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Subject: Re: alternative to array of linked list  
Posted by [forlano](#) on Tue, 03 May 2016 18:30:03 GMT  
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koldo wrote on Tue, 03 May 2016 15:36 It sounds very similar to SPH ([https://en.wikipedia.org/wiki/Smoothed-particle\\_hydrodynamic\\_s](https://en.wikipedia.org/wiki/Smoothed-particle_hydrodynamic_s)), but I do not understand the role of the cells. Questions:

- Is the number of particles "almost" the same in all simulation?
- How is every solving step/iteration?. In the "explicit" case:
  - First, are computed the forces that act over every particle?
  - Second, is the movement of every particle computed depending on the forces?

If the problem is similar to this, you can:

- use a fixed list of particles.
- do a terrific parallelization

The answer is YES.

The problem is that I have only one CPU.

Anyway I have implemented a

```
std::vector< std::unordered_set<int> >
```

and I am very happy. The code is very clean and easy to read.

Luigi

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