

## GH | Parametric Design

Topics in Computer Application Design  
ARCH 5064 | ARCH 4164 | Fall 2016  
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### announcements

- # next portion of class discussed
- # start thinking about final projects

### discussions

- # presenting projects

### exercises

- # kangaroo install - food4rhino
- # kangaroo basic
- # kangaroo pavilion
  - # galapagos

### key points

- # Hooke's Law: [https://en.wikipedia.org/wiki/Hooke%27s\\_law](https://en.wikipedia.org/wiki/Hooke%27s_law)
- # form finding - Frei Otto
  - # [https://www.youtube.com/watch?v=degls4ve\\_Dc](https://www.youtube.com/watch?v=degls4ve_Dc)
  - # <https://www.youtube.com/watch?v=Vt-yAiieDn0>
- # digital form finding - gridshell
  - # <https://www.youtube.com/watch?v=5iqkMJbaOnU>

### assignment completion

- # completed list of tutorials for the week
- # landscape 8.5" x 11"
  - # screenshot of definition/rhino and tutorial at end
  - # brief notes of main point learned
- # save as FirstInitial\_LastName\_Assignment#\_tutorialname.pdf
- # upload to dropbox

### resources

- # rando stuff
  - # <http://www.designalyze.com/meshing-sp2013-class03>
  - # [https://www.youtube.com/watch?v=yY5WU\\_8L4S8](https://www.youtube.com/watch?v=yY5WU_8L4S8)
- # kangaroo
  - # group: <http://www.grasshopper3d.com/group/kangaroo>
  - # dl: <http://www.food4rhino.com/project/kangaroo?ufh>
  - # ex: <http://www.grasshopper3d.com/group/kangaroo/page/example-files>
  - # canopy: [https://www.youtube.com/watch?v=yY5WU\\_8L4S8](https://www.youtube.com/watch?v=yY5WU_8L4S8)
- # galapagos
  - # reading: <http://www.grasshopper3d.com/profiles/blogs/evolutionary-principles>
  - # group: <http://www.grasshopper3d.com/group/galapagos>
  - # <https://www.youtube.com/watch?v=3sM6qUUJxus>
- # Karamba
  - # ex - <https://www.youtube.com/watch?v=E4Bkeh57B88>
  - # ex - <https://www.youtube.com/watch?v=Jv-ma7ErP8g>
  - # ex - <https://www.youtube.com/watch?v=dGXOqCkTvLI>
  - # group - <http://www.food4rhino.com/project/karamba?ufh>
- # Millipede
  - # dl: <http://www.grasshopper3d.com/group/millipede>
  - # tutorial: <https://www.youtube.com/watch?v=EvKPmlwfJ10>
- # heliotrope
  - # group: <http://www.grasshopper3d.com/group/heliotrope>
  - # dl: <http://www.food4rhino.com/project/heliotropegh?ufh>
- # project examples
  - # <http://frustrazioniarchitetoniche.blogspot.com/>
  - # <https://www.youtube.com/watch?v=kh8y1Sf9Jvk>
- # generative house demo
  - # <https://www.youtube.com/watch?v=SWyE3V6LKCc>
- # galapagos training parts 1-3
  - # <https://www.youtube.com/watch?v=04ACFI9t7zl>
- # millipede + galapagos
  - # <https://www.youtube.com/watch?v=EvKPmlwfJ10>

## Class 7 || 10.13.16

### assignment 5 for 10.27.2016 @ 7:00 PM - 6 pdf's

- Kangaroo
  - # <https://vimeo.com/64326971> - pdf
- Responsive Components
  - # <https://vimeo.com/137770678> - pdf
  - # <https://vimeo.com/137770680> - pdf
- Gridshell
  - # <https://vimeo.com/60604978> - pdf
  - # <https://vimeo.com/60607852> - pdf
  - # <https://vimeo.com/60607853> - pdf

### assignment 6 for 11.3.2016 @ 7:00 PM - 11 pdf's

- Daniel Nagy's Solar Dynamic Components - Heliotrope
- # advance analysis parts 1-4
  - # [https://www.youtube.com/watch?v=3tZFu\\_5VAIY](https://www.youtube.com/watch?v=3tZFu_5VAIY)
  - # <https://www.youtube.com/watch?v=bYO7qnRKTUo>
  - # <https://www.youtube.com/watch?v=FuWZrHGx9I>
  - # [https://www.youtube.com/watch?v=53nuzbv1\\_BQ](https://www.youtube.com/watch?v=53nuzbv1_BQ)
- # heliotrope install + setup
  - # <https://www.youtube.com/watch?v=TB5wkh79Pv4>
  - # <https://www.youtube.com/watch?v=PzJLfjY9u3I>
- # heliotrope insolation analysis 1-3
  - # <https://www.youtube.com/watch?v=TM9NXY0ntVY>
  - # <https://www.youtube.com/watch?v=62XOmdDT0C8>
  - # <https://www.youtube.com/watch?v=Shlc2sAllvc>
- # heliotrope solar shading optimization 1-2
  - # <https://www.youtube.com/watch?v=OKKT6BloXoE>
  - # <https://www.youtube.com/watch?v=GSvm3uU62ow>

### final project due at WAAC Show

### optional assignment

- # millipede - <https://vimeo.com/94105579> - pdf

- Daniel Nagy's Karamba Structural analysis - Karamba
- # optimization introduction
  - # [https://www.youtube.com/watch?v=3tZFu\\_5VAIY](https://www.youtube.com/watch?v=3tZFu_5VAIY)
- # Karamba Structural Analysis 1-4
  - # [https://www.youtube.com/watch?v=\\_znWGFvZImM](https://www.youtube.com/watch?v=_znWGFvZImM)
  - # <https://www.youtube.com/watch?v=GvnBUbx34sE>
  - # <https://www.youtube.com/watch?v=t3yE1xxMUo>
  - # <https://www.youtube.com/watch?v=qJVHUsVyyqC0>