

**TouchDesignerFotonica2020**  
**ONLINE event 14-18 december**  
**Instructor: Andrew Quinn**

**Day 1: TOPs**

17.00 - 20.00

*Pixel formats - waveforms and functions in TOPs - math TOP (calculating distance)  
slope TOP - point clouds - looping noise - cache TOP - pixel direction  
GPU particles  
Rendering - render pass - feedback tricks*

**DAY 2: SOPs**

17.00-17.30 Q&A

17.30 - 20.00

*Sweep SOP, ray SOP, creep SOP, magnet SOP, primitive SOP  
SOPs and DATs - how to create geometry with python - replicator  
Custom attributes - centroid, normal, bounds*

**Day 3: PARTICLES**

17.00-17.30 Q&A

17.30 - 20.00

*Particle SOP - emission velocity - attractors - instancing (rotate to vector)  
Flocking - copy SOP - stamping  
flex particles*

**Day 4: RENDERING & ANIMATION**

17.00 - 17.30 Q&A

17.30 - 20.00

*render layers - render select TOP - GLSL vertex shaders - bend with texture -  
calculating normals  
Animation - event CHOP - timer CHOP - animation component - lookup CHOP*

**Day 5: PROJECTS**

17.00 - 17.30 Q&A

1730-20.00

*Individual projects - problem solving - debugging - optimization - case studies*

## **REFERENCES**

*python scripting*

[https://www.derivative.ca/wiki088/index.php?title=Working\\_with\\_OPs\\_in\\_Python](https://www.derivative.ca/wiki088/index.php?title=Working_with_OPs_in_Python)

## **TUTORIALS**

<http://matthewragan.com/category/how-to/touchdesigner/>

<http://matthewragan.com/2014/03/05/touchdesigner-these-are-the-dats-youve-been-looking-for/>

<http://matthewragan.com/2014/03/06/touchdesigner-replicators-and-buttons-and-tables-oh-my/>