

# Re: Ellipse Distance / Intersection

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*Source:* <http://sci.tech-archive.net/Archive/sci.math/2007-11/msg00002.html>

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- *From:* Narasimham <[mathma18@xxxxxxxxxxx](mailto:mathma18@xxxxxxxxxxx)>
  - *Date:* 31 Oct 2007 15:24:58 -0700
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On Oct 27, 8:12 pm, Narasimham <[mathm...@xxxxxxxxxxx](mailto:mathm...@xxxxxxxxxxx)> wrote:

On Oct 27, 7:13 pm, Stephan Rose <[nos...@xxxxxxxxxxx](mailto:nos...@xxxxxxxxxxx)> wrote:

Distance/Intersection between ellipse and ellipse  
Stephan

I recently asked about minimum distance between two non-intersecting conic sections, not lucky in this particular aspect.

[http://groups.google.co.in/group/sci.math/browse\\_thread/thread/be8fba...](http://groups.google.co.in/group/sci.math/browse_thread/thread/be8fba...)

Narasimham

Using transversality conditions  $f(x)$  and  $g(x)$  in addition the the Euler – Bernoulli equations on functional  $F(x,y,y')$  in variational calculus this can be solved, I believe.

The Euler– Bernoulli equations using standard notation are:

$$F + (f' - y') Fy' = 0 \text{ and } F + (g' - y') Fy' = 0$$

whre  $f$  and  $g$  appear as some additional 'attachments'.

See e.g., Calculus of Variations I.M.Gelfand & S.V.Fomin, Moscow State Univ. Prentice–Hall English edition LCCCN 63– 18806.

Narasimham