TPA 3: Advanced rendering methods involving atmospheric effects/ fog on outdoor scenes

Description of the problem:

- **Output should be a short video animation.**
- **Scenes must have soft objects like trees, grass; and flying objects like birds, butterfly etc.**
- **Background sky with haze, light drizzle;**
- **high-rise buildings or rocky terrain interlaced with trees/bush etc.**

1. https://developer.nvidia.com/content/cg-tutorial-chapter-9-advanced-topics

2. Interactive rendering of atmospheric scattering effects using graphics hardware; Yoshinori Dobashi, Tsuyoshi Yamamoto, Tomoyuki Nishita;

Proceeding HWWS '02 Proceedings of the ACM SIGGRAPH/EUROGRAPHICS conference on Graphics hardware, Pages 99 – 107, Eurographics Association Aire-la-Ville, Switzerland.

3. Simulation of Rain in Videos; Sonia Starik Michael Werman, Proceedings Texture 2003, The 3rd international workshop on texture analysis and synthesis ISBN 1-904410-11-1, In conjunction with ICCV-2003.

4. Photorealistic image synthesis for outdoor scenery under various atmospheric Conditions; Kazufumi Kaneda, Takashi Okamoto, Eihachiro Nakamae and Tomoyuki Nishita, The Visual Computer (1991) 7:247-258.

5. Perceptually Based Tone Mapping for Low-Light Conditions, Adam G. Kirk James F. O'Brien; ACM Transactions on Graphics, Vol. 30, No. 4, Article 42, Publication date: July 2011.

6. Practical Rendering of Multiple Scattering Effects in Participating Media; Simon Premože, Michael Ashikhmin, Ravi Ramamoorthi, Shree Nayar; Eurographics Symposium on Rendering (2004), H. W. Jensen, A. Keller (Editors)