



Leonardo Electronic Almanac

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INTRODUCTION
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< This Issue >

Craig Harris

This month LEA presents a new monograph by Michael Century, "Pathways to Innovation in Digital Culture." In this comprehensive perspective on the evolution of new media art, Century presents a framework for thinking about the artist as an actor in the innovation process in information and communication technologies.

Also this month we present "The Aesthetic Use of Machinic Beings," by James R. Hugunin, a profile of an exhibition by "sine::apsis experiments," a network of artists who create immersive and responsive art experiences generated by computer-mediated kinetic and interactive sound sculptures, light installations, experiments with microorganisms, and performance works. The group of artists, formerly known as "synApse" began in 1998 when Sabrina Raaf and Fernando Orellana invited nine other Chicago-based artists to meet and discuss issues concerning art and technology. LEA presented a profile (PROFILES/SYNAPSE/synapse.html) on synApse in LEA Volume 6, Numbers 8/9.

This month's Leonardo Digital Reviews comprises eight new book reviews, covering a wide variety of topics, including design, myth, magic, mysticism, masterworks of art publishing and a new book about Van Gogh.

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FEATURE ARTICLES
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< Pathways to Innovation in Digital Culture >

by Michael Century

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Abstract  
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This report presents a multi-perspective framework from which to view the rising density of communication between the worlds of art, technology, and science. Designating the site of this hybrid activity as the studio-laboratory, the first section traces the development of

such organizations historically, compares their dynamics to that of "transdisciplinary" knowledge production in science and technology, and argues that they foster incremental, radical and systemic innovation. The second section examines this framework through the prism of five discussion themes: Instruments of the imagination, Creative users, Access, Reflexivity, Public awareness. A brief conclusion identifies five issues and questions for further investigation.

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Introduction  
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This report presents a framework for thinking about the artist as an actor in the innovation process in information and communication technologies. The framework differs from most approaches to the interactions between the creative arts and techno-science in two ways.

First, it attempts to identify and characterize the range of innovative outcomes and the factors that shape them along multiple dimensions -- aesthetic, technological, scientific, economic -- and time frames, both long and short. Second, the framework stresses the importance of a new class of hybrid innovative institution, the studio laboratory, where new media technologies are designed and developed in co-evolution with their creative application. The research is informed by an overview of contemporary studio-laboratories, a historical case study tracing the build-up of a strong digital media capability in Canada, and a review of literatures bearing on the sociology and economics of innovation. Numerous individuals artists, researchers, theoreticians and policy-makers have been consulted. The framework presented widens the way contemporary artistic practices are understood by placing them in the context of innovation studies; and in turn, it broadens the way in which the literature on innovation has up till now addressed the contribution of the creative artist in the digital media design and diffusion process.

The report is organized in a series of short thematic chapters, each treating in a different way the common thesis unifying them: that in the emerging digitally networked society, the creative arts and cultural institutions in general are mutating by forming a constellation of productive relationships with the science and technology research system, industry, humanistic and social science scholarship, and with emerging new structures of civil society. This apparently rising density of communication suggests the need to begin rethinking some aspects of the relationship between cultural support policy, innovation and research policy, and the still nascent but interconnected set of concerns about the requirements for widespread creative participation in a "techno-sphere" increasingly shaped by fast-changing digital media technologies. The concluding section identifies a set of possible interventions and topics for further study, though the phase of research does not permit the preparation of detailed designs or proposals for specific measures.

Cultural theorists will no doubt recognize the shifts briefly alluded to as continuous with a progressive reduction throughout the 20th century of the so-called autonomy of the artist as an alienated or estranged figure existing on the margins of society. Particularly among groups who have defined their "art" more or less in terms of technological innovation, this turn away from the Enlightenment notion of the aesthetic as the "disinterested play of the senses" can sometimes provide the material basis for establishing sustainable linkages with highly charged sectors of the global economy -- the entertainment and information industries -- and their associated scientific and technological bases. But it would be a mistake to

consider the breadth of these shifts only as a widening of the well-established role of creators in industrial design to include such relatively new, trendy factors as "interaction design" or "relationship technologies". As art historians have pointed out, the movement of the machine into the studio is a progressive one which can be variously traced to the early 20th century avant-gardes, but in particular, a marked tendency since the 1960s to engage critically with the "technological sublime" as both material and subject-matter. This critical orientation, at least among some of emerging "media-art and technology" community, is part of what makes the phenomena difficult to describe from a singular disciplinary perspective. Works conceived to make a conceptual or critical point by re-appropriating simple or older techniques can be misread when only evaluated in terms of technological novelty; just as, conversely, the point of "speculative" technological invention may at times be missed by developers seeking only incremental innovation understandable in terms of existing markets and users.

Similarly, the sites of innovation with which we will be concerned in this report, "studio-laboratories", need to be understood as emergent formations fed by, and flowing into artistic, techno-scientific, economic and discursive sources. This anti-reductionist approach is unavoidable, given the complexity of interests in and about digital media today. While we aim to characterize a wide range of linkages between art, science, technology and society through digital media, the emphasis will be on identifying those "pathways to innovation" with the greatest potential benefit to the widest number of actors. Somewhat differently conceived, pathways are perhaps better understood as configurations, since multi-finality is taken for granted in the phenomena being discussed. As such, the approach will contrast sharply with other current stances towards the "unity of knowledge" question that continues to be widely debated on both sides of the postmodern divide.

... [Content omitted: Ed.] ...

[Ed. note: the complete content of this article is available at the LEA website: <<http://mitpress.mit.edu/e-journals/LEA/>>.]

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PROFILES
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< The Aesthetic Use of Machinic Beings >  
by James Hugunin

James Hugunin  
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Department of Art History/Theory/Criticism  
The School of the Art Institute of Chicago  
and Managing Editor of U-Turn E-zine  
Email: <[james@uturnweb.com](mailto:james@uturnweb.com)>  
URL: <<http://www.uturn.org>>

The group, "sine::apsis experiments," is a network of artists Valerie Sullivan Fuchs, Kevin Heisner, Dan Miller, Kym Olsen, Fernando

Orellana, Sabrina Raaf, Lauren Was, and Amy Youngs that interface bodies and technologies. Steve Boyer, and Kenneth E. Rinaldo, all contemporary media artists, have been invited by sine::apsis as special guests for this show. "in::FORMATION" is an exhibition of art that moves and makes artworks in the process. Often natural life processes are introduced into artificial media. The result is immersive and responsive art experiences generated by computer-mediated kinetic and interactive sound sculptures, light installations, experiments with microorganisms, and performance works. Besides the pre-programmed activity, randomness is introduced into their works. Like scientists in cybernetics and socio-biology, these artists agree in seeing randomness not simply as a lacking pattern but as the creative ground from which patterns can emerge.

Such systems result in "emergence" whereby, appearing on their own, surprising and unaccounted-for properties that arise from the complex system and develop in ways not anticipated. The pieces form developed networks to which are imparted an upward tension to the recursively looped programs such that, "like a spring compressed and suddenly released, the processes break out of the pattern of circular self-organization and leap outward into the new." They ask us to see technology and the human as contiguous, rather than opposed, and speculate upon the advent of new mutual evolution.

The group (formerly known as "synApse") began in 1998 when Sabrina Raaf and Fernando Orellana invited nine other Chicago-based artists to meet and discuss issues concerning and art and technology.

Commonalities were found, mutual technical support was given, and a collective vision formulated. For instance, the interrelationship between information and entropy interests them like how technologies encourage rapid restructuring and new use of our bodies that then change experiences of our embodiment in the world. This then impacts the metaphoric networks at play within culture and encourages new life-choices. But also of interest to them is how technologies are geared to accelerate a planned obsolescence that feeds rampant consumerism. On the market, machines have short life spans. In one of their manifestoes, the group declares both a stoic resignation to the inevitable obsolescence and breakdown of their automata and their own mortal bodies, even as they utopically formulate a vision of themselves as machine-assisted artists producing artworks that are art-producing machines.

[Ed. note: the archive referred to in this article is available at the LEA website: <<http://mitpress.mit.edu/e-journals/LEA/>>.]

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LEONARDO DIGITAL REVIEWS
1999.11

Editor-in Chief: Michael Punt  
Executive Editor: Roger Malina  
Managing Editor: Kasey Rios Asberry

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Michael Punt  
<<http://mitpress.mit.edu/e-journals/Leonardo/ldr.html>>

This month's Leonardo Digital Reviews comprises eight new book reviews. Once again we are indebted to Ballast Quarterly Review for permission to reprint Roy R Behrens' cogent pointers to what might be worth attending to in the field of design. Paul Hertz' review, on the other hand, directs our gaze toward art, and in particular the works in the Argentinean National Museum of Fine Arts and their relation to the favoured artists of mainstream art publishing. Wilfred Niels Arnold's more reserved reaction to Mancocoff's well illustrated new book on Van Gogh may indicate that some of these more popular publishing topics demand careful editing in the light of the quality of existing scholarship, not quite the claim of Kevin Murray's sceptical reception of Erik Davis' account of the mystical dimension of technology which suggests a wider survey of the field is called for. Will Marchant's review of Full Moon provides a timely reminder of the impact that the images sent back from various American space missions had on the public, whilst Jacques Mandelbrojt peers through the other end of the telescope at a modest but no less beautiful interaction between music and painters. As always we are grateful to authors who, through their effort, articulate their research and ideas for public consumption, and our panel of reviewers who frame and studies which may be unfamiliar to us.

Michael Punt  
Editor in Chief  
Leonardo Digital Reviews

Book Review

Becoming a Graphic Designer: A Guide to Careers in Design  
Steven Heller and Teresa Fernandes  
New York: John Wiley and Sons 1999.  
Reviewed by Roy R Beherens

Book Review

Techgnosis: Myth, Magic + Mysticism In The Age Of  
Information  
Erik Davis  
New York: Harmony Books, 1998.  
Reviewed by Kevin Murray

Book Review

Obras Maestras del Museo Nacional de Bellas Artes Masterworks of the  
Museum of Fine Arts  
Jorge Glusberg et al.  
Museum of Fine Arts, Buenos Aires, second ed. 1999.  
(oversize soft cover edition. ISBN not available. Spanish language.)  
Reviewed by Paul Hertz

Book Review

The Springboard in the Pond: An Intimate History of the Swimming Pool  
Thomas A.P. van Leeuwen. Cambridge, MA.: MIT Press. 1999.  
ISBN:0-262-22059-8  
Reviewed by Roy R. Behrens

Book Review

Looking Closer 3: Classic Writings on Graphic Design  
Edited by Michael Bierut, Jessica Helfand, Steven Heller and Rick Poynor.  
New York: Allworth Press and The American Institute of Graphic Arts. 1999. ISBN  
1-58115-022-9.  
Reviewed by Roy R. Behrens

Book Review

Full Moon  
Michael Light  
New York: Alfred A. Knopf, Inc., 1999.

ISBN: 0-375-40634-4.  
Reviewed by Will Marchant

Book Review  
The Sound of Painting, Music in Modern Art  
by Karin v. Maur  
Reviewed by Jacques Mandelbrojt

Book Review  
Van Gogh, Fields and Flowers  
Debra N. Mancoff  
San Francisco: Chronicle Books  
Reviewed by Wilfred Niels Arnold

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Visit Leonardo Digital Reviews online to read these reviews in full  
together with the latest postings in LDR Raw as they come in.  
<<http://mitpress.mit.edu/e-journals/Leonardo/ldr.html>> Your comments  
are welcome at <[kasberry@humanorigins.org](mailto:kasberry@humanorigins.org)>

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| OPPORTUNITIES |  
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< Digital Media Design - University of Minnesota, Duluth >

Gloria DeFilipps Brush  
Chair, GD 6 Search Committee  
Art Department, University of Minnesota Duluth  
317 Humanities Building  
10 University Drive  
Duluth, MN. 55812  
Tel: (218) 726-8580  
Email: <[gbrush@d.umn.edu](mailto:gbrush@d.umn.edu)>

POSITION OPEN  
Digital Media Design

Assistant Professor, tenure-track

Salary: negotiable.  
Start Sept. 1, 2000. Term of contract: 9/1/2000 - 5/31/2002

Teach courses in various aspects of graphic/digital design, including  
such areas as motion graphics, interactive design, intermedia design,  
and web design. Other assignments dependent upon departmental need and  
areas of expertise. Work with student design teams. Involvement with  
new Digital Imaging Laboratory. Join 5+ person, expanding design  
program. Contribute to aspects of the M.F.A. program in graphic  
design. Creative activity/research, service and advising  
responsibilities.

Essential qualifications: M.F.A. in graphic design or with  
concentration in digital media arts by 7/1/2000. Experience with  
Mac-based design technology. Familiarity with current and emerging  
electronic technologies and historical and critical graphic/media  
design issues. National exhibition record. Two years professional  
experience in graphic or media design. Communication skills  
appropriate to a faculty position.

Preferred qualifications: Two years college level teaching experience in a group lab environment preferred. (Graduate Teaching Assistant experience acceptable.) Experience with photographic processes desired.

UMD is the second largest campus of the University of Minnesota system. The Art department, within the School of Fine Arts, has 300 undergraduate majors in studio art, graphic design, art education, art history, and art and technology, and an M.F.A. program in Graphic Design. Duluth is a scenic port city within proximity to the Boundary Waters Canoe Area Wilderness, and has extensive cultural, educational and recreational opportunities.

Completed applications must be postmarked by March 15, 2000. Submit: Letter of application reflecting philosophy of teaching and skills and experience as they relate to the position; curriculum vitae; unofficial transcripts (official transcripts required if finalist); up to 20 minutes of design work on videotape, Mac-formatted CD ROM, or other electronic format; examples of students work invited, if available; names, addresses and phone numbers of three professional references (letters of reference will be required for finalists); SASE, to: Gloria DeFilipps Brush, at the above address.

The University of Minnesota is an equal opportunity educator and employer.

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< Electronic Music Foundation >

Nancy Hager  
Tel: (718)951-5286  
Email: <NHager@brooklyn.cuny.edu>

Job opening at Brooklyn College (New York City)

The Center for Computer Music at Brooklyn College has a MIDI studio with sampler keyboards and other software and another studio equipped with Macintosh computers running ProTools, CSound, Soundhack, Metasynth, and IRCAM software. The studio also has a Kyma System. Workstations are configured for computer analysis and synthesis, digital signal processing, digital audio recording, editing, and mastering; for digital audio recording and editing, notation, and MIDI (sequencing and sampling); and live electronic music in both sound creation and processing.

We are looking for a composer with knowledge of hardware as well as software (i.e., how to configure equipment) to direct the Center and teach composition majors, a course in computer music, and probably theory of 20th century music. We are particularly interested in someone with experience in live multi-media performance or collaborations with artists in other media, such as film and video. Our spring term begins January 31. Rank and salary will be based on the candidates experience. I expect that the substitute position will be converted to a tenure-track line with a year.

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| ANNOUNCEMENTS |  
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< The Second African River Festival >

The Water Festival : "Encounters on the Mouhoun River"

Camel Zekri & Dominique Chavaucher

An Encounter between Traditional Arts and New Technologies

From January 12th to February 1st 2000, a group of international artists, most of them working and creating art and music with new technologies, meet to travel down the River Mouhoun in Burkina Faso and collaborate with local artists. Together, they will create new work in villages, run workshops with local artists, children in the streets, in schools and homes.

During Nov-Dec 2000 and in May-June 2001, this very same group of artists, together with artists from Burkina Fasso that will have met during the trip down the River Mouhoun, will tour Europe. This "travelling tour" will be structured around residencies during which the artists will run workshops and meet the local artists in European towns.

The first River Festival took place in Niger in December 1996 (travel down the River), in March 97 and January 98 (tour in France).

The project will begin to be posted on <<http://www.olats.org/festival-eau>> as soon as the artists are able to log on January 13, 2000 in Burkina Faso.

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< VII Brazilian Symposium on Computer Music >

For updated information please visit the Symposium website:

<<http://www.eca.usp.br/nucleos/lami/nucom/sbcm2000.html>>

The Sixth Brazilian Symposium on Computer Music saw researchers from various countries discussing their experiences in a friendly and informal atmosphere. The Seventh Brazilian Symposium, chaired by Bernadete Zagonel (bzagonel@rocketmail.com), will be held in Curitiba, the capital of the Parana state, from 17 to 20 July 2000. The Brazilian Symposia are organized by NUCOM, the computer music branch of the Brazilian Computing Society and pride themselves on their intercultural nature and selection policies.

Roger Dannenberg (USA) and Leigh Landy (UK) will deliver the keynote speeches. There will be paper presentations, concerts, tutorials and product demonstrations. Researchers, composers, educators, manufactures and all concerned with the interplay between music and technology are invited to submit papers, compositions, tutorial projects and product demonstration proposals.

\*important dates\*

- 25 Feb 2000 --- closing date for postage of compositions
- 3 March 2000 --- closing date for postage of papers, tutorials and product demonstration proposals

31 March 2000 --- notification of acceptance of papers  
21 April 2000 --- notification of acceptance of compositions,  
tutorials and product demonstration proposals  
21 April 2000 --- closing date for camera-ready papers

\*submission of papers\*

Topics of interest include, but are not limited to:

Acoustics, Diffusion, Sonorization  
Artificial Life and Evolutionary Music Systems  
Audio Hardware Design  
Audio Signal Processing  
Computer Aided Musical Education  
Computer Aided Music Analysis  
Computer-Aided Musicology  
Internet Applications  
Multimedia Integration  
Music Data Structures and Representation  
Music Notation, Printing and Optical Recognition  
The Musicologies of Digital Musics  
Psychoacoustics and Cognitive Modelling  
Real-time Interactive Systems  
Sound Synthesis  
Systems and Languages for Composition

This year we are giving particular emphasis to the musicologies (historical, systematic, ethno, critical etc) of digital musics (computer music, electroacoustic music, soundscape, techno etc.). Papers reporting ongoing or concluded research should be submitted in a preliminary version of no more than 8 pages (Times Roman 12 and 1.5 interline space). Please state clearly in the front page which of the above headings, if any, best describes your subject matter. Preliminary submissions in Portuguese will be accepted on the understanding that their authors will undertake to present the final version in English. You are kindly requested not to reveal your identity in your paper (avoid self reference etc.). Please send MS Word 97 compatible files as email attachments to the Chairs, Aluizio Arcela \*and\* Carlos Palombini: <arcela@cic.unb.br> and <palombini@usa.net>.

By agreement with the Editors, a selection of musicological papers will be published online in the "Electronic Musicological Review" and the "Critical Musicology Journal", as appropriate. Since online publication is likely in all areas, authors are encouraged to take advantage of hypertext facilities.

\*submission of compositions\*

The Seventh Brazilian Symposium on Computer Music will seek to highlight the variety of musical styles that come under the computer music heading. Submissions are invited from composers working in all genres within the field. Formats are as follows:

[ 1] music for tape, 2 to 8 channels;

[ 2] music for tape or live-electronics with vocal and/or instrumental parts;

[ 3] algorithmic composition, vocal and/or instrumental.

For [ 1] send DAT or CD.

For [ 2] send DAT or CD recording of the electronic part plus full score

and, if at all possible, a recording of the full piece.

For [3] send DAT or CD plus full score.

Submission must include:

One copy of a brief programme note (10 to 15 lines in English, Portuguese or Spanish);

One copy of a short biography (10 to 15 lines in English, Portuguese or Spanish);

Three copies of all music materials (CDs, DATs and scores).

Please post submissions by air mail to the Chair, Fernando Iazzetta, to whom enquiries may be addressed: iazzetta@usp.br.

Fernando Iazzetta  
USP - ECA - Dpto. Musica  
Rua da Antiga Reitoria, S/N  
05508-900 - Sao Paulo - SP  
Brazil

\*tutorials and product demonstrations\*

Please contact Conrado Silva:

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BRASIL  
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Fax: +55 61 349-0757  
Email: <conrado@unb.br>

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< Workshop "Genetic Algorithms in Visual Art and Music" >

CALL FOR PAPERS AND ANNOUNCEMENT

Workshop "Genetic Algorithms in Visual Art and Music" (GAVAM' 2000)  
Bird-of-a-feather Workshop at the 2000 Genetic and Evolutionary  
Computation Conference (GECCO-2000 ) 8 July 2000

Colin G. Johnson  
Computing Laboratory  
University of Kent Canterbury, Kent  
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Tel: +44 1227 827562  
Fax: +44 1227 762811  
Email: <C.G.Johnson@ukc.ac.uk>

Juan Jesus Romero Cardalda  
RNASA Lab.  
Department of Computer Science  
University of A Coruna  
CP 15009 +A Coruna, Spain  
Tel: +34 981 167000 Ext 1043 (1302)  
Fax: +34 981 167160  
Email: <jj@udc.es>

URL: <<http://galileo.dc.fi.udc.es/workshop/gecco2000/>>

## Workshop topic

The idea of using computers for artistic activities springs from the first studies of what an intelligent machine could do. Nowadays, the worlds of music and art and the world of computational science are getting closer. This is thanks to the findings of many researchers who, over the last decade, have used genetic algorithms and similar adaptive methods in the creation of works of art, both visual arts and music. However the methods used in these various attempts have been empirical. The aim of this workshop will be to review these various methods and work towards a methodology for taxonomizing, analysing and improving the performance of these methods.

## Timeliness of the proposal

Over the last decade there have been around 15 separate attempts to use genetic algorithms towards a musical and artistic end. However there is little synthetic or comparative work between these various systems. We feel that there is a need to review this work, compare the various ideas that have been put forward, and lay the foundations for a more unified theory in this application area.

## Paper submission and Participation

People wishing to present a talk should send a paper of approximately 3 pages to the address below by 15th February 2000. Accepted papers will be published in a supplement to the conference proceedings. The preferred format for submission is postscript files by email. If anyone is unable to send a file in electronic form then please contact the organizers. Those interested in either attending or presenting a paper at the workshop should fill in this form. All people involved in the workshop must be registered for the main Gecco'99 conference. Details are available here.

By submitting a paper, at least one of the authors is required to attend the workshop and give the corresponding presentation. If you have any questions regarding the paper submission, please do not hesitate to contact the organizers.

## Important Dates:

- \* Paper summary submission deadline: February 15, 2000
- \* Decisions will be mailed by: March 15, 2000
- \* Submissions of camera-ready papers: April 10, 2000
- \* July 8-12, 2000 Gecco 2000 (Saturday - Wednesday)

## Format of Workshop.

Half day (2-3 hours for presentations, and 1-2 hours for structured discussion)

The format of the workshop is designed to encourage discussion of these topics and familiarization with a broad range of work in this area. To this end we will invite interested participants to give short (15-20 minute) talks, which could outline work that they have carried out but which more importantly must include a number of questions designed to provoke discussion of future directions in this area. As the talks progress these questions will be collected and second half of the workshop will be used to discuss issues raised by these questions in more depth.

## Gecco 2000 Conference

The Genetic and Evolutionary Computation Conference (GECCO-2000) is a recombination of the Fifth Annual Genetic Programming Conference (GP-2000) and the International Conference on Genetic Algorithms (ICGA-2000). GECCO-99 had 619 attendees and is a the largest and most inclusive conference in the field of evolutionary computation. For venue, accommodation and Local arrangements please see GECCO-2000 pages.

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< Acoustics and Music: Theory and Applications >

ACOUSTICS AND MUSIC: THEORY AND APPLICATIONS  
(AMTA 2000 INTERNATIONAL CONFERENCE)

Montego Bay, Jamaica, December 20-22, 2000.

URL: <<http://www.worldses.org/wses/AMTA/index.htm>>

DEADLINE for paper submission: APRIL 15, 2000  
Notification of Acceptance/Rejection: MAY 15, 2000

ORGANIZER: WSES (World Scientific and Engineering Society)

TOPICS:

#### ACOUSTICS

Mathematical Models in Acoustics  
Boundary Value Problems  
Environmental Acoustics  
Architectural Acoustics  
Acoustics Measurements  
Sound Insulation  
Noise Control Engineering  
Active Control of Sound  
Prediction Methods  
Acoustics of Fluids  
Underwater Acoustics  
Ultrasound technology and applications  
Electronics for Sound Art and Technology  
Speech Processing  
Language Processing and Technology  
Vibro-Acoustics  
Ambiophonics  
Bio-acoustics  
Seismic Imaging  
Medical Diagnostics  
Non-destructive Inspection  
Biological Effects of Sound  
Psychoacoustics  
Other relevant topics and applications.

#### MUSIC

Mathematical Models in Music  
Computers in Music Composition  
Neural Networks, Fuzzy Logic, Genetic Algorithms in Music  
Modeling of Music in European and non-European Scales  
Mathematics of Greek (i.e. Byzantine) Music  
Mathematics of Oriental Music and, in general, of non-european music  
Pattern Recognition in Music  
Automatic Music Composition  
Biological Effects of Music  
Electronic Musical Instruments  
Mathematical Analysis of Musical Instruments

Music and Psychology  
Music and Religion  
History of Music  
Music and Civilization  
Musicology  
Music in Art and Philosophy  
Other relevant topics and applications.

PUBLICATIONS!!

Publish your paper in the Proceedings and in WSES-Press International Luxurious Editions ALL THE ACCEPTED PAPERS will be published twice (two different publications); in the CD-ROM Proceedings (with Search Facilities and Page Numbering) as well as in the Electrical and Computer Engineering International Reference Book Series of WSES PRESS as Post-Conference Books (Hard cover, velvet paper, international circulation). These will be different International Editions (with different ISBN). Also SPECIAL ISSUES of selected papers will appear in Computational Acoustics, Applied Acoustics and Informatics journals.

PLACE:

Special Arrangements for AMTA 2000 participants have been made (discount rates) with the Wexford Modego Bay Hotel where the conference will take place. For AMTA 2000 discount rates, please, contact <usa@worldses.org>.

HOTEL:WEXFORD MODEGO BAY  
Gloucester Avenue  
Montego Bay, JAMAICA

SUBMISSION:

Send your paper or papers via email to: usa@worldses.org (Only electronic submissions are accepted. Don't submit via regular mail, please). Send also your proposals for tutorials, invited sessions, workshops to: usa@worldses.org Format of your paper: The format is the same of the WSES Sponsored conferences CSCC 2000 or MCP 2000 or MCME 2000 (take the sample from WSES main web page following appropriate links).

URL: <<http://www.worldses.org>>

LOOKING FORWARD TO SEEING YOU IN JAMAICA!

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< OLATS News >

1) The Water Festival : "Encounters on the Mouhoun River" Camel Zekri & Dominique Chavaucher - <<http://www.olats.org/festival-eau>> Encounter between traditional arts and new technologies.

From January 12th to February 1st 2000, a group of international artists, most of them working and creating with new technologies, meet to travel down the River Mouhoun in Burkina Fasso and to exchange with local artists. Together, they will create new works in villages, run workshops with local artists, children in the streets, in schools, ... In November-December 2000 and in May-June 2001, this very same group of artists together with artists from Burkina Fasso that they will have met during the travel down the River Mouhoun will tour Europe. This "travelling tour" will be structured around residencies during which the artists will run workshops and meet the local artists in the various places in Europe.

The first edition of the Festival of Water took place in Niger in December 1996 (travel down the River), in March 97 and January 98 (tour in France).

2) Space and the Arts Bibliography : updated ! Check where you can find books and articles about Space and the Arts a project developed by Leonardo and OLATS.

3) New publication in the Leonardo Book Series at MIT Press: The Robot In The Garden, edited by Ken Goldberg For information please visit <<http://mitpress.mit.edu/promotions/books/GOLTHS00>>

The Robot in the Garden Telerobotics and Telepistemology in the Age of the Internet, edited by Ken Goldberg

The Robot in the Garden initiates a critical theory of telerobotics and introduces telepistemology, the study of knowledge acquired at a distance. Many of our most influential technologies, the telescope, telephone, and television, were developed to provide knowledge at a distance. Telerobots, remotely controlled robots, facilitate action at a distance. Specialists use telerobots to explore actively environments such as Mars, the Titanic, and Chernobyl. Military personnel increasingly employ reconnaissance drones and telerobotic missiles. At home, we have remote controls for the garage door, car alarm, and television (the latter a remote for the remote).

The Internet dramatically extends our scope and reach. Thousands of cameras and robots are now accessible online. Although the role of technical mediation has been of interest to philosophers since the seventeenth century, the Internet forces a reconsideration. As the public gains access to telerobotic instruments previously restricted to scientists and soldiers, questions of mediation, knowledge, and trust take on new significance for everyday life.

Telerobotics is a mode of representation. But representations can misrepresent. If Orson Welles' s "War of the Worlds" was the defining moment for radio, what will be the defining moment for the Internet? As artists have always been concerned with how representations provide us with knowledge, the book also looks at telerobotics' potential as an artistic medium.

The seventeen essays, by leading figures in philosophy, art, history, and engineering, are organized into three sections: Philosophy; Art, History, and Critical Theory; and Engineering, Interface, and System Design.

Contributors:

Albert Borgmann, Tom Campanella, John Canny, Judith Donath, Hubert Dreyfus, Ken Goldberg, Alvin Goldman, Oliver Grau, Marina Grzanic, Blake Hannaford, Michael Idinopulos, Martin Jay, Eduardo Kac, Machiko Kusahara, Jeff Malpas, Lev Manovich, Maurice Merleau-Ponty, Eric Paulos, Catherine Wilson.

May 2000, 7 x 9, 330 pp., 49 illus., cloth ISBN 0-262-07203-3

A Leonardo Book. To order: <<http://mitpress.mit.edu>>

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< Leonardo Book Series Presents Richard Coyne' s look at "Technoromanticism" >

For the past two decades, pundits have championed computer technology as \*the\* tool for unifying humanity through interconnectivity, the restoration of community, the revitalization of democracy and the notion of a new humanitarian whole. In his new book "Technoromanticism: Digital Narrative, Holism and the Romance of the Real," Richard Coyne explores how this digital romaniticism--which encompasses McLuhan's utopic vision of social reintegration all the way to the "new realities" of cyberspace--is eminently rooted in Enlightenment thinking and the romanticism of the 18th and 19th century. Coyne also posits alternative theories to technoromanticism (for example, pragmatism, hermeneutics, surrealism and deconstruction) in order to provoke new narratives of computing. N. Katherine Hayles of UCLA said that "Technoromanticism" "provides the most comprehensive philosophical and cultural context for understanding information technologies that I have ever seen."

"Technoromanticism: Digital Narrative, Holism and the Romance of the Real" by Richard Coyne can be ordered from MIT Press via phone at 1-800-358-0343 or via email at <mitpress-orders@mit.edu>.

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