# Lecture 21 - UM 102 (Spring 2021) 

Vamsi Pritham Pingali

IISc

## Recap

## Vamsi Pritham Pingali <br> Lecture 21 <br> $2 / 5$

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- Solved the damped oscillator


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- Defined open balls, interior points, and open sets.
- Solved the damped oscillator and RLC circuits.
- Defined open balls, interior points, and open sets. Gave examples and non-examples.


## Exterior points, boundary points, and closed sets

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- One can prove (HW) that a set $S \subset \mathbb{R}^{n}$ is closed iff $S=\operatorname{int}(S) \cup \partial S$.


## Limits

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## Examples

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\begin{aligned}
& |f(x, y)-L|<\frac{1}{100} \text { when } 0<\|(x, y)\|<\delta \text {. Thus if } y=x \text { or } \\
& y=2 x \text { and } 0<|x|<\frac{\delta}{\sqrt{5}} \text {, then }|f(x, y)-L|<\frac{1}{100} \text {. }
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