

HKIIT Workshop

Day 1 Morning

Opening Session

Instructor: TADOKORO Atsushi

2025

Today's Agenda (9:30 - 11:30)

1. Opening Session (9:30 - 10:10)

- Introduction
- Workshop Objectives
- Overall Overview

2. Administrative Notices and Environment Check (10:10 - 10:20)

1. Opening Session

(9:30 - 10:10)

1-1. Introduction

Welcome

- Thank you very much for participating in the HKIIT Workshop today
- This workshop is a place to explore creative activities using cutting-edge digital technologies
- Although we have a limited time of 6 days, I would like to learn, create, and discover new possibilities of technology and expression together with you
- **In this workshop, you, the participants, are the protagonists**
 - Please actively ask questions
 - Please experiment
 - Challenge yourself without fear of failure

Instructor Introduction

TADOKORO Atsushi

Creative Coder, Live Coder, University Professor

Background and Activities

- Associate Professor, Faculty of Engineering, Maebashi Institute of Technology
- Creates music production, video generation, and installation works using programming
- Extensive experience in live coding performances and workshops both domestically and internationally
- Author: “Beyond Interaction,” “Performing Programming: Live Coding Philosophy and Practice - Show Us Your Screens,” “Processing Creative Coding Introduction - Creative Expressions Generated by Code,” etc.

Areas of Expertise

- Media art, creative coding
- Live coding
- Algorithmic composition
- Real-time audiovisual expression
- Generative art and AI

Thoughts on the Workshop

Technology is not just a “tool” but a “medium” that opens up new ways of thinking and possibilities for expression. I hope that you will find your own unique language of expression through technology.

1-2. Workshop Objectives

What This Workshop Aims For

We aim not only to “use” digital technology but to “**freely manipulate it as a tool for expression.**”

Through 6 days of intensive learning, we will acquire **practical skills to expand your creativity.**

Objective 1: Understanding and Creative Application of Generative AI

Learning Content

- Conceptual understanding of core technologies such as Transformers and LLMs
- Application to image, music, and code generation
- Viewing AI as an “idea source” and “collaborator”
- Methods to incorporate into your creative process

Specific Topics

- Fundamentals of prompt engineering
- Image generation AI (Stable Diffusion, Midjourney, etc.)
- Text generation AI (ChatGPT, Claude, etc.)
- Music generation AI (Suno, Udio, etc.)

Objective 1: Learning Flow

Day	Time	Content
Day 1	Morning	Opening Session (Orientation, Icebreaker)
Day 1	Afternoon	Workshop 1 “Generative AI and the Future of Creation”

Objective 1: Goals

- ✓ Technically understand how generative AI works
- ✓ Select and utilize appropriate AI tools for your projects
- ✓ Build a new creative style through collaboration between AI and humans

Objective 2: Music Construction Through Live Coding

Using TidalCycles

- Generate music in real-time using code
- Composition and performance based on algorithmic thinking
- Improvisationally rearrange patterns and build complex rhythms

Characteristics of Live Coding

- Generate and modify music in real-time
- Pattern-based composition methods
- Balance of improvisation and reproducibility
- Collaborative development through open-source communities

Objective 2: Learning Flow

Day	Time	Content
Day 2	Morning	Generative AI Creation Workshop Presentation + Workshop 2 “TidalCycles Installation Party”
Day 2	Afternoon	Workshop 3 “What is Live Coding? TidalCycles Basic Tutorial” + Rhythm Pattern Creation (Hands-on)
Day 3	Morning	TidalCycles Basic Tutorial Presentation + Workshop 4 “TidalCycles Practical Tutorial 1 (Chords/Scales, Complex Rhythms)”
Day 3	Afternoon	Workshop 5 “TidalCycles Practical Tutorial 2 (Extensions)” + Mini Performance (Hands-on)

Objective 2: Goals

- ✓ Master TidalCycles basic syntax and freely write patterns
- ✓ Build music using complex rhythm patterns and effects
- ✓ Think by connecting music theory with coding
- ✓ Acquire the basic ability to perform improvised live performances

Objective 3: Real-time Audiovisual Expression

Using TouchDesigner

- Visual programming environment
- Generate interactive video in real-time
- Create audiovisual works where sound and video are tightly integrated

Characteristics of TouchDesigner

- Node-based visual programming
- Excellent real-time performance
- Integrates 3D, 2D, audio, video, and data processing
- Supports projection mapping, VJ, installations, etc.

Objective 3: Learning Content

Day	Time	Content
Day 4	Morning	Workshop 6 “TouchDesigner Installation, Introduction”
Day 4	Afternoon	Workshop 7 “TouchDesigner Basic to Intermediate Tutorial” (Live Performance Team Division)
Day 5	Morning	TouchDesigner Tutorial Presentation + Workshop 8 “Audiovisual (Waveform/Spectrum Visualization, TidalCycles Integration)”
Day 5	Afternoon	Workshop 9 “Live Performance Production (Structure, Ideation)” + Preparation (Hands-on)

Objective 3: Goals

- ✓ Master TouchDesigner basic operations and create simple visual works
- ✓ Analyze audio signals and map them to visual parameters
- ✓ Build an integrated system linking TidalCycles and TouchDesigner

Objective 4: Technology Integration and Live Performance

Final Goal

Don't let the learned technologies end as fragmented knowledge

Integrate Generative AI + Live Coding + Audiovisual to build **original live performances**

Importance of an Integrated Approach

- Modern media art is interdisciplinary
- Not just acquiring individual technologies, but “design skills” to combine them are necessary
- Balance of technical implementation ability and artistic expression

Components of Live Performance

1. **Concept** - Theme and message of the work
2. **Sound** - Music part using TidalCycles
3. **Visual** - Video part using TouchDesigner
4. **Interaction** - Integration of sound and video
5. **Direction** - Timing, development, climax

Preparation for Presentation (Day 5 Afternoon - Day 6)

- Concept planning individually or in groups
- Prototype creation and testing
- Rehearsal and polishing

Objective 4: Goals

- ✓ Design and implement works integrating multiple technologies
- ✓ Project management ability to complete works within limited time
- ✓ Communication ability to present your work to others

1-3. Workshop Overall Overview

6-Day Schedule

Day	Theme	Content
Day 1	Generative AI and the Future of Creation	Orientation, AI overview, practice
Day 2	Live Coding Basics	TidalCycles environment setup, basic syntax
Day 3	Live Coding Practice	Advanced patterns, music production
Day 4	Visual Generation Basics	TouchDesigner basic operations
Day 5	Audiovisual Integration	Building sound and video integration systems

2. Administrative Notices and Environment Check

(10:10 - 10:20)

Questions Welcome

- We welcome questions during lectures and practical sessions
- Any trivial questions are OK
- **Having doubts is the first step in learning**

Support System

- Instructors and staff will circulate during production practice
- Questions via online chat are also possible (link to be shared separately)

Break and Manners

Breaks






- Brief breaks between sessions
- Please return promptly after breaks

Manners

- Silence or mute mobile phones
- Use laptops and tablets appropriately
- Respect diverse opinions and expressions

Application Check

Recommended Installed Applications

-  **Google Chrome** - Latest version recommended
-  **Visual Studio Code** - Text editor
-  **TouchDesigner** (※User registration and key required)
 - Free version (Non-Commercial) is fine
 - License key input required at first launch
-  **SuperCollider** - Audio engine for TidalCycles
-  **Git** - Version control system

※TidalCycles installation will be done together by everyone in the afternoon of Day 2

Troubleshooting

If you have installation problems

Instructors and staff will provide support during this time

Especially **TouchDesigner license acquisition** has many troubles, so please let us know if you haven't completed it

Recommended Resources

Online Communities

- TidalCycles Forum: <https://club.tidalcycles.org/>
- TouchDesigner Forum: <https://forum.derivative.ca/>

Reference Materials

- TidalCycles Official Documentation
- TouchDesigner Official Tutorials
- Instructor's books and blog posts (link collection to be shared later)

Thank You!

See you at the afternoon session!

From 14:00

Workshop 1 “Generative AI and the Future of Creation”

2. Administrative Matters and Environment Check

Questions and Support

Please ask questions anytime!

- Questions are welcome during lectures and practice sessions
- Even the smallest questions are OK
- **Having doubts is the first step in learning**

Support System

- Instructors and staff will circulate during production practice
- Questions via online chat are also possible (link to be shared separately)

Breaks and Etiquette

Breaks






- We will provide breaks as appropriate between each session
- Long coding sessions require concentration, so we recommend frequent breaks
- Break time is also a valuable opportunity for interaction

Workshop Rules and Etiquette

- Please be considerate not to disturb other participants' learning
- Photography and video recording for personal notes is allowed; please confirm before posting on social media
- Copyright of works belongs to the creator
- Let's respect each other's works and opinions and provide constructive

Application Confirmation

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-  **SuperCollider** - TidalCycles audio engine
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※TidalCycles installation will be done together on Day 2 afternoon

Troubleshooting

For those with installation issues

Instructors and staff will provide support during this time

TouchDesigner license acquisition often has issues, so please speak up if incomplete

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