

## Re: how to evaluate the addition of millions of functions dynamically and efficiently?

**Source:** <http://sci.tech-archive.net/Archive/sci.math.num-analysis/2004-08/0214.html>

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**From:** jim green ([jjg\\_at\\_withheld.org.de](mailto:jjg_at_withheld.org.de))

**Date:** 08/16/04

Date: Mon, 16 Aug 2004 12:25:48 GMT

"networm" <[networm8848@yahoo.com](mailto:networm8848@yahoo.com)> writes:

> *I am also interested in the "RBF monopole" you've mentioned in your  
> previous post.*

>

> *Do you think it will give me a drastic performance improvement? If so, I am  
> going to dive into it and learn how to make my program a lot faster...*

I have never implemented it, but the idea is rather similar to the FFT – break the problem into smaller simpler subproblems, and recurse.

I understand that the implementation is rather involved, so I'd suggest that you consider using it only if

- your centres are genuinely scattered,
- your basis function does not have compact support.

Otherwise I would guess that a local search would be quicker and a lot easier to implement.

As I say, I'm no expert on this, others may correct me.

There are quite a few papers in the (mathematics) literature, I'd recommend that you look at those before proceeding.

–j