new exhibitions on science themes linked to hot topics. Researchers, journalists and politicians discussed these topics with visitors. The amazing success of the program raises the question: is controversy and dialogue with the public the future for our field?

**Session leader:** Brigitte Coutant, Director of International Affairs, La Cité des Sciences et de l'Industrie, France

### Workshop: Leadership from the inside out!

Leadership is from the inside out – the inside of the leader, the inside of the follower and the inside of the organisation. Using a web-based diagnostic tool, this workshop will help you understand your preferred leadership style and that of your organisation. Explore the latest research which demonstrates that, while the CEO's personality is important, it is not as critical as the personality of the organisation. Contact Roy Shafer at [orgcoach@compuserve.com](mailto:orgcoach@compuserve.com) for details of web tool.

**Session leader:** Roy Shafer, Organisational Coach, The Roy L Shafer Company: Strategies for Organisational Change, USA

# Parallel Session Program (continued)

## **Panel Discussion: Learning from buildings**

The buildings that house our science centers help to shape the learning experiences that occur within them. Whether very large or small, newly built or renovation of existing spaces, buildings learn from their users (visitors and staff) and in turn users learn from buildings. Panelists will share lessons learned from recent experiences in creating a variety of new science center facilities.

**Session leader:** James Peterson, President, Science Museum of Minnesota, USA

## **Panel Discussion: Linking science centres and museums to build a museum of the 21st century**

Combining the strengths of both science centres and museums could be a future strategy for both kinds of organisation in order to create richness in content and presentation, with visitors as the prime consideration.

**Session Leader:** Dr Otmar Moritsch, Senior Curator, Technisches Museum, Austria

## **Panel Discussion: Look and... Do touch – combining interactives, objects and other media for an effective visitor experience**

Combining significant objects with hands-on exhibits provides visitors with new and potentially rich contexts in which they can gain a greater appreciation of science and technology, but with it come challenges. Participants will discuss how we can best use objects in environments where visitors are encouraged to explore, touch and interact with exhibits.

**Session leader:** Julie Catchpole, Director, The Science Centre & Manawatu Museum, New Zealand

## **Roundtable Discussion: Managing up**

A healthy relationship between the director and the board is a key to the organization's success and the director's mental health. In this roundtable session we will identify the governance issues most important to the group, then share experiences, anecdotes, and tips from colleagues around the world for managing boards.

**Session leader:** Nancy Stueber, President and CEO, Oregon Museum of Science and Industry, USA

## **Workshop: Marketing science centres into the 21st century**

Serious competition from commercial operations are presented to science centres as they try to survive and grow in the 21st century. This session explores how these challenges can be met using examples from a variety of situations and will provide opportunities for participants to plan a campaign which they can use in their institution.

**Session leader:** Brian Taylor, Director, Science Alive! New Zealand

## **Panel Discussion: Merchandising and enterprise schemes that work!**

Contributors share their centre's approach to generating revenue via merchandising and other enterprise activities.

**Session leader:** James Marchbank, CEO, Science North, Canada

## **Speakers Corner: Museums and science centers – allies or rivals**

Museums and science centers are occupied with the same subject using different approaches. Museums generally are object oriented; the central figure is a historical object, the museum exhibit. Science centers on the other hand are focused on phenomena or concepts. Other distinctions and similarities will be reviewed and some suggestions given for closer partnerships and improved performance.

**Speaker:** Dr Orest Jarh, Director, Technical Museum of Slovenia, Slovenia

## **Panel Discussion: Research that really helps!**

What qualities are required for a research project to powerfully impact an institution? How can research help you shape your institution's future and attract funding and other support? Science centre leaders will share their most successful research projects in this roundtable discussion.

**Session leader:** Peter Giles, President and CEO, The Tech Museum of Innovation, USA

## **Panel Discussion: Science centres on a shoestring**

This session will investigate the challenges and limitations inherent in the establishment and operation of science centres under very tight budgets. In developing countries, monetary constraints often dictate the development of exhibits that are inexpensive to build, but which are often better suited to the audience they serve. In an attempt to explore the benefits of low cost exhibitry, comparisons with big budget institutions will also be drawn.

**Session leader:** Derek Fish, Director, Unizul Science Centre, South Africa

## **Roundtable Discussion: Trends impacting on science centres**

This session follows the Plenary Session "What global trends and demographics are impacting on science centres? How will these shape science centres in the future?" Four roundtable groups share their ideas in response to the plenary session and work through a process to arrive at a consensus on the three major trends most impacting on science centres, and what institutions and networks could do to address these.

**Session leaders:** Lesley Lewis, Director General & CEO, Ontario Science Centre, Canada; Ingit Mukhopadhyay, Director General, NCSM, India; Michel Demazure, Director, Cité des Sciences et de l'Industrie, France; Jeff Rudolph, Executive Director, California Science Centre, USA; Prof Mike Bruton, Head, MTN ScienCentres, South Africa; Per-Edvin Persson, Director, Heureka, Finland; and Annie Ghisalberti, Director, Questacon, Australia.

## **NEW TECHNOLOGY: THE INTERNET, ROBOTICS AND NEW COMMUNICATION FOR THE TWENTY-FIRST CENTURY**

### **Panel Discussion: How international partnerships can serve the public using the Internet**

What are the benefits of coordinating efforts of science centres internationally? What does it take to do it – international infrastructure, partnerships and translations? How can we grow our field and leverage centralised and external resources?

**Session leader:** Eric Marshall, Director, TryScience, New York Hall of Science, USA

## **Workshop: Kids, programming and robotics – Learning by doing with LEGO MINDSTORMS robots at science museums**

Participants will get a first hand look at LEGO MINDSTORMS technology and hands-on learning in science museums. Science North and the Singapore Science Centre will share their experiences from two different contexts and will include ideas on revenue generation, connecting children through the Internet, working with schools and robotics competitions.

**Session leader:** Ole Møller, Senior Project Manager, Community and Learning, LEGO System A/S, Denmark

## **Panel Discussion: Networks – what do these mean for science centres?**

The co-operative work of the European network relies on the good use of new information technology. Several meetings and an Internet forum have enabled the network to share innovative activities for virtual visitors, schools and other groups. A comparison between virtual and traditional visitors will be discussed in the context of innovative museum practice.

**Session leader:** Walter Staveloz, Executive Director, ECSITE, Belgium

## **Panel Discussion: New technologies to enhance the museums experience.**

More and more new technology is being introduced into science centres. Often art museums are far ahead of science centres in this field. AEC in Linz is at the edge of art and science. The session will try to establish which new technology improves the visitor's experience and which does not.

**Session leader:** M. Wolfgang Modera, Deputy Director, ARS Electronica Centre, Austria

## **Panel Discussion: No more black boxes**

Our world is filling up with mysterious electronic devices – "black boxes." What if young people had the tools to build their own scientific equipment – even computers, cell phones, and radios – from scratch? Through an examination of the impact of European science on traditional world cultures, radical science centre approaches will be discussed

**Session leader:** Dr Hooley McLaughlin, Senior Adviser for Science and Technology, Ontario Science Centre, Canada

## **Workshop: RoboCup Junior: A robotics challenge for science and technology educators**

RoboCup Junior is rapidly becoming adopted as an exciting science and technology education program leading to an international competition. Since September 2000, it has been adopted by more than 20 countries. Robocup Junior developers will train participants to play a game of robot soccer. The session will explain how science centres worldwide can benefit from their involvement in RoboCup Junior.

**Session leader:** Brian Thomas, Chairman, RoboCup Junior Australia, Australia

# Parallel Session Program (continued)

## PROGRAMS WITH A DIFFERENCE: SCIENCE CENTRES AND MUSEUMS EXPLORE NEW WAYS OF REACHING THEIR AUDIENCES

### Speakers Corner: China! 7000 Years of Innovation – Responding to Community Priorities

China! 7000 Years of Innovation presented Science World British Columbia with marketing opportunities that promised to broaden Science World's appeal and expand its ties to the community, particularly Vancouver's vibrant Chinese population. To capitalize on this potential, Science World developed an extensive program of community interaction that involved esteemed organizations, general and ethnic media and members of the local Chinese community.

**Session leader:** Bryan Tisdall, President & C.E.O., Science World British Columbia, Canada.

### Workshop: Creative exhibit design

Participants work in small groups to design, develop and evaluate an exhibit prototype.

**Session leader:** Geoff Snowdon, Associate Executive Director, PETROSAINS, Malaysia

### Panel Discussion: Cutting edge science in science centres

How can science centres show research and future trends in science? Even some scientists think that research is too complex for the general public. Should science centres restrict themselves to showing only the science that affects our daily lives or can we show cutting edge research as well?

**Session leader:** Dr Wolf Peter Fehlhammer, General Director, Deutsches Museum Munich, Germany

### Workshop: An interdisciplinary approach – the science, the institution, the outreach and the performance

In an ever increasing technological society, science centres are confronted with new ways to achieve a relevant role in their community. Both creative insights, as well as an interdisciplinary approach in viewing exhibits are vital to this challenge. Sustaining marketability in one's region is a challenge that can be approached through a mix of innovative educational outreach programs and interactive live theatre. We will share successful approaches and involve participants in an engaging live theatre presentation.

**Session leader:** Terry J. Hutter PhD, Programs Manager, Exploration Place, USA

### Panel Discussion: Music + Science = Creativity?

Add music to science and the science centre experience is immeasurably enriched. Venturing into new pastures requires research, preparation, incubation and the illumination and verification of thoughts, ideas and activities through creative processes; which can only lead to a greater provision of activities in the field of music and science.

**Session leader:** Dr Melanie Quin, Science Communication Director, Techniquest, UK



### Panel Discussion: New frontiers of thinking about the formal/informal learning interface

This session features the latest thinking by science centres in different regions of the world. Each of these science centres profiled has a program philosophy that is breaking down the traditional gulf between formal and informal learning. The aim of the session is to share and compare these philosophies, and through audience discussion, stimulate the field.

**Session leader:** Stephen Baumann, Vice President, Student Experiences, Liberty Science Centre, USA

### Workshop: The new generation starts at age 0 – creating interactive science experiences for children aged 0 to 6

This presentation/workshop explores how science centers can cater for the early childhood age group through exhibits, programs and facilities. Case studies highlight the impact of providing early childhood experiences on visitor numbers, and provide practical advice on establishing early childhood facilities.

**Session leader:** Em Taylor, Concept Developer, Questacon, Australia

### Panel Discussion: Planetariums – Astronomy education in the 21st century

Many institutions are assessing the role of planetariums in a modern science center. This session will highlight several different approaches.

**Session leader:** Douglas R King, President, St Louis Science Centre, USA

### Panel Discussion: Presentations and performances in ASPAC region

Live presentations are becoming increasingly popular in cultural institutions around the world. In this session, participants will share their experiences of performance in a science centre environment, and outline how they adapt their presentation style to ensure it is both appropriate and effective for differing audiences and themes.

**Session leader:** Robert Bunzli, Performance Manager, Questacon, Australia

### Speakers Corner: Science, Technology and Scepticism – Importance of science centres in popularising new scientific developments.

This session will consider the positive and negative aspects of science and technology progress. The role of the science centre and technology museum in popularising current developments such as environmental pollution, the loss of human mind integrity and the priority given to economic rather than aesthetic considerations, will be discussed.

**Speaker:** Dr. Ivo Janousek, Director General, National Technical Museum, Czech Republic

### Speakers Corner: Scitech Discovery Centre – the world's most isolated science centre

Being the world's most isolated science centre has its challenges. Yet tucked away in Perth, Western Australia, Scitech Discovery Centre overcomes distance with a travelling Roadshow, satellite science and touring exhibitions. Problems created by isolation will be addressed as well as suggestions for extending science networks around the world.

**Speaker:** Alan Brien, CEO, Scitech Discovery Centre, Australia

### Workshop: Thinking outside the box

What is creativity? Can creativity be taught? How can creative thinking be applied to museum programs and events? What have other museums invented combining creativity with free, natural resources of their areas?

**Session leader:** Dr Linda Organ, Director of Education, The Discovery Center, USA

### Speakers Corner: To live and die in LA. Museums – building an audience share

What do an 85 year old LA-based research museum and a yet-to-be opened Canadian interpretive centre have in common? Both have taken the process of defining audience, assessing visitor needs and understanding audience agendas down a very untraditional path. This session will examine a new model for museum interpretation, including ways of looking at programs in terms of cost-recovery.

**Speaker:** Linda M Abraham, Vice President/Education, Natural History Museum of Los Angeles County, USA

### Panel Discussion: Yes, it IS rocket science!

With the construction of the International Space Station and the collaborative involvement of so many nations, our voyage into space has taken a great leap forward. How can science centres and museums take full advantage of the public's fascination with space to create great experiences and to drive attendance? Participants in this session will learn about exhibits and programs which emphasise keeping current with activities in space, and will take away practical examples and information they can apply in their own science centers.

**Session leader:** Alan Nursall, Science Director, Science North, Canada

### Workshop: What works – science and math manipulatives in elementary and secondary schools

This workshop models an inquiry-based approach to teaching and learning science and math concepts. Participants will be actively engaged in exploring interactive manipulatives that promote inquiry skills as they work in cooperative groups. They will learn how to construct and implement these manipulatives in elementary and secondary science curriculum.

**Session leader:** Dr Isabel N Quita, Assistant Professor, San Francisco State University, USA



# Parallel Session Program (continued)

## Speakers Corner: ART+COM

TerraVision, a complete digital 1:1 depiction of the earth. TerraVision enables interactive movement in realtime by flying over the virtual globe and integrates all geo-reference information. Our latest project, Archaeovision, resurrects legendary Troy and mystical ancient Egypt. Virtual reality techniques enable scientists and the public from all around the world to interactively access archeological information.

**Speaker:** Hans-Jorg Woite, Head of Exhibition Systems, ART+COM, Germany

## Speakers Corner: Can one's country be a living display?

Using the example of an exhibition on the subject of "Canada" currently being developed for display at La Cité des sciences et de l'industrie in Paris, concepts for country to country communication will be explored. In particular, the issues arising with regard to live communication links through on-floor exhibits will be debated.

**Speaker:** Dr Hooley McLaughlin, Senior Advisor for Science and Technology, Ontario Science Centre, Canada

## RESEARCH AND EVALUATION: WHAT ARE THE IMPORTANT MESSAGES FOR SCIENCE CENTRES?

### Workshop: Contextual learning – its influence on exhibition development

Participants review the understanding we have about the importance of contextual learning – physical, personal, cultural. They observe visitors use and analyse their own interactions with exhibits. Group discussion focuses on how the physical, personal and cultural context of the participant's country influences conveying the same/similar topics in each participant's institution.

**Session leader:** Dennis Schatz, Associate Director, Pacific Science Centre, USA

### Panel Discussion: Evaluating traveling programs

This session shares the evaluation methods and outcomes of traveling programs in Australia (the Shell Questacon Science Circus and the Queensland Sciencentre Roadshow) and New Zealand (the National Science Technology Roadshow).

**Session leader:** Ian Kennedy, Director, National Science Technology Roadshow, New Zealand

### Workshop: Measuring success – turning desired outcomes into agreed performance measures for a science centre.

Are your performance measures economic? educational? socio-political? Are they relevant to your fundamental goals? Can we make the important outcomes measurable? Or are we content to see the most measurable outcomes become the important ones? To take part in this session for CEOs and senior managers, email your centre's 'performance measures' to [colin@techniquet.org](mailto:colin@techniquet.org).

**Session leader:** Colin Johnson, Director, Techniquet, UK

### Panel Discussion: The impact of science centres on their surrounding communities – preliminary research findings

How can we justify the value of science centres to governments, sponsors and others? This session will report on international research into the ways that science centres are meeting their missions and highlight some particularly relevant studies. Participants will identify and discuss key research that is needed by the science centre industry.

**Session leader:** Robin Garnett, International Research Co-ordinator, Questacon, Australia

### Panel Discussion: Reconceptualising the nature of learning from science centres

This session will present and describe the most contemporary and innovative views of visitor learning arising from science centre and museum experiences. The panel will discuss several perspectives of learning for practically conceptualising the experiences of visitors in and beyond their immediate in-gallery encounters.

**Session leader:** Dr David Anderson, Senior Researcher, QUT Museums Collaborative, Queensland University of Technology, Australia

### Panel Discussion: Redefining our exhibition standards – what are we learning from the new generation of science centres?

The exhibitions in each new science centre project help to inform the progress of the field. The aim of this session is to share and compare these philosophies, and through audience discussion, stimulate the field.

**Session leader:** Peter Anderson, President, Blue Wave Presentations, Ltd, UK

### Panel Discussion: Research on learning in science centres

Speakers will share findings from a range of recent research on learning in science centres, discussing some of the problems and issues that arise in this important area. Questions for the direction of future research will be raised for discussion.

**Session leader:** Dr Leonie Rennie, Professor of Science and Technology Education, Curtin University of Technology, Australia

### Roundtable Discussion: Unexpected and creative misuse of exhibits

Visitors use exhibits sometimes completely differently than planned. This misuse can be creative and an added value – as well as a problem. The roundtable aims to collect and analyse your most striking examples and to discuss how to handle this phenomenon.

**Session leaders:** Mikko Myllykoski, Head, Exhibition Planning, Heureka, Finland; John Falk, Director, Institute for Learning Innovation, USA

### Speakers Corner: What are adult visitors learning?

There is little research which has examined the nature and extent of learning on the part of adult visitors to an interactive science centre. What are these visitors gaining from interactions with exhibits and how does it affect their awareness of science? What are the lessons for exhibit design? In this paper, these issues will be discussed in the light of research over the past 4 years in Questacon, and the positive outcomes for science centres will be described.

**Speaker:** Dr Susan Stocklmayer, Director, National Centre for Public Awareness of Science, Australian National University, Australia

## COOPERATION AND DEVELOPMENT: SCIENCE CENTRES REACH OUT TO WORK WITH EACH OTHER AND WITH THEIR COMMUNITIES

### Panel Discussion: Collaboration between research organisations and science centres/museums

More and more research organisations are establishing science centres as part of their public communication programs. What are their motivations? Do these new centres continue to evolve once the initial investment is over? What are the roles of the partners in such projects? What are the mutual benefits and potential challenges? This session will feature examples from different regions of the world and examine how this new breed of science centre can integrate and collaborate with the museum field.

**Session leaders:** Emma Sanders, Head, Microcosm, CERN, Switzerland; Catherine Franche, Head, Professional Development, OCIM, France

### Panel Discussion: Outreach activities and school support of science centres

School support and outreach activities can be an important educational contribution developed by science centres particularly where schools lack equipment. Distance education by radio and Internet, innovative environmental education programs and experimental activities with loaned equipment are being developed by science centres maintained by SATWAC Foundation in Ahmedabad, India and University of Sao Paulo, Brazil. Their impact will be presented and discussed.

**Session leaders:** Prof Dr Dietrich Schiel, Director, Centre of Scientific and Cultural Dissemination, Brazil and Dr Jayshree Mehta, Director, SATWAC Foundation, India

### Panel Discussion: Presenting science and technology heritage in science centres

In many countries, small or big, science centres have an additional mandate of functioning as custodians of the scientific and industrial relics of the region and hence the science centre personnel have to function in both areas. How can we tackle this challenge and how can we make the two functions complementary?

**Session leader:** Ingit K Mukhopadhyay, Director General, National Council of Science Museums, India

### Panel Discussion: Reaching out to regional and rural areas

A number of science centres in Australia, New Zealand and Asia have developed successful programs which take the science centre experience to rural and remote communities. Panelists will discuss the impact that these programs are making and the challenges ahead to ensure that these programs are relevant and viable.

**Session leader:** Dr Graeme Potter, Director, Queensland Sciencentre, Australia

### Speakers Corner: Science and technology across cultural boundaries – challenges for indigenous programs

Visiting remote aboriginal communities and presenting science shows and workshops to community members presents exciting challenges, both logistical and cultural. Discovering and respecting cultural sensitivities is an essential part of this work. There are several Australian programs – exhibition-based and presentation-based – that are working to meet the needs of indigenous communities in science and technology education.

**Speaker:** Allen Rooney, National Teacher Programs, Questacon, Australia.



# Parallel Session Program (continued)

## **Panel Discussion: Science centres and formal education partnerships**

How do science centres in different countries contribute to the public education system? Do centres receive funding from a national government? Are they recognised players in the public education arena? Are there patterns of involvement in different regions of the world? Join us to explore the impact of science centres in formal public education.

**Session leader:** Vera L Y Uyehara, President, Quantum-Itch, Inc, USA

## **Speakers Corner:**

### **The new SET Discovery Centre at the University of Pretoria**

The focus of the new centre shifted from the traditional Newtonian science to a more integrated approach of technology, engineering, biology, botany and astronomy. Closer collaboration between these fields makes it an anchor point for outreach and public understanding activities. Combining it with the academic environment of the University makes it a unique Discovery Centre.

**Speakers:** Mrs Rudi Horak, Curator, Discovery Centre @ TUKS, University of Pretoria, South Africa: Prof Emile Horak, Head, Department of Civil Engineering, University of Pretoria, South Africa



## **SCIENCE SHOWS**

### **Show: Good vibrations**

I will present a 30 minute science show intended for science teachers and students. During the show I will strike an aluminum rod and explore its patterns of vibration with my fingers alone. I will then demonstrate standing wave vibrations by playing a slinky on a wire, by oscillating a long PVC pipe, and by vibrating a coiled phone cord.

**Presenter:** Dr Paul Doherty, Senior Staff Scientist, The Exploratorium, USA

### **Show: Making sense of senses**

Dramatic and entertaining hands-on demonstrations of the way that we perceive different sensations such as heat, cold, pressure and more.

**Presenter:** Dr Moshe Rippon, Clore Garden of Science, Weizman Institute of Science, Israel

### **Show: Dr Art's Guide to Planet Earth**

Dr Art's Guide to Planet Earth is a theater show, book and website ([www.planetguide.net](http://www.planetguide.net)). The show combines scientific demonstrations with audience participation. It vividly and clearly explains how our planet works, captures the imagination of people of all ages, and invokes a sense of wonder.

**Presenter:** Dr Art Sussman, Project Director, WestEd, USA

## **Show:**

### **Demonstration of Air and Water**

We use scientific instruments or properties to show the characteristics of air and water. For example, a vacuum and balloons are used to present the change of air pressure. Water, indicator (such as phenolphthalein), hydrogen chloride and sodium hydroxide are used to show neutralization.

**Presenter:** Sam Yen, Docent, National Science and Technology Museum, Taiwan, ROC

## **EXHIBITION MARKETPLACE**

### **Participants make short presentations promoting exhibitions and services.**

To be included in the Marketplace, contact Robin Garnett at [rgarnett@questacon.edu.au](mailto:rgarnett@questacon.edu.au) by 16 November 2001

Please note that this is not the final program. The International Program Committee may vary this preliminary program. Check the Congress website [www.questacon.edu.au/iiscwc.html](http://www.questacon.edu.au/iiscwc.html) for the latest program information.