

Papers We Love

$$T(\vec{v}) = A\vec{v} = \begin{pmatrix} 1 & 4 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} x + 4y \\ y \end{pmatrix}$$

$$\int (x^2 + y^2) dx + \frac{2xy}{y} dy$$

$$\vec{v} = \vec{0}$$

$$\vec{v} \neq \vec{0}$$

$$\vec{0} = \lambda \vec{v} - A \vec{v}$$

$$\lambda I_n \vec{v} - A\vec{v} = \vec{0}$$

$(\lambda I_n - A) \vec{v} = \vec{0}$ \Rightarrow $\vec{0}$ all independent
 $B \vec{v} = \vec{0}$
 some matrix

some matrix

↑ ↑
eigenvalues
eigenvectors

↑: eigen values $x = \cos t$ $y = \sin t$

$$\vec{v} = \frac{1}{\sqrt{2}} (\vec{e}_1 + \vec{e}_2)$$

$$\frac{dx}{dt} = \frac{\partial x}{\partial t} + \frac{\partial x}{\partial \theta} \dot{\theta}$$

$$\vec{v} \in N(\lambda I_n - A)$$

$$\vec{r} = \vec{r}_1 + \vec{r}_2$$

$$f = \frac{V}{\lambda} \cdot \frac{1}{v} = \frac{1}{\lambda \cdot v}$$

$$\vec{f}(x,y) = (x^2+y^2)\hat{i} + (2xy)\hat{j}$$

$$d\vec{r} = dx\hat{i} + dy\hat{j}$$

$$\int_0^\pi \vec{f} \cdot d\vec{r} = F\left(\frac{\pi}{4}\right) - F(0)$$

$$= F(x(\pi^+), y(\pi^+)) - F(x(0))$$

to be to L (give positive $\# \epsilon$) \leftarrow how close?

$$f(x) - L < \epsilon \quad \epsilon \rightarrow \delta$$

$\delta = \text{function of } \epsilon$

○ 1990年10月1日

Hello, Göteborg!

What is Papers We Love?

- Love for science & technology
 - Collaboration!
 - Community
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How do we love 'em papers?

Common practice:

- Speaker presents
 - Discussion - *not just* Q&A - follows
 - Talk about the next one
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State

- Meetup:
<https://www.meetup.com/Papers-We-Love-Gothenburg>
 - Github:
<https://github.com/papers-we-love/gothenburg>
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Communication

- Slack: #pwlgot on <https://paperswelove.slack.com/>
 - Twitter [@pwlgot](#)
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How often should we meet?

- Once a month (Just 12 papers a YEAR?!)
- Twice a month
- Every week

Let's experiment?

What can you help with?

Offline stuff

- Hosting, booking / finding a meetup location
- Speaking
- Ideas for the next meetup
- Sponsor / finding sponsors
- Social media (Swedish)
- Co-organizer!

(meetup poll)

Presentation by Victor

Entscheidungsproblem

- It's a landmark!
 - Practical implications
 - HUGE implications IF such an algorithm did exist
 - Solvable in “special cases” (eg: pres. Arithmetic, static type systems)
 - General approach:
 - Define the problem statement in a specific logic
 - Define the model
 - Use a model checker to check if the statement holds in the model
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Reduced forms

- Halting problem
- ..

Type checking

- In principle, a type checker could find *all* errors in a program

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sort: List -> List
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```
sort: (x: List) -> (y: List) & sorted(x,y)
```

Propositions as Sessions

Next meetup?

- Weekend or weekday?
 - Topic?
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Thank you!
