



How much CS does an artist need?

Programming Art with Snap!



presented by Joachim Wedekind



Computer SEL ER56



Plotter Zuse Graphomat



**Hommage à Nake:
Rectangle Hatching (1965)**



Flow - Interactive exhibit by Karl Sims (2018)

www.dieangewandte.at/jart/prj3/angewandte-2016/main.jart?rel

di:Angewandte
Universität für angewandte Kunst Wien
University of Applied Arts Vienna

Newsletter | Contact | Deutsch

Suche

ANGA Angewandte Resident Artist Programme

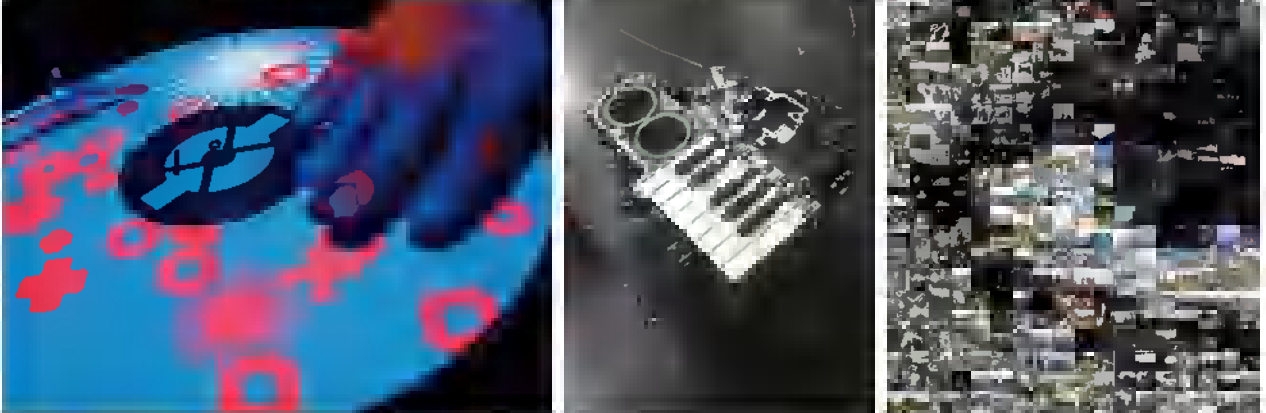
NEWS STUDIES UNIVERSITY INTERNATIONAL INSTITUTES ART AND RESEARCH SERVICE PRESS

Angewandte » Institutes » Institute of Fine Arts & Media Art » Digital Arts

INSTITUTES

- Institute of Architecture
- Institute of Art Sciences and Art Education
- Institute of Arts and Society
- Institute of Art & Technology
- Institute of Conservation
- Institute of Design
- Institute of Fine Arts & Media Art**

- Art & Science
- Digital Arts
- Science Visualization
- Graphics and Printmaking
- Painting
- Painting and Animated Film
- Photography
- Sculpture and Space
- Site Specific Art
- Stage and Film Design



Digital Arts

Head: Univ.-Prof. Mag. art. Ruth Schnell

The assignment of artistic teaching and research/exploration in the Digital Arts Department is the opening up of new fields for the arts and artistic practice through the use of information technology (hardware/software) as a design resource and instrument, as well as the application, via algorithms, sensors, robots and new methods of image creation, of the metaphors and design principles of time-based art (film, video, audio, interactive media art, ...) to "classic" art forms such as sculpture and architecture, etc.

Courses

Contact

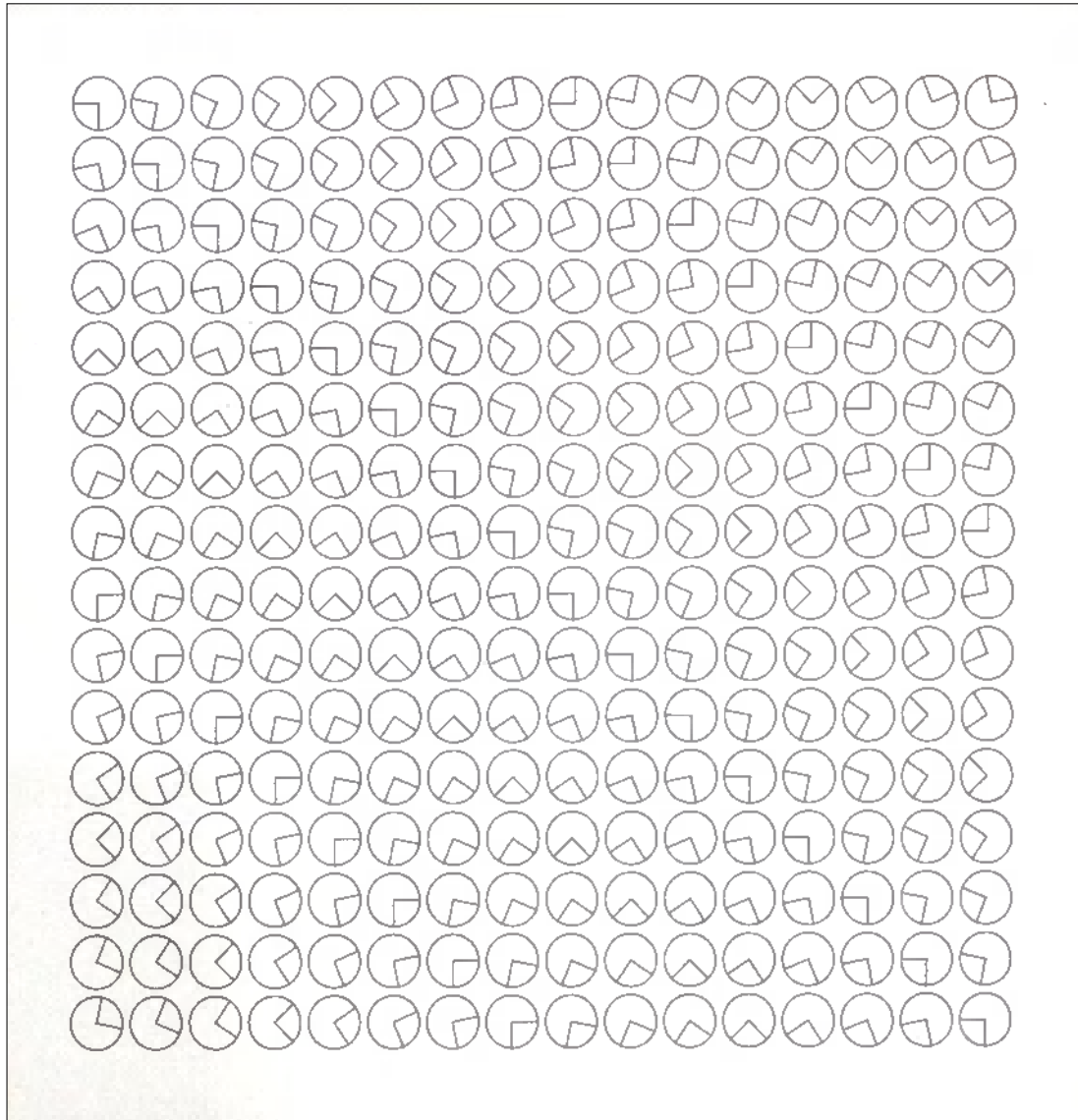
✉ digitalekunst@uni-ak.ac.at
☎ +43-1-71133-2640



Processing
TouchDesigner
Blender
pd~



Codierte Kunst (Coded Art) - Vernissage 31st October 2019, IWM, Tübingen



Horst Bartnig: Untitled (1985)

Snap! Categories:

- Motion
- Looks
- Sound
- Pen
- Control
- Sensing
- Operators
- Variables

Control:

- when clicked
- when space key pressed
- when I am clicked
- when
- when I am clicked
- broadcast
- broadcast and wait
- send to message
- warp
- wait 1 secs
- wait until
- forever
- repeat 10
- repeat until
- for i = 1 to 10
- if
- if
- else
- if then else
- repeat
- stop all
- run
- launch
- call
- tell to
- ask for
- run

```
when clicked
  go to x: 400 y: 400
  point in direction 90
  switch to costume iris_25_2ar
  set size to 400 %
  show
  clear
  pen up
  set delta to 10
  wa
  for n = 1 to 16
    for i = 1 to 16
      stamp
      move 55 steps
      set x to -380
      change y by -55
      hide
    go to x: -380 y: 400
    switch to costume stich_2
    pen up
    point in direction i
    script variables
    set a to
    wa
    for n = 1 to 16
      for i = 1 to 16
        point in direction delta
        stamp
        point in direction 90
        stamp
        point in direction 90
        move 55 steps
        set x to -380
        change y by -55
        change i by 1
```

Motion

Variables

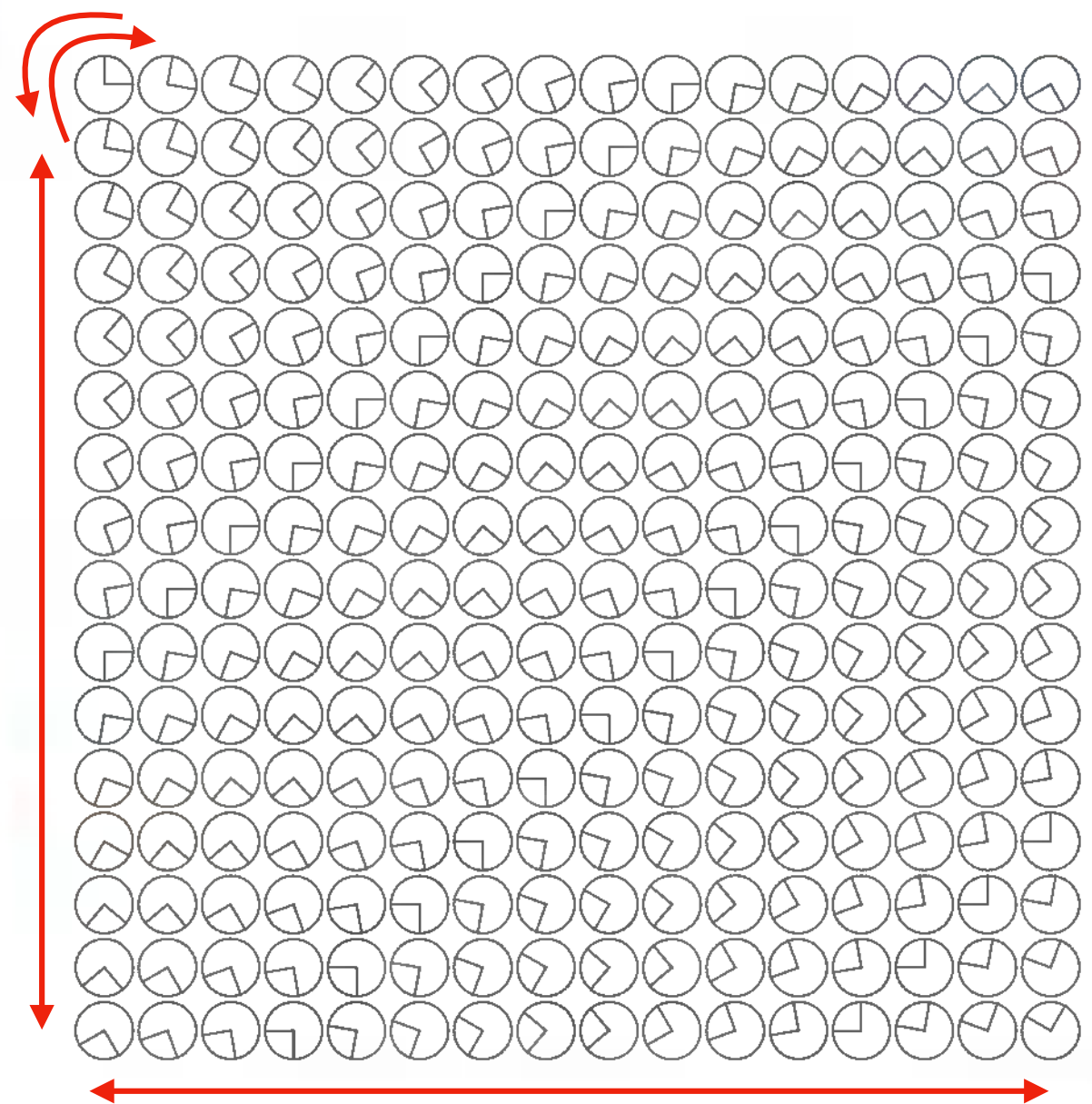
Loops

Motion

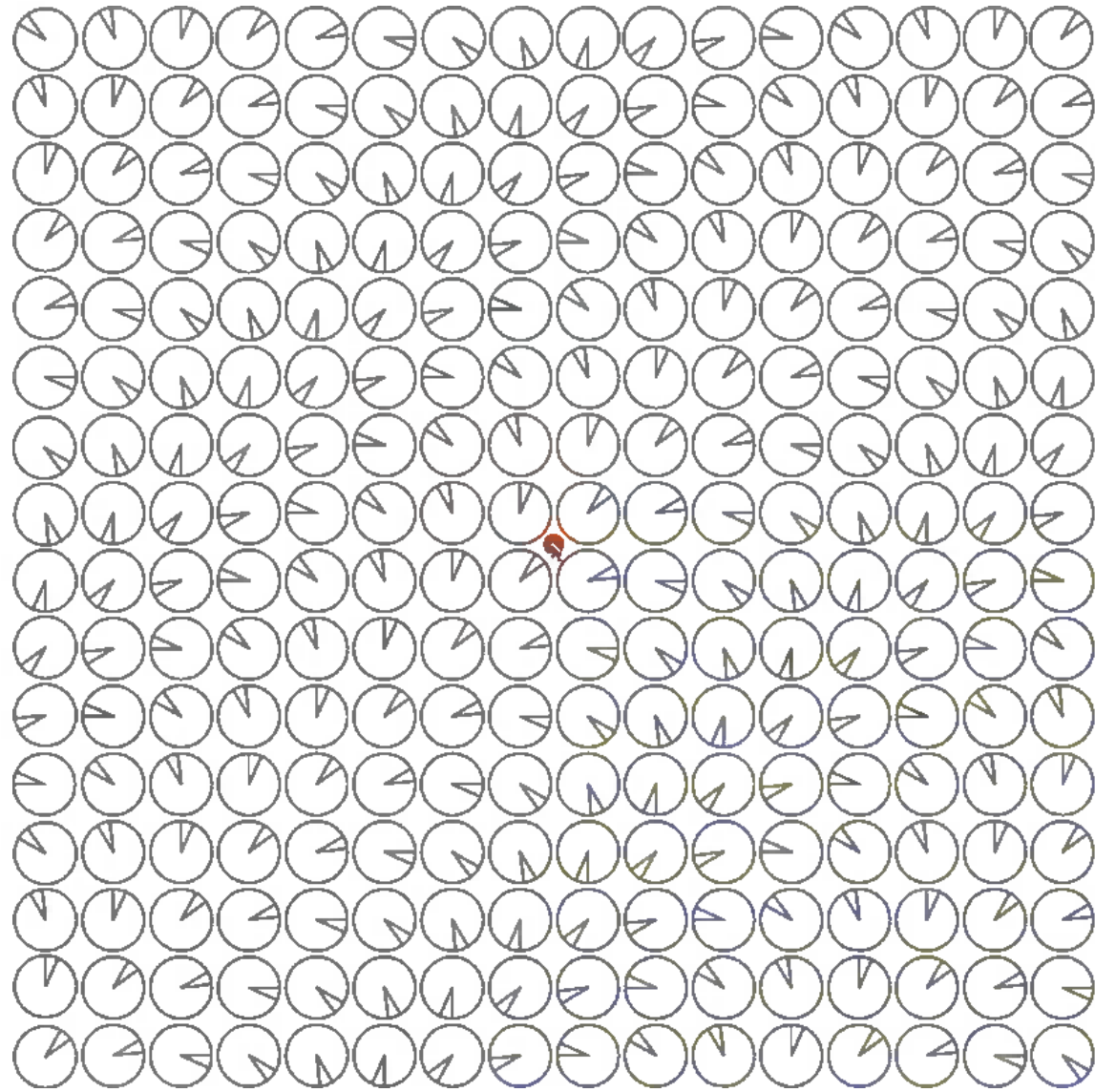
Variables

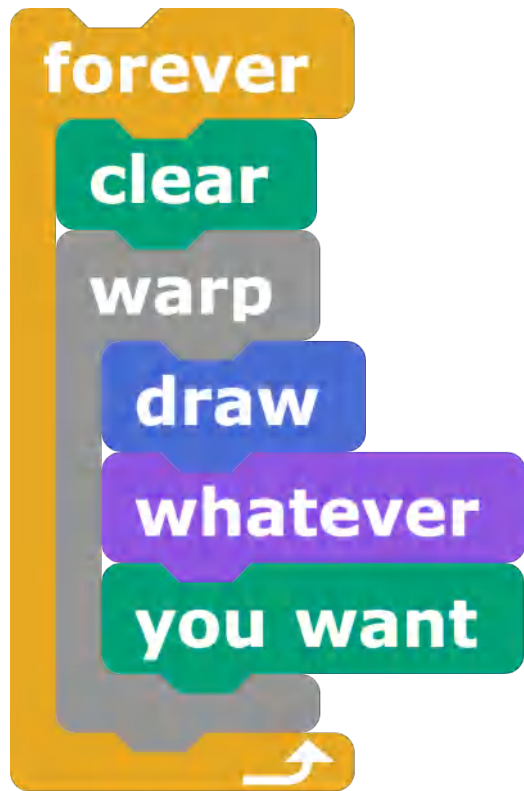
Loops

Motion



Stage Sprite






animation




interaction

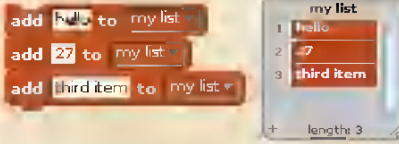
• Variables and Scope




• Iteration



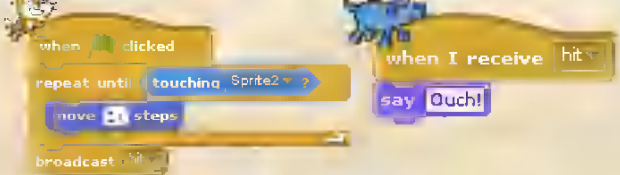
• Lists



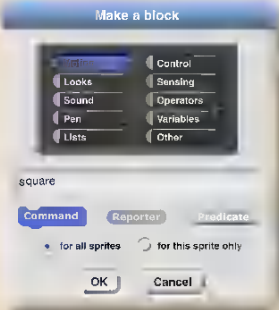
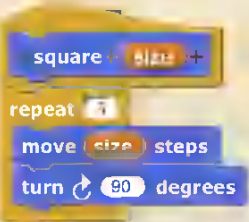
• Parallelism



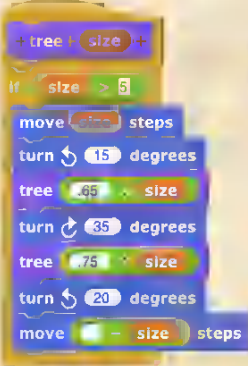

• Event Handling






• Procedures (Commands and Reporters)

• Recursion

• Functions and Lists as First Class Data

Some Big Ideas in Scratch/Snap! (<https://bjc.berkeley.edu>)

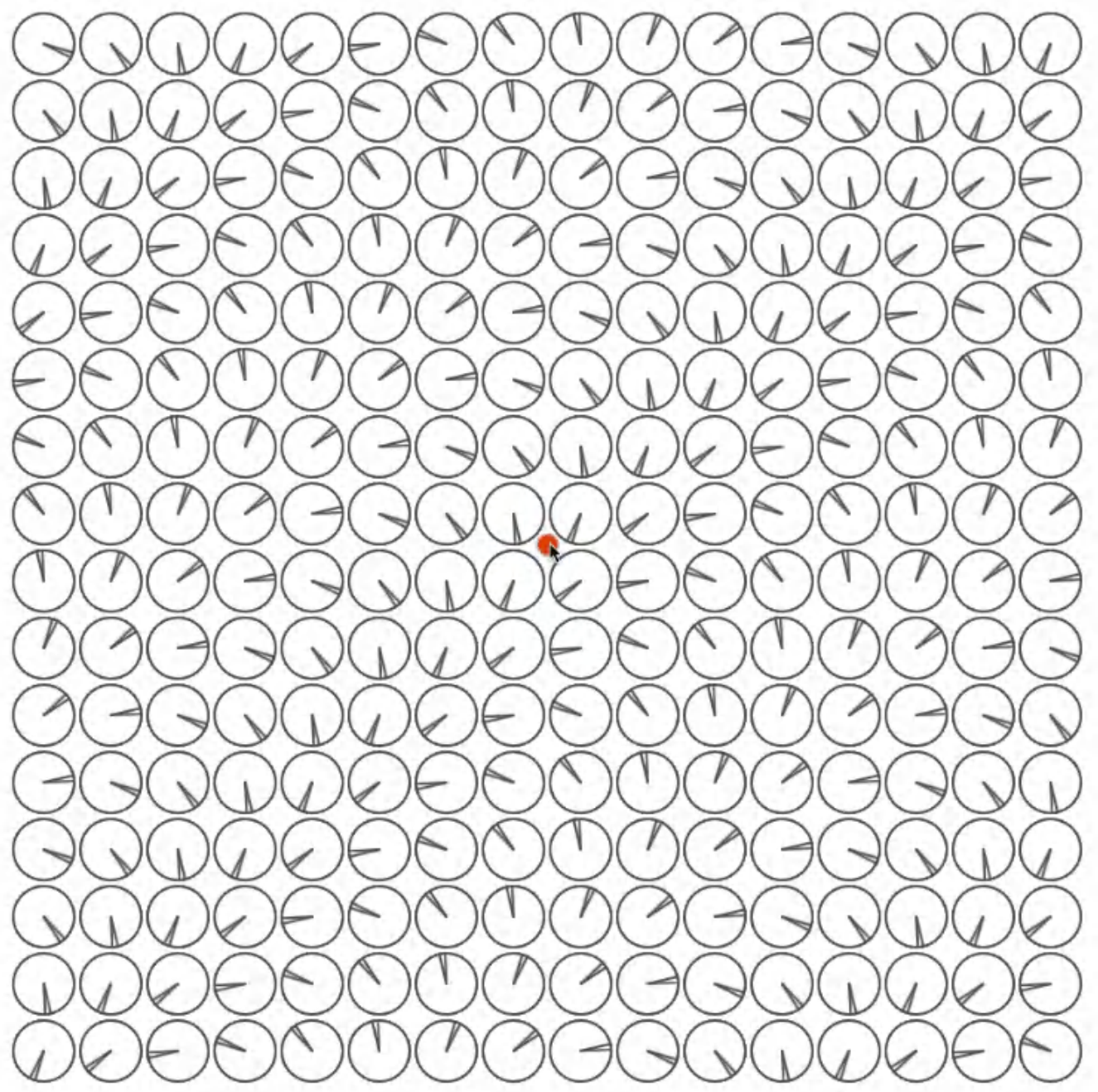
```
when clicked
clear
pen up
set angle_1 to 5
set angle_2 to 10
set delta to 30
set delta_angle_1_2 to 90
kreise_zeichnen
zeichne_linien_1
```

```
when I start as a clone
show
forever
turn angle_1 degrees
```

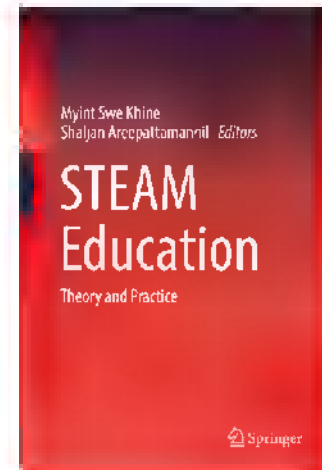
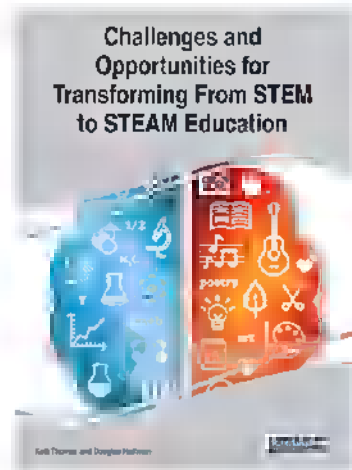
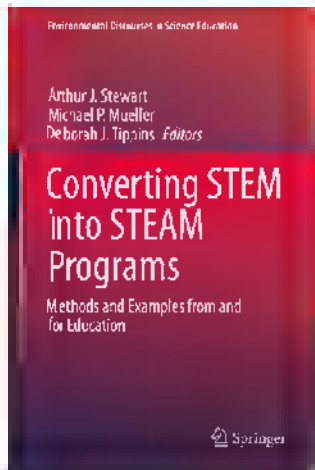
```
Block Editor

+zeichne_linien_1+
go to x: -390 y: 400
switch to costume strich_2
pen up
point in direction 0
script variables a
set a to direction
warp
for n = 1 to 16
  for i = 0 to 15
    point in direction a + i * delta
    create a clone of myself
    point in direction 90
    move 55 steps
    set x to -390
    change y by -55
    change a by delta
  forever
  if mouse x > -400
    set angle_1 to mouse x + 400 / 30
  else
    set angle_1 to 0

OK Apply Cancel
```



STEM



STEAM



Painting with the Fingers - Exhibit with an interactive table, 28th November 2019, IWM, Tübingen

Thank you for your attention!

<http://digitalart.joachim-wedekind.de>

Twitter: @jowede

E-Mail: joachim.wedekind@t-online.de