



Introduction to Scientific Working

Aart Middeldorp

Outline

- 1. TikZ**
- 2. Conferences**
- 3. LaTeX**
- 4. Scheduling**
- 5. Homework**

Keywords

acknowledgement

awards

beamer

bibliography

CORE ranking

DBLP

conference

editorial board

generative AI

Google Scholar

h-index

impact factor

journal

L^AT_EX

LIPICs

LNCS

open access

plagiarism

presentation

program committee

rebuttal

review

submission

TikZ

workshop

...

Types of Scientific Works

- ▶ seminar report
- ▶ bachelor thesis
- ▶ master thesis
- ▶ PhD thesis
- ▶ habilitation thesis
- ▶ workshop paper
- ▶ conference paper
- ▶ journal article
- ▶ book chapter
- ▶ book

Outline

- 1. TikZ**
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3. LaTeX
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5. Homework

```
\usetikzlibrary{arrows.meta}  
\draw [thick,-{Stealth}] (0,0) -- ++(2,0);
```

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Arrow Tips

	Classical TikZ Rightarrow		Computer Modern Rightarrow
	Implies		Hooks
	Arc Barb		Parenthesis
	Bar		Straight Barb
	Bracket		Tee Barb
	Circle		Circle[open]
	Diamond		Diamond[open]
	Ellipse		Ellipse[open]
	Kite		Kite[open]

```
\usetikzlibrary{arrows.meta}
```

```
\draw [thick,-{Stealth}] (0,0) -- ++(2,0);
```



Arrow Tips (cont'd)

	Latex		Latex[open]
	Latex[round]		Latex[round,open]
	Rectangle		Rectangle[open]
	Square		Square[open]
	Stealth		Stealth[open]
	Stealth[round]		Stealth[round,open]
	Triangle		Triangle[open]
	Turned Square		Turned Square[open]

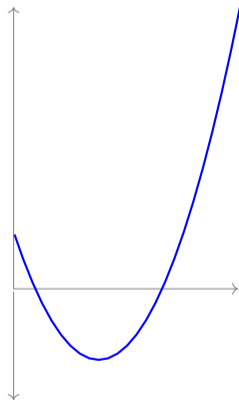
[src](#)

Plots

```
\draw [help lines,<->] (0,5) - (0,0) - (4,0);  
\draw [help lines, ->] (0,0) - (0,-2);  
\draw [blue, thick, domain=0:4] plot (\x, {\x*\x-3*\x+1});
```

Plots

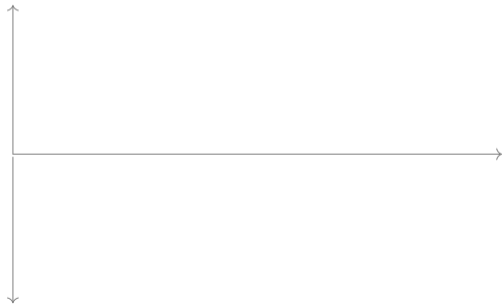
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[src](#)

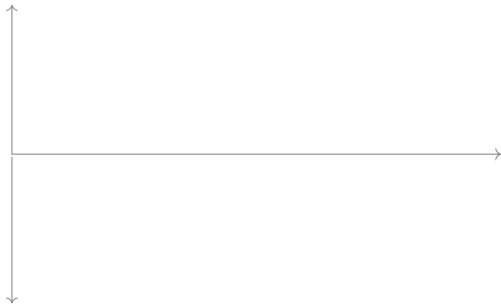
$$x^2 - 3x + 1$$

```
\draw [help lines,<->] (0,2) - (0,0) - (6.5,0);  
\draw [help lines, ->] (0,0) - (0,-2);
```

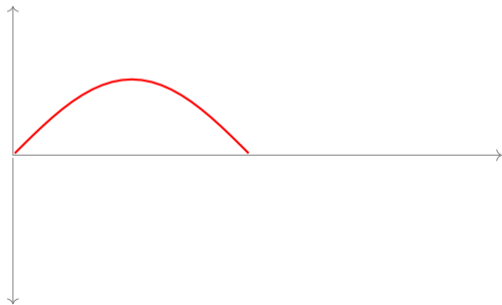
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\draw [help lines,<->] (0,2) - (0,0) - (6.5,0);  
\draw [help lines, ->] (0,0) - (0,-2);
```



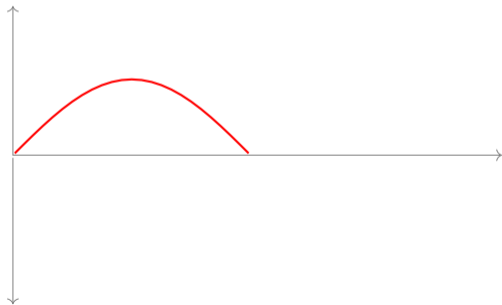
```
\draw [help lines,<->] (0,2) - (0,0) - (6.5,0);  
\draw [help lines, ->] (0,0) - (0,-2);  
\draw [red, thick, domain=0:pi] plot (\x,{sin(\x r)});
```



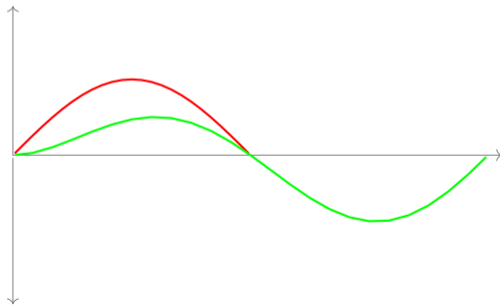
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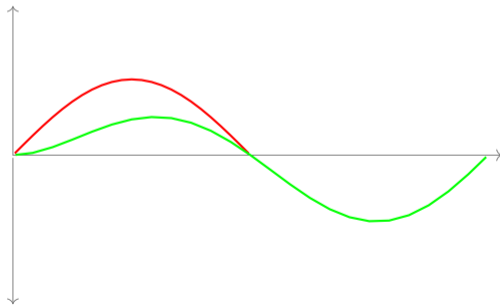
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\draw [help lines, ->] (0,0) - (0,-2);  
\draw [red, thick, domain=0:pi] plot (\x,{sin(\x r)});  
\draw [green, thick, domain=0:2*pi] plot (\x,{sin(\x r)*ln(\x+1))/2});
```



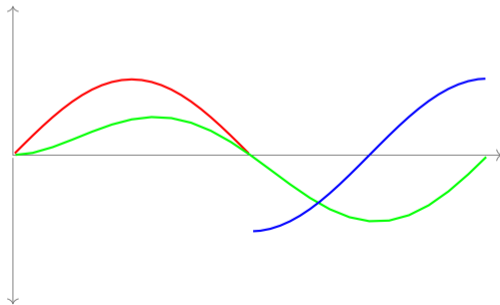
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\draw [blue, thick, domain=pi:2*pi] plot (\x,{cos(\x r)*exp(\x/exp(2*pi))});
```



```
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\draw [blue, thick, domain=pi:2*pi] plot (\x,{cos(\x r)*exp(\x/exp(2*pi))});
```

[src](#)

Outline

1. TikZ

2. Conferences

3. LaTeX

4. Scheduling

5. Homework

- ▶ location
- ▶ call for papers
- ▶ deadlines
- ▶ program committee
- ▶ invited speakers
- ▶ accepted papers
- ▶ rebuttal
- ▶ publication
- ▶ ranking
- ▶ awards

- ▶ location
- ▶ call for papers
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- ▶ rebuttal
- ▶ **publication**
- ▶ ranking
- ▶ **awards**

Federated Logic Conference (FLoC) 2026

- ▶ 32nd International Conference on Principles and Practice of Constraint Programming CP
- ▶ 11th International Conference on Formal Structures for Computation and Deduction FSCD
- ▶ 42nd International Conference on Logic Programming ICLP
- ▶ 23rd International Conference on Principles of Knowledge Representation and Reasoning KR
- ▶ 41st Annual Symposium on Logic in Computer Science LICS
- ▶ 29th International Conference on Theory and Applications of Satisfiability Testing SAT
- ▶ 38th International Conference on Computer Aided Verification CAV
- ▶ 39th IEEE Computer Security Foundations Symposium CSF
- ▶ 13th International Joint Conference on Automated Reasoning IJCAR
- ▶ 17th International Conference on Interactive Theorem Proving ITP

Awards

- ▶ best paper

Awards

- ▶ best paper
- ▶ best student paper

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award
- ▶ test-of-time award

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award
- ▶ test-of-time award
- ▶ ...

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award
- ▶ test-of-time award
- ▶ ...
- ▶ best reviewer award

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award
- ▶ test-of-time award
- ▶ ...
- ▶ best reviewer award
- ▶ ...

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award
- ▶ test-of-time award
- ▶ ...
- ▶ best reviewer award
- ▶ ...
- ▶ Turing award

Awards

- ▶ best paper
- ▶ best student paper
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- ▶ test-of-time award
- ▶ ...
- ▶ best reviewer award
- ▶ ...
- ▶ Turing award
- ▶ ...

Awards

- ▶ best paper
- ▶ best student paper
- ▶ distinguished paper award
- ▶ test-of-time award
- ▶ ...
- ▶ best reviewer award
- ▶ ...
- ▶ Turing award
- ▶ ...
- ▶ other awards in computer science

- ▶ ACM

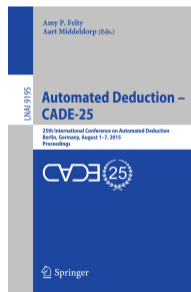
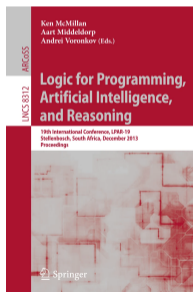
Publication

- ▶ ACM
- ▶ IEEE

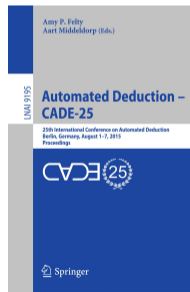
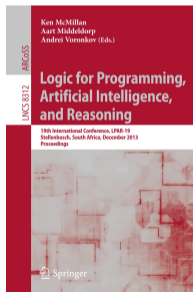
- ▶ ACM
- ▶ IEEE
- ▶ Lecture Notes in Computer Science (LNCS)



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- ▶ IEEE
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- ▶ ACM
- ▶ IEEE
- ▶ Lecture Notes in Computer Science (LNCS)
- ▶ Leibniz International Proceedings in Informatics (LIPIcs)





SCHLOSS DAGSTUHL
Leibniz-Zentrum für Informatik



Outline

1. TikZ
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Exemplary Bachelor Theses

- | | | |
|---------------|----------------------|------|
| ▶ Number Link | Benjamin Rupprechter | 2009 |
| ▶ Kurodoko | Johannes Koch | 2020 |
| ▶ Five Cells | Diana Gründlinger | 2023 |

Common Ingredients

- | | | |
|-----------------------|----------------|---------------------|
| ▶ appendices | ▶ formulas | ▶ screen shots |
| ▶ bibliography | ▶ hyper links | ▶ table of contents |
| ▶ chapters / sections | ▶ lists | ▶ tables |
| ▶ figures | ▶ plots | |
| ▶ footnotes | ▶ program code | |

Exemplary Bachelor Theses

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Common Ingredients

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| ▶ appendices | ▶ formulas | ▶ screen shots |
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| ▶ chapters / sections | ▶ lists | ▶ tables |
| ▶ figures | ▶ plots | |
| ▶ footnotes | ▶ program code | |

Some dummy\footnote{This is the first footnote.} text. Footnote marks should not be placed before\footnotemark[1], like here, but after punctuation marks, like this.\footnote{This is the second footnote.}

src

Some dummy\footnote{This is the first footnote.} text. Footnote marks should not be placed before\footnotemark[1], like here, but after punctuation marks, like this.\footnote{This is the second footnote.}

src

- ▶ **footmisc** package for customizing footnotes

Some dummy\footnote{This is the first footnote.} text. Footnote marks should not be placed before\footnotemark[1], like here, but after punctuation marks, like this.\footnote{This is the second footnote.}

src

- ▶ footmisc package for customizing footnotes

```
\usepackage[perpage,para,symbol]{footmisc}
```

Some dummy\footnote{This is the first footnote.} text. Footnote marks should not be placed before\footnotemark[1], like here, but after punctuation marks, like this.\footnote{This is the second footnote.} And here is a third\footnote{This is the third footnote.} one.

src

- ▶ Greek alphabet

► Greek alphabet

<code>\alpha</code>	α	<code>\eta</code>	η	<code>\nu</code>	ν	<code>\tau</code>	τ
<code>\beta</code>	β	<code>\theta</code>	θ	<code>\xi</code>	ξ	<code>\upsilon</code>	υ
<code>\gamma</code>	γ	<code>\iota</code>	ι	<code>\omicron</code>	\omicron	<code>\phi</code>	ϕ
<code>\delta</code>	δ	<code>\kappa</code>	κ	<code>\pi</code>	π	<code>\chi</code>	χ
<code>\epsilon</code>	ϵ	<code>\lambda</code>	λ	<code>\rho</code>	ρ	<code>\psi</code>	ψ
<code>\zeta</code>	ζ	<code>\mu</code>	μ	<code>\sigma</code>	σ	<code>\omega</code>	ω

► Greek alphabet

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<code>\beta</code>	β	<code>\theta</code>	θ	<code>\xi</code>	ξ	<code>\upsilon</code>	υ
<code>\gamma</code>	γ	<code>\iota</code>	ι	<code>\omicron</code>	\omicron	<code>\phi</code>	ϕ
<code>\delta</code>	δ	<code>\kappa</code>	κ	<code>\pi</code>	π	<code>\chi</code>	χ
<code>\epsilon</code>	ϵ	<code>\lambda</code>	λ	<code>\rho</code>	ρ	<code>\psi</code>	ψ
<code>\zeta</code>	ζ	<code>\mu</code>	μ	<code>\sigma</code>	σ	<code>\omega</code>	ω
<code>\varepsilon</code>	ε	<code>\vartheta</code>	ϑ	<code>\varsigma</code>	ς	<code>\varphi</code>	φ

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<code>\gamma</code>	γ	<code>\iota</code>	ι	<code>\omicron</code>	\omicron	<code>\phi</code>	ϕ
<code>\delta</code>	δ	<code>\kappa</code>	κ	<code>\pi</code>	π	<code>\chi</code>	χ
<code>\epsilon</code>	ϵ	<code>\lambda</code>	λ	<code>\rho</code>	ρ	<code>\psi</code>	ψ
<code>\zeta</code>	ζ	<code>\mu</code>	μ	<code>\sigma</code>	σ	<code>\omega</code>	ω
<code>\varepsilon</code>	ε	<code>\vartheta</code>	ϑ	<code>\varsigma</code>	ς	<code>\varphi</code>	φ
<code>\Gamma</code>	Γ	<code>\Theta</code>	Θ	<code>\Xi</code>	Ξ	<code>\Upsilon</code>	Υ
<code>\Delta</code>	Δ	<code>\Lambda</code>	Λ	<code>\Pi</code>	Π	<code>\Psi</code>	Ψ
				<code>\Sigma</code>	Σ	<code>\Omega</code>	Ω

```
\usepackage{amsmath}
\begin{multline}
\sum_{i=1}^{15} a_{i+1}b_i^2 = a_2b_1^2 + a_3b_2^2 + a_4b_3^2 + a_5b_4^2 + a_6b_5^2 \\
+ a_7b_6^2 + a_8b_7^2 + a_9b_8^2 + a_{10}b_9^2 + a_{11}b_{10}^2 \\
+ a_{12}b_{11}^2 + a_{13}b_{12}^2 + a_{14}b_{13}^2 + a_{15}b_{14}^2 + a_{16}b_{15}^2
\end{multline}
```

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+ a_7b_6^2 + a_8b_7^2 + a_9b_8^2 + a_{10}b_9^2 + a_{11}b_{10}^2 \\
+ a_{12}b_{11}^2 + a_{13}b_{12}^2 + a_{14}b_{13}^2 + a_{15}b_{14}^2 + a_{16}b_{15}^2 \\
\end{multline}

\begin{align}
f(x,y,z) &= \lnot (x \to y) \lor z \ \& \ h(x,y) \ \& \ x \ \lor \ \lnot y \\
g(x,y) &= x \to x \ \land y \ \& \ i(x) \ \& \ 0 \\
\end{align}

```

```

\usepackage{amsmath}

\begin{multline}
\sum_{i=1}^{15} a_{i+1}b_i^2 = a_2b_1^2 + a_3b_2^2 + a_4b_3^2 + a_5b_4^2 + a_6b_5^2 \\\
+ a_7b_6^2 + a_8b_7^2 + a_9b_8^2 + a_{10}b_9^2 + a_{11}b_{10}^2 \\\
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f(x,y,z) &= \lnot (x \to y) \lor z \ \& \ h(x,y) = x \ \lor \ \lnot y \\
\intertext{\&}
g(x,y) &= x \to x \ \land y \ \& \ i(x) = 0
\end{align}

```

src

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Topics

1 chemmacros	5 listings	10 pgfplots	14 tikzmark
2 chessboard	6 mathtools	11 postit	15 tikzpeople
3 cleveref	8 MusiXTeX	12 qrcodetikz	16 tkz-berge
4 enumitem	9 pgf-go	13 TangramTikz	17 todonotes

Assignment

1 Bacher Martin	6 Oppermann Linda	13 Paganini Adriano
2 Weilbacher Jannick	8 Beier Tom Simon	14 Hölzl Sebastian
3 Darsel Esma	8 Küllmar Jan Peter	15 Krause Jakob Moritz
3 Fitz Julia	9 Albrecht Odin	16 Musch Eric Edgar Friedrich
4 Bekhtari Salma	10 Kerber Thomas Martin	17 Freiermuth Marie
4 Ristova Kirjana	11 Ilic Ilija	17 Leinfelder Matthias Christian
5 Krumholz Maya	11 Khakhlou Pavel	
5 Sagerer Marie	12 Ciech Dominique Manuel	

Scheduling

- ▶ June 11
- ▶ June 18
- ▶ June 25

Scheduling

▶ June 11	5	4	11	8	17	9
▶ June 18	10	16	13	14	15	6
▶ June 25	3	12	1	2		

Scheduling

▶ June 11	5	4	11	8	17	9
▶ June 18	10	16	13	14	15	6
▶ June 25	3	12	1	2		

Instructions

- ▶ 15 minute presentation using slides with **beamer** package

Scheduling

▶ June 11	5	4	11	8	17	9
▶ June 18	10	16	13	14	15	6
▶ June 25	3	12	1	2		

Instructions

- ▶ 15 minute presentation using slides with **beamer** package
- ▶ 5 to 10 page report in **LIPICs** format (deadline: 10 am on July 3)

Scheduling

▶ June 11	5	4	11	8	17	9
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Instructions

- ▶ 15 minute presentation using slides with **beamer** package
- ▶ 5 to 10 page report in **LIPICs** format (deadline: 10 am on July 3)
- ▶ content:
 - ▶ functionality
 - ▶ examples
 - ▶ options
 - ▶ ...

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Homework Exercises for April 23

- ① Which awards are presented by the conferences that are part of FLoC 2026? ①
- ② Prepare a five page conference paper in both the LIPIcs and LNCS formats. Feel free to use lipsum or blindtext package to generate dummy content. ③
- ③ Use TikZ to typeset the following diagram: ①

