

GENERATIVNÍ UMĚNÍ,  
POČÍTAČOVÉ UMĚNÍ,  
ALGORITMICKÉ UMĚNÍ

# VLIV KYBERNETIKY A INFORMAČNÍ TEORIE NA UMĚNÍ – GENERATIVNÍ ESTETIKA

Hledání vědeckého symbolického jazyka, který není zaměřen na komunikaci, ale má sloužit jako nástroj k hledání pravdy

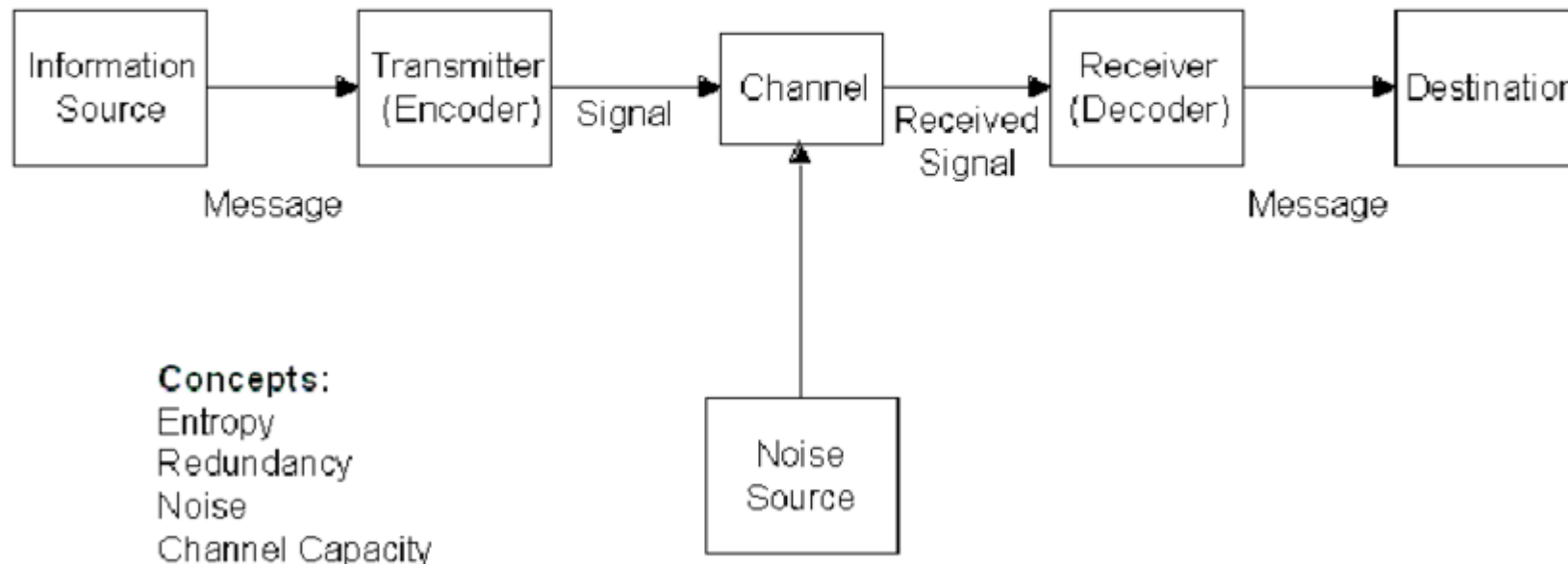
myšlenky univerzálního matematického jazyka, s nímž lze popsat svět (Leibnitz, Babbage, Turing)

Informace jako klíčový koncept prostřednictvím kterého porozumíme estetickým procesům

umělecké dílo začalo být nahlíženo optikou nové vědecké disciplíny - kybernetiky

dílo nahlíženo jako informace, která prochází komunikačním systémem

## The Shannon-Weaver Mathematical Model, 1949



# RACIONÁLNÍ ESTETIKA, INFORMAČNÍ TEORIE, KYBERNETICKÁ ESTETIKA

výzkum zaměřený na hledání objektivních (měřitelných) estetických vlastností uměleckého díla

pokus o kvantifikaci estetické hodnoty díla

Max bense

Abraham Moles

Herbert W. Franke

# PRAKTICKÉ REALIZACE TEORIÍ - PARTICIPATIVNÍ A GENERATIVNÍ ESTETIKA – HLAVNÍ ZNAKY A STRATEGIE

Vytváření děl podle určitých pravidel

Důraz na procesy opakování, variace a kombinace

Tvorba estetických situací

Práce s koncepty redundance a komplexity

Do popředí se dostává komunikativní dimenze umění

Spojení vědeckých otázek a tvorby umění – realizace experimentů

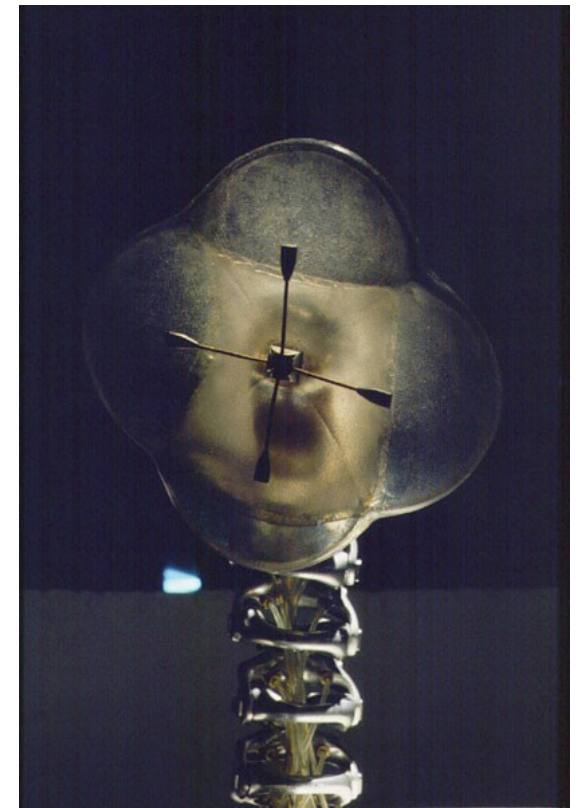
# PŘÍKLAD VLIVU KYBERNETIKY NA UMĚNÍ – VÝSTAVA CYBERNETIC



Peter Zinovieff  
Ihnatowicz



Gordon Pask - The Colloquy of Mobiles



Edward

# PŘÍKLAD VLIVU KYBERNETIKY NA UMĚNÍ – VÝSTAVA CYBERNETIC SERENDIPITY

**Serendipity**  
Serendipity

the faculty of making  
happy chance discoveries  
by means of control and communication machines  
both human and electronic

An exhibition  
in addition demonstrating how man uses  
and the computer and how technology has  
extended the scope of his creativity  
and inventiveness  
which have made possible such  
work as automatic and  
other  
serendipitous  
manifestations

Institute  
of Contemporary  
Arts  
August 2 - October 20

Institute of Contemporary Arts  
North House, The Mall, London WC1N  
August 2 - October 20  
Tuesday, Thursday, Saturday 12 - 6

Thursday  
August 8  
Tuesday  
August 13  
Thursday  
August 15  
Tuesday  
August 20  
Tuesday  
August 27  
Tuesday  
September 3  
Thursday  
September 5  
Tuesday  
September 10  
Thursday  
September 12  
Thursday  
September 19  
Tuesday  
September 24  
Thursday  
September 26  
Tuesday  
October 1  
Tuesday  
October 8  
Thursday  
October 10  
Thursday  
October 17

Class 3. Miller  
Make in the fields of anthropology,  
computer, international scientific cooperation  
and the visual arts.  
REFLECTIONS ON THE DIFFERENCES BETWEEN SCIENCE AND ART

Professor Herbert Root  
Composer and musicologist at School of Music  
of the University of Illinois.  
COMPOSITIONS: EARLY INSTRUMENTAL MUSIC

Charles Ellis  
Director of the Computer Music Network in New York  
MUSIC: WITHOUT LABELS

S.J. Thorne  
Sub-director at Government School  
New machine systems for literary creation  
AND HIS MARTIN INTERLUDE

Dr. Christopher East  
Clinical research Fellow  
in the Division of Computer Science  
at the National Physical Laboratory  
SLEEPING AND AWAKING

Mr. Mark  
Miller, Metallist, inventor and consultant,  
in making a study of the impact of the computer  
ON HISTORY  
SOUNDING TO SUNDAY EVEN

Professor M.J. Duffin  
of the Department of Aeronautical Engineering  
Queen Mary College, London.  
QUESTIONS IN THE SERVICE OF MAN

Dr. Gordon East  
Experimental psychologist and automation  
DIRECTOR OF RESEARCH IN ARTS RESEARCH CENTER,  
COMMENT ON SEX AND SENSATION

Janis Rowin  
Composer, 1968 artist winner of the BBC Congress  
computer-processed music competition 1968  
UNUSUAL, CONTRASTY IN MUSIC AND ITS FORMULATION

Mr. A. S. Miller  
Plays on the use of computer  
in the dramatic, classical and folk literature in general  
THE COMPUTER AS AN AID TO LITERARY STUDIES

Henry Samuel  
Composer and founder of the  
SCHOOL OF MUSIC RESEARCH IN FINLAND  
THE COMPUTER IN MUSIC

Professor Robert Rice  
of University of Minnesota, sociologist and computerist  
interested with the application of computer  
and information theory to literature and music  
THE SOCIAL IMPLICATIONS OF ART WITH COMPUTER

Professor J.A. Baddeley  
of the Institute of Computer Science in London  
THE CONTRIBUTION OF COMPUTATION TO THE ART OF CREATION

Professor John Cowan  
of the Department of Psychology, Neuroscience Institute  
UNIVERSITY OF BIRMINGHAM

Professor Laurel Rouse  
American Professor of Human Genetics  
AT HARVARD UNIVERSITY  
AUTOMATIC MECHANICAL SELF-REPLICATION

Robin Murray Wood  
Computer system designer and technical investigator  
at the Cambridge Language Research Unit  
TRAILING TO SUBMERSE

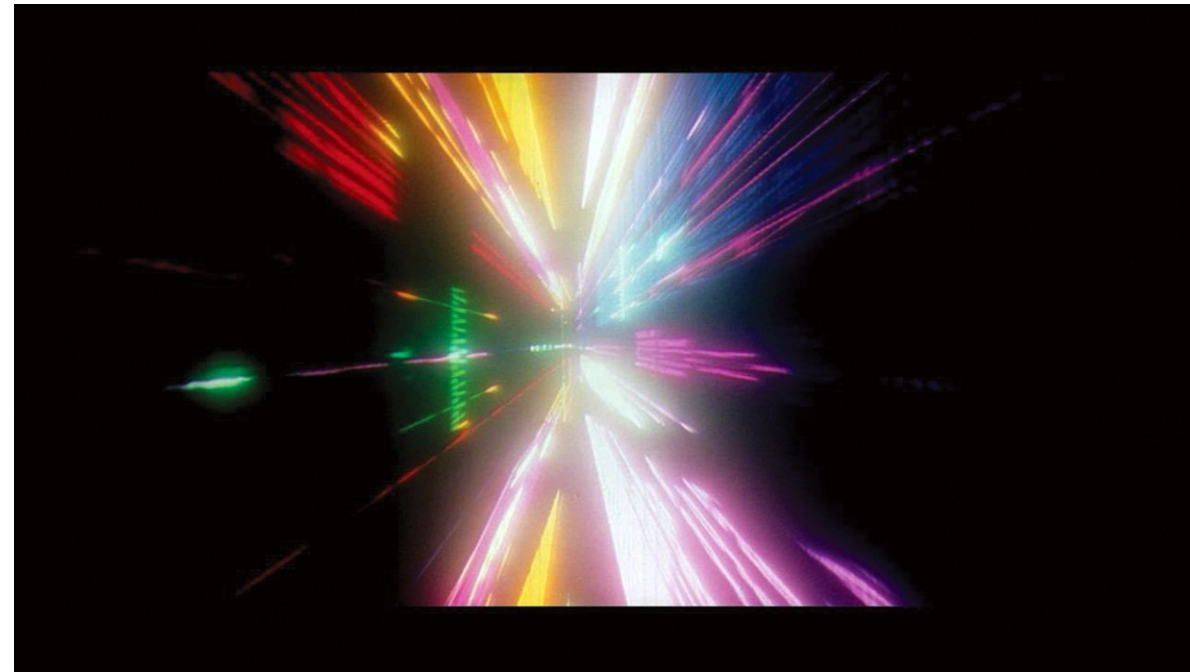
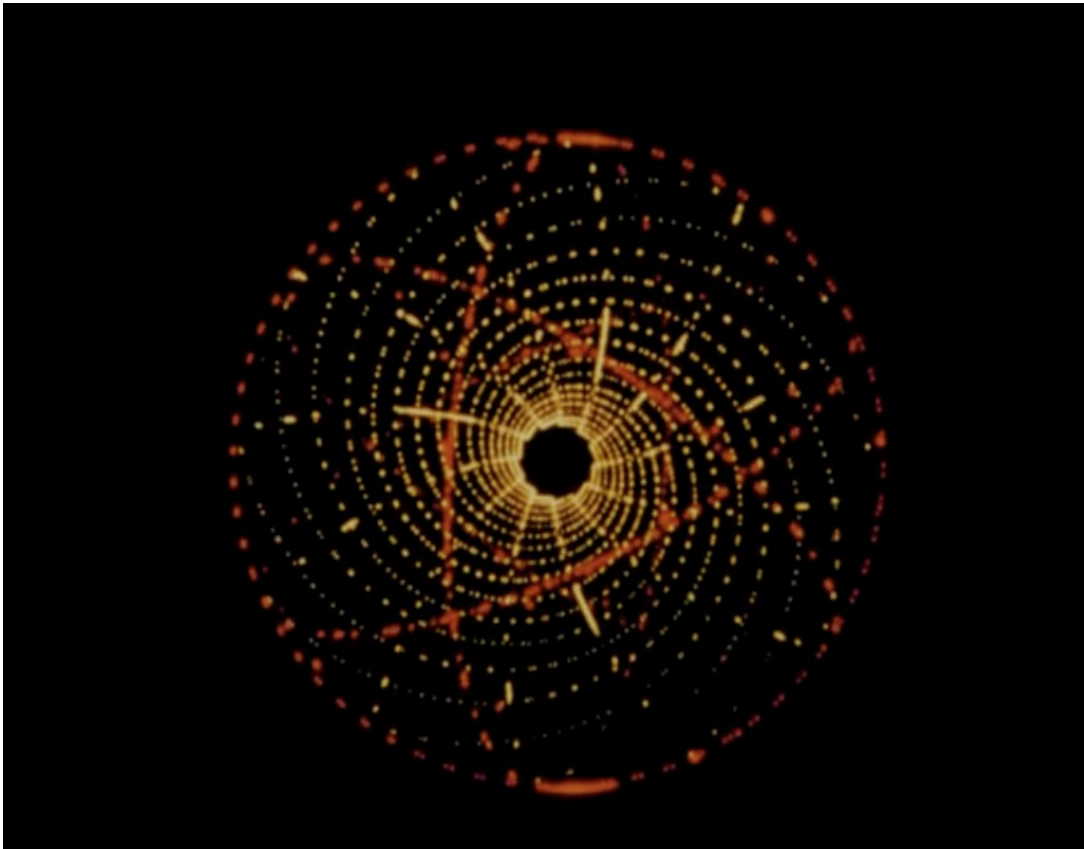
<http://www.medienkunstnetz.de/exhibitions/serendipity/>

# COMPUTER ART - DÍLA

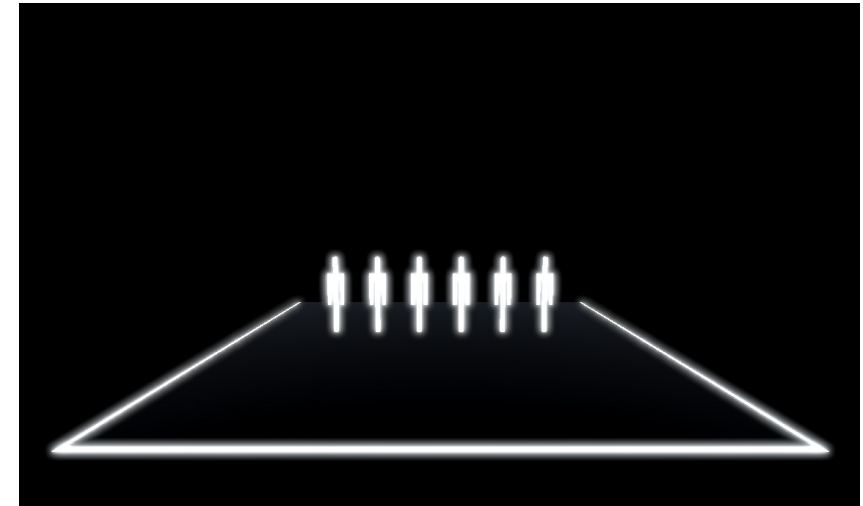
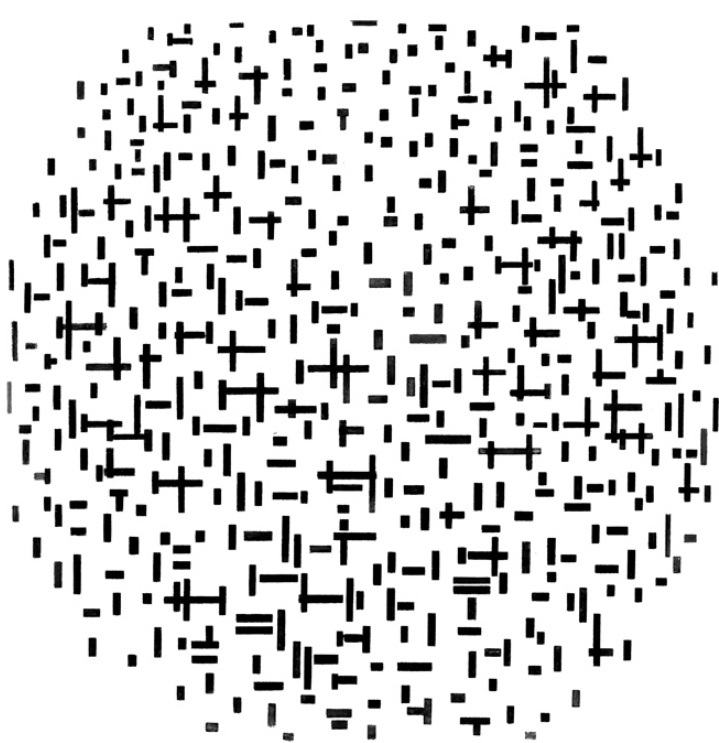




# PŘEDCHŮDCE - JORDAN BELSON – ALLURES (1961)



# MICHAEL NOLL

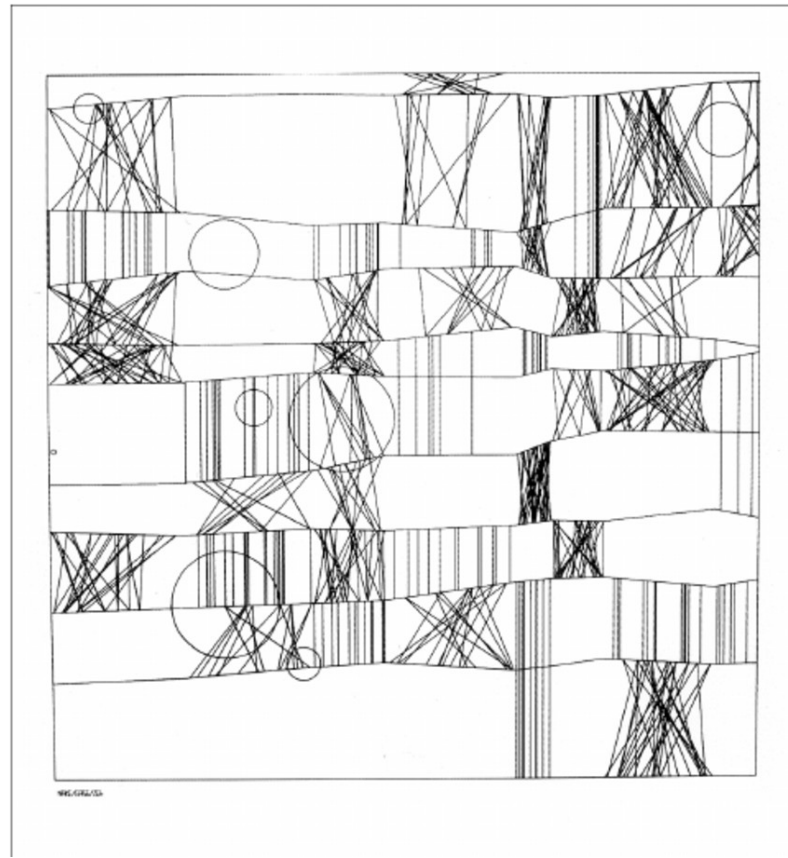


Computer Composition with Lines (1964)  
Ballet (1965)

<http://noll.uscannenberg.org/Art%20Papers/Mondrian.pdf>

Computer Generated

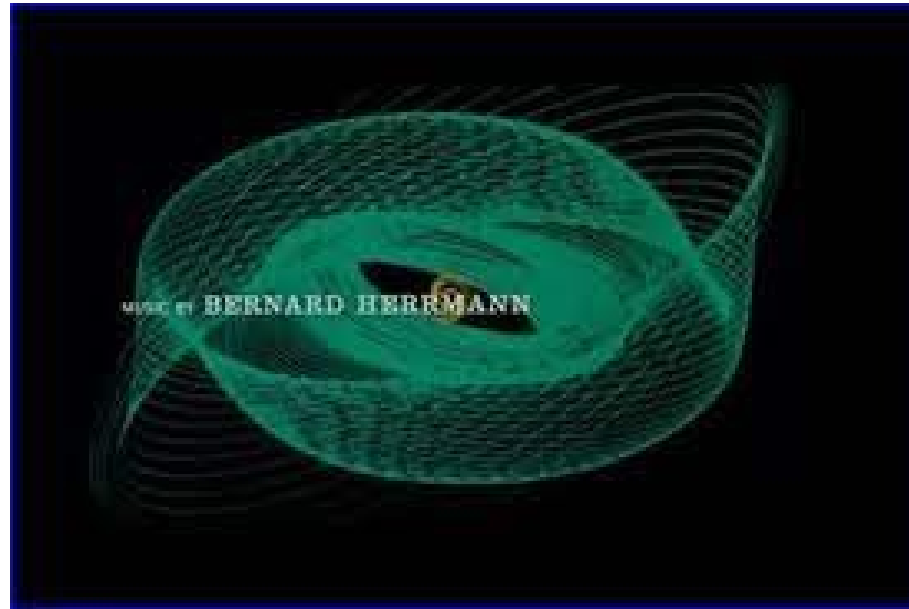
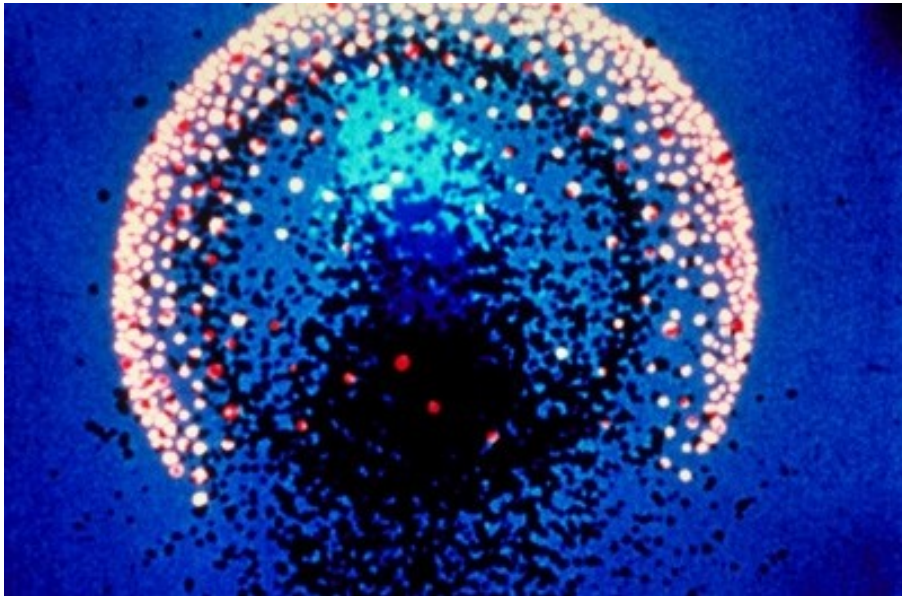
# FRIEDER NAKE



Paul Klee -Highroads and Byroads (1929) Hommage à Paul Klee 13/9/65 Nr.2 (1965)

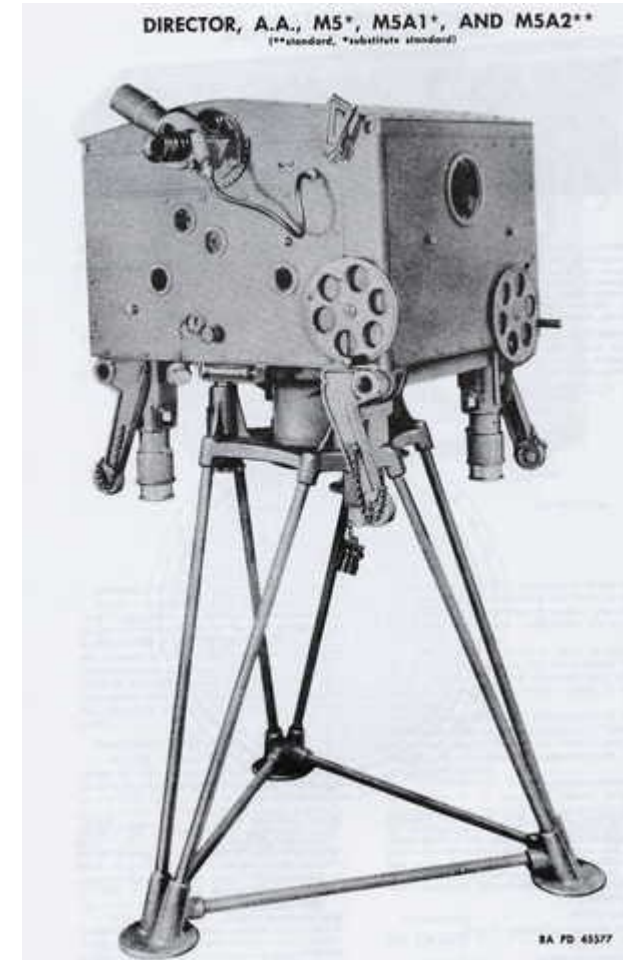
Random Polygons

# JOHN A JAMES WHITNEY

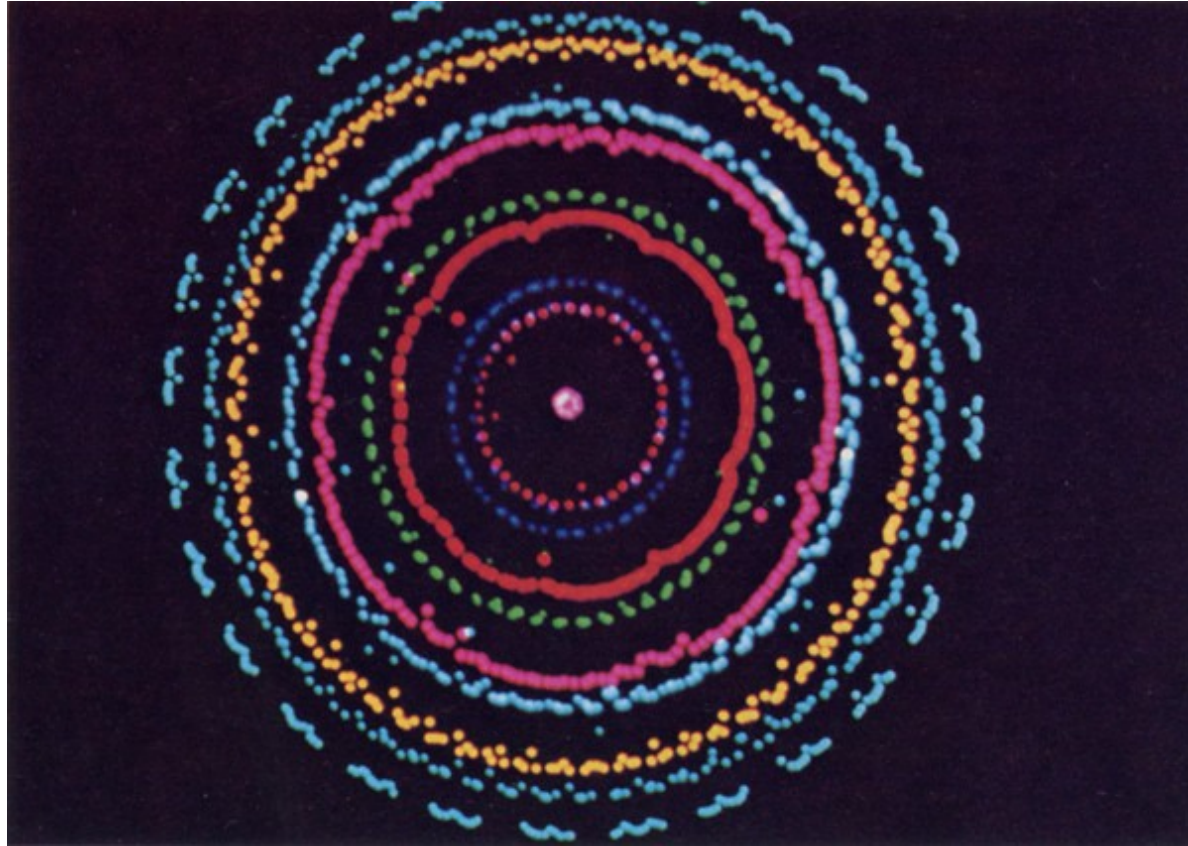


Yantra (1957)

<http://www.centerforvisualmusic.org/WhitneyNotesPerm.htm>



# JOHN A JAMES WHITNEY



Permutations (1968)

[p://www.centerforvisualmusic.org/WhitneyNotesPerm.htm](http://www.centerforvisualmusic.org/WhitneyNotesPerm.htm)

# CHARLES CSURI: HUMMINGBIRD 1967



<https://www.moma.org/calendar/exhibitions/3903>

# HAROLD COHEN - AARON (1973)



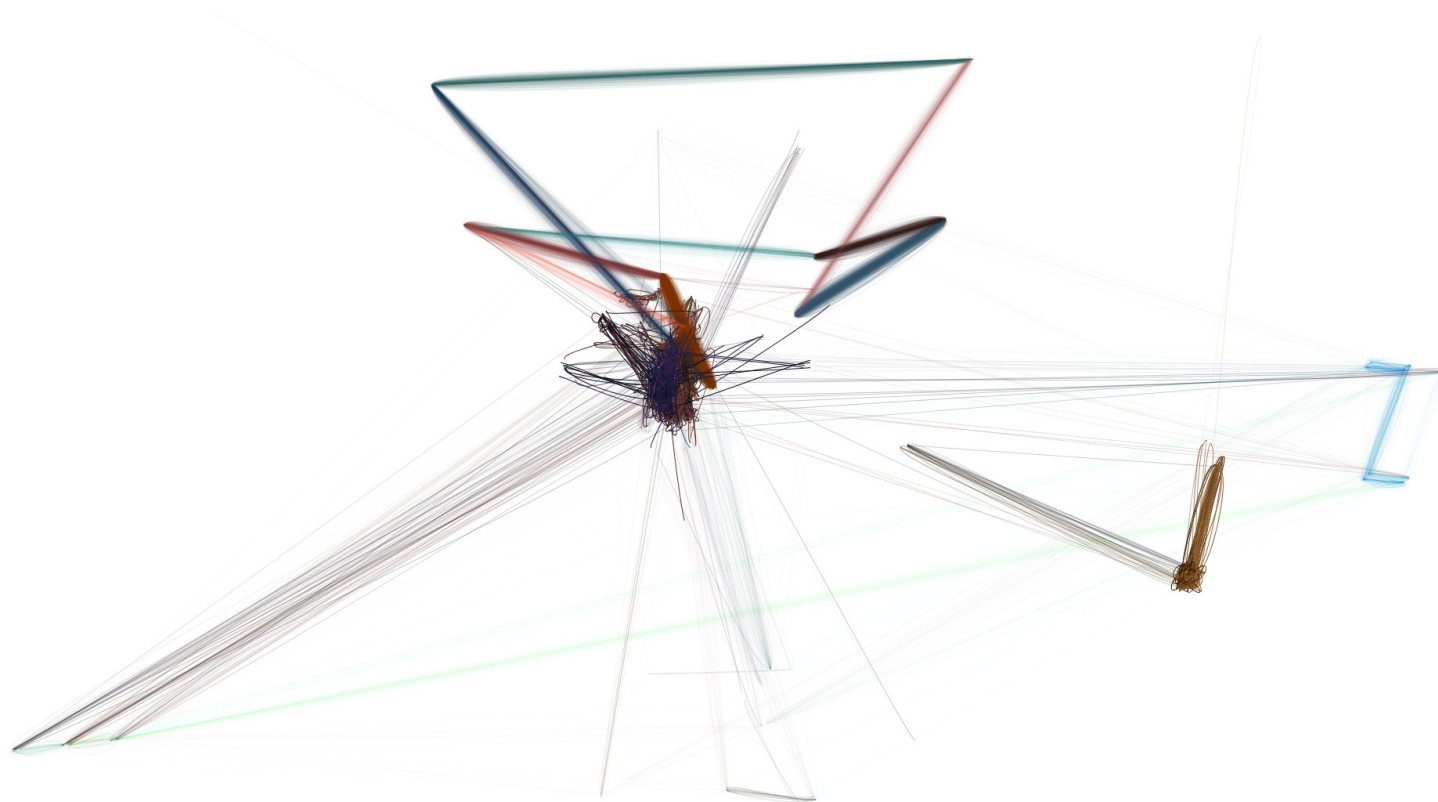
<http://www.aaronshome.com/aaron/index.html>

# ERWIN DRIESSENS A MARIA VERSTAPPEN: E-VOLVER (2006)





# BEN GROSSER: COMPUTERS WATCHING MOVIES (2013)



# GENERATIVNÍ UMĚNÍ - APLIKACE

<http://weavesilk.com>

<https://tinkersynth.com/slopes>

<https://www.prosepainter.com>

# ZDROJE

[What is Computer Art? An Attempt Towards an Answer and Examples of Interpretation. MediaArtNet, 2004.](#)

Ondřej Chrobák - Pavel Kappel - Jana Písaříková. 1968: computer.art. Brno: Moravská galerie v Brně, 2018.

Frank Dietrich. Visual Intelligence: The First Decade of Computer Art (1965-1975). Leonardo, roč. 19, č. 2, 1986.

<http://dada.compart-bremen.de/>