

# Research Journal

COMP220

1507866

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## 1 Papers:

### 1.1 Design and Application of General Data Structure for Particle System

[1]

- Main properties of particle:
  - spatial location
  - velocity
  - survival time
  - shape
  - size
  - gravity factor
- Properties change over time
- Particle system should:
  - initialise particles

- emit particles
- render particles
- eliminate particles

Paper mostly just gave a model for a particle system, could be helpful for breaking down the particle system into smaller user stories.

## 1.2 Illumination for computer generated pictures [2]

- Textures and shadows make 3D graphics look more realistic
- Three light parts of light:
  - Ambient
  - Specular
  - Diffuse

Related papers: Blinn [3] - says Phong model not good for reflections

## 1.3 []

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## References

- [1] X. Huang, D. Zhao, N. Li, and R. Xu, “Design and application of general data structure for particle system,” in *Computer Science and Electronics Engineering (ICCSEE), 2012 International Conference on*, vol. 1, pp. 489–492, March 2012.
- [2] B. T. Phong, “Illumination for computer generated pictures,” *Commun. ACM*, vol. 18, pp. 311–317, June 1975.

- [3] J. F. Blinn and M. E. Newell, “Texture and reflection in computer generated images,” *Commun. ACM*, vol. 19, pp. 542–547, Oct. 1976.