# Termination Competition 2012

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IJCAR 2012

# Rules

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- 60 seconds timeout for each example

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- 64.5 hours of proof search, 2.7 minutes of certification

# Overview

# Competitors

- AProVE, RWTH Aachen University
- CeTA, University of Innsbruck
- HOT, Chinese Academy of Sciences/INRIA
- matchbox, HTWK Leipzig
- muTerm, Universitat Politècnica de València
- Thor, Universitat Politècnica de Catalunya
- TTT2, University of Innsbruck
- VMTL, Vienna University of Technology
- Wanda, VU University Amsterdam

# Term rewriting variants

| Category | 1st | 2nd | 3rd |
|---|---|---|---|
| string rewriting | | | |
| strings (relative) | | | |
| term rewriting | | | |
| terms (relative) | | | |
| terms (innermost) | | | |
| terms (outermost) | | | |
| terms (equational) | | | |
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| terms (cont. sens.) | | | |
| higher-order | | | |

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| strings (relative) | AProVE (57 ) | TTT2 (31) | |
| term rewriting | AProVE (89 ) | TTT2 (61) | VMTL (40) |
| terms (relative) | AProVE (77 ) | TTT2 (55) | |
| terms (innermost) | AProVE (73 ) | | |
| terms (outermost) | AProVE (92) | | |
| terms (equational) | AProVE (76) | muTerm (73) | |
| terms (conditional) | AProVE (100) | VMTL (71) | |
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| higher-order | HOT (88) | Wanda (83) | Thor (71) |

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- AProVE, RWTH Aachen University
- Julia, University of Verona and University of Réunion
- polytool, KU Leuven
- pTNT, KU Leuven

# Rewriting against dedicated tools . . .

- AProVE: transformation to rewriting
- Julia, polytool, pTNT: tools outside rewriting community

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| Logic Programming | | | |
| LP with cut | | | |
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| Haskell | | | |

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| Logic Programming | AProVE (83) | polytool (80) | pTNT (15) |
| LP with cut | AProVE (75) | | |
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- new participants welcome
- new programming languages welcome

# Overview

# Competitors

- AProVE: RWTH Aachen University
- CaT: University of Innsbruck
- CeTA, University of Innsbruck
- TCT: University of Innsbruck

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| derivational innermost | TCT (219 ) | |
| runtime complexity | TCT (211 ) | CaT (125) |
| runtime innermost | AProVE (404) | TCT (364 ) |

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| runtime innermost | AProVE (404) | TCT (364 / 80) |

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red numbers: scores when certified by CeTA

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- certification gets more and more powerful
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- more (new and old) participants welcome