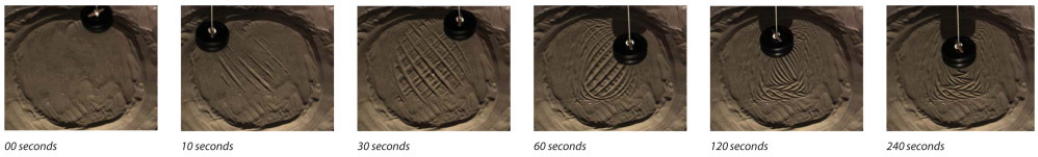
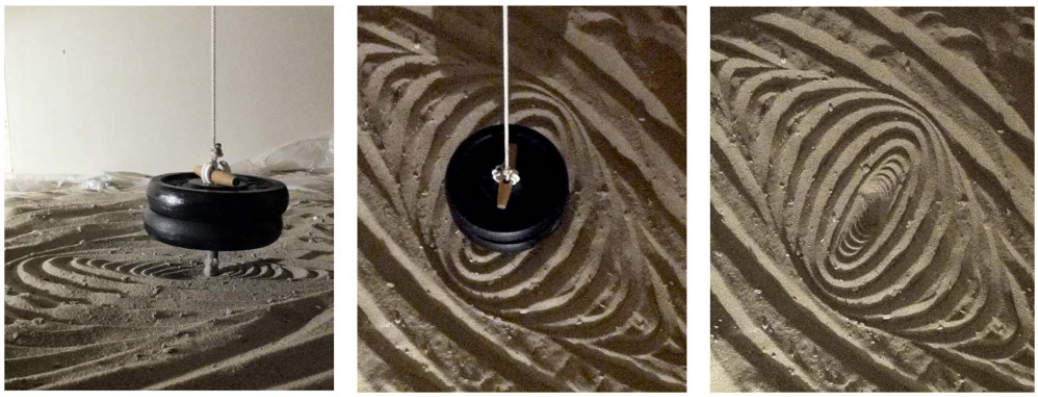
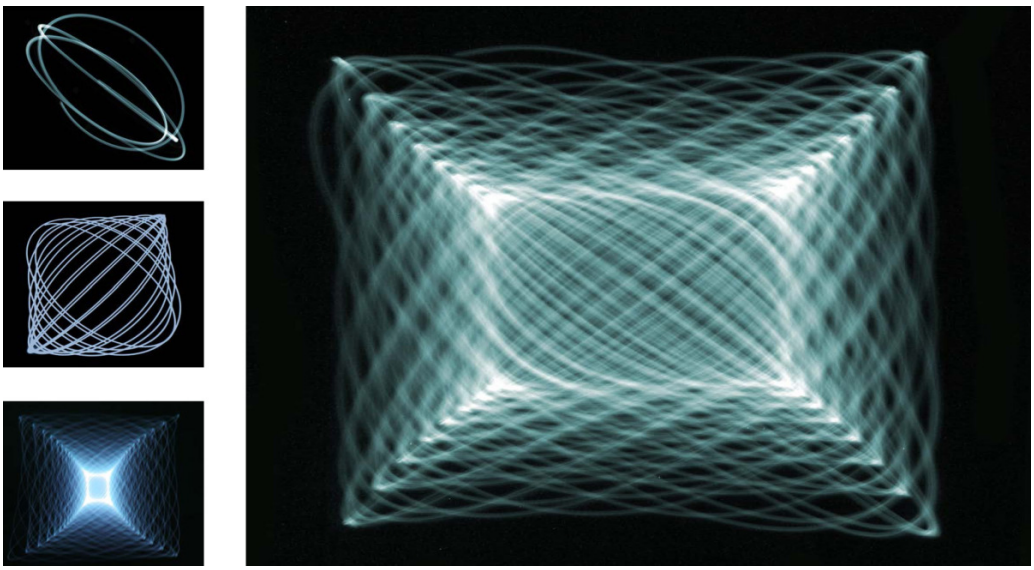
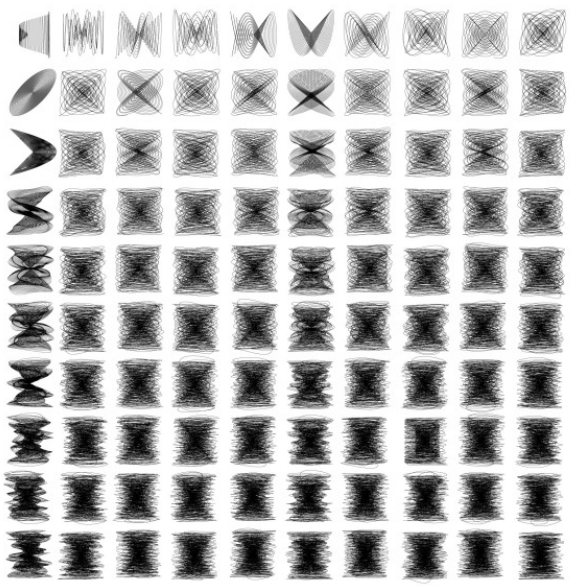
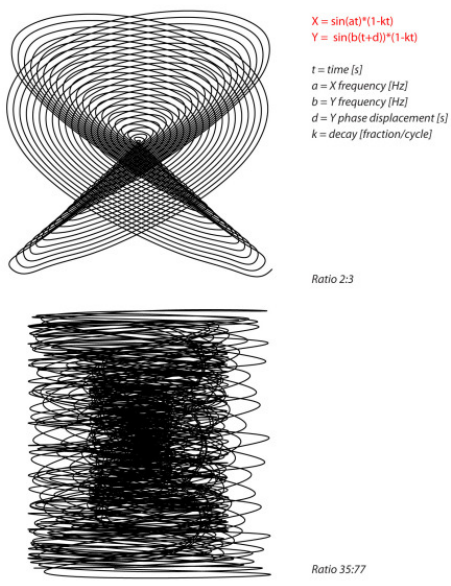
BRIEF 01:SYSTEM











Dan Dodds physical and digital experiments of harmonic oscillation.
http://wewanttolearn.wordpress.com/2013/01/28/near-unison-burning-man-festival-black-rock-desert/

INTRO:
This is a period in which to learn new software and concepts, as well as develop your documentation / layout strategy, and in doing so develop an arsenal of digital and representation skills which will be incorporated in your later work.

Please write your contact details in the following google doc, we will invite you to our dropbox and to our blog and to a whatsapp group:
https://docs.google.com/spreadsheet/ccc?key=0AozL2EzkCkDwdFE0N3dpT0FESWhOdjRCdEh5WTRVWmc#gid=0

SYSTEMS:
from Gk. systema "organized whole, body," from syn- "together" + root of histanai "cause to stand".
You will begin by analysis and comparison of three related systems:
1) Structural: A temporary man-made structure.
2) Natural: A naturally occuring form with similar properties.
3) Mathematical: Defining the rules which generate a similar geometry.
Through parametric, physical modelling and diagrams, we want you to make these three systems your own, extracting the rules behind them.
The three systems should be based on your interest and could be chosen for their complementarity or radical differences.

METHOD:
We want you to bounce your work back and forth, test digital work in the real world and test physical work through digital simulation, setting up a dialogue and feedback between the two. Bear in mind that we are aiming to understand the underlying rules of these systems. You should be able to make your own experiments, showing these rules and ways to control them. Below is a list of key steps to understand and control your systems:

- RULES: Diagram the general rules underlying the creation of your systems.
- CATALOGUE: Make a clear catalogue showing their diversity and the way in which they adapt to different conditions.
- TIME-BASED DIAGRAM: Look at the ways in which they happen through time, not just the final picture. Work on your own time-based diagrams to show that.
- MODELS: Start making models of these systems looking at how you can translate the rules behind them into a material system which you can control and use to design with.
- PARAMETERS: Try to understand and convey the parameters at play, both quantitative and qualitative (through the digital and physical models, diagrams, catalogue, models)
- PORTFOLIO: Start you own portfolio layout style, this will make you gain time as you won't have to do it again afterwards.

NOTES:

Please remember that your portfolios should serve as living documents, all your physical experiments should be well photographed, set aside a space with good light and a backdrop and ensure your photos are consistent, ie all shot from the same angle, same light etc. Where possible avoid using screenshots from programs as evidence of your experiments, or if essential then spend some time in cleaning the images up, removing the backgrounds or window borders.

LECTURES:

Please attend the following structural lectures in room M421:
Stelarc - The Cyborg Artist -
Thursday 3rd October, 6.30pm.
Graham Stevens - Desert Cloud and other Lightweight Wonders Thursday -
10th October, 6.30pm.
Neil Thomas and Aran Chadwick (Atelier One) Liquid Threshold -
Thursday 17th October, 6.30pm.
Tim Lucas (Price & Myers) The Kew House Project -
Thursday 24th October, 6.30pm.
Daniel Ptacek (Kinnickkinnic) 'The Adjacent Possible' -
Thursday 31st October, 6.30pm.
Dr Henrik Schoenefeldt (University of Kent) Environmental Experimentation -
Thursday 7th November, 6.30pm.
Nick Crosbie (Inflate) Air Structures -
Thursday 14th November, 6.30pm.
Paul Bavister (UCL) Sound, Acoustics, Music and Architecture -
Thursday 21st November, 6.30pm.
TBC - Thursday 28th November, 6.30pm
Jaisha Reichardt - 'Our Dreams Change, We Don't' -
Thursday 5th December, 6.30pm.
TBC -
Thursday 12th December, 6.30pm.

CLASSES:

This will be accompanied by parametric and BIM software training sessions (Rhino3D, Grasshopper and Revit), environmental analysis (Geco, Diva, Ecotect and Vasari), physics modelling (Karamba, Kangaroo, Millipede), recursion (C# and Hoopsnake) and rendering classes (Maxwell) with each student developing an arsenal of digital skills to incorporate in later work.

TIP:

Use this time wisely to get your hands dirty and learn digital techniques as the skill set you build up in these weeks will set you up for much of the rest of the year. Do not hesitate to ask questions on the online forums such as Grasshopper3d.com, StackOverflow.com (and other stack exchange forums). Learn code concepts on codeacademy.com.

OUTCOME:

1) A rough portfolio covered in feedback and notes with all your results. We insist without exception that you print your pages and bring them to tutorials so that we can add notes on top of them. THis document should be left in the studio and will grow over time.
2) At the end a well presented digital portfolio professionally and clearly detailing your research.
3) Clear diagrams showing the parameters and processes at play in generative systems.
4) A grounding in the digital technologies, using digital tools to help your design process.
5) Lots of well photographed rough sketch models and models to bring on the pin-up.
6) One large beautiful printed page per system (three in total), larger than A2. Start thinking about the pages from the start and bring them at tutorials so that we can work on them and help you make them beautiful.

READING:
-A bibliography is available on http://wewanttolearn.wordpress.com/bibliography/ and some of the essays are available on the dropbox/essays.
-Look at Frei Otto's IL series of books as a good example of recording experiments in a clear fashion, even though the experiments themselves may be work in progress.
-Look at what Deleuze and Guattari mean by systems in the essay Rhizome.
Read the Field condition by Stan Allen to understand relationships.
-Look at examples of portfolio pages from last year's first brief. Some of them are in the dropbox/2011-2012 Portfolios others can be found through the blog under the Students tab in the menu, example: http://wewanttolearn.wordpress.com/dan-dodds-portfolio/
- Look into festivals and temporary structures around the world in order to find interesting built work which you can extrapolate rules from.