

# EXTENDING COMPACT-TABLE TO NEGATIVE AND SHORT TABLES

AAAI17

---

Hélène Verhaeghe<sup>1</sup> , Christophe Lecoutre<sup>2</sup> , Pierre Schaus<sup>1</sup>

February 2017

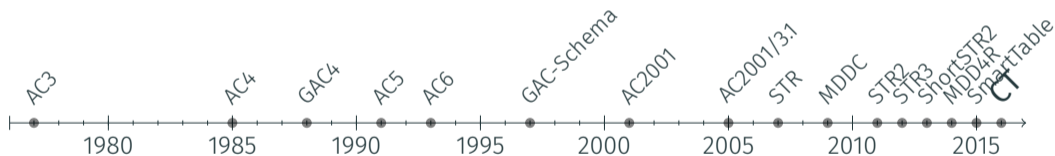
<sup>1</sup> Université catholique de Louvain, Louvain-la-Neuve, Belgium, *{firstname.lastname}@uclouvain.be*

<sup>2</sup> CRIL-CNRS UMR 8188, Université d'Artois, F-62307 Lens, France, *lecoutre@cril.fr*

# EXTENDING COMPACT-TABLE TO NEGATIVE AND SHORT TABLES

Tables are the oldest most used CP constraints

		$x$	$y$	$z$
	$\tau_1$	$a$	$a$	$a$
$(x, y, z) \in$	$\tau_2$	$d$	$d$	$a$
	$\tau_3$	$c$	$e$	$b$
	$\vdots$	$\vdots$	$\vdots$	$\vdots$



2016 : New algorithm ! CompactTable [CP2016], based on bitwise operations, completely outperformed existing algorithms.

## EXTENDING COMPACT-TABLE TO NEGATIVE AND SHORT TABLES

We extend Compact-Table in 3 directions :

	$x$	$y$	$z$
$\tau_1$	$a$	$*$	$*$
$(x, y, z) \in \tau_2$	$*$	$d$	$a$
$\tau_3$	$c$	$e$	$b$
$\vdots$	$\vdots$	$\vdots$	$\vdots$

Short tuples tables

	$x$	$y$	$z$
$\tau_1$	$a$	$a$	$a$
$(x, y, z) \notin \tau_2$	$d$	$d$	$a$
$\tau_3$	$c$	$e$	$b$
$\vdots$	$\vdots$	$\vdots$	$\vdots$

Negative tables

	$x$	$y$	$z$
$\tau_1$	$a$	$*$	$*$
$(x, y, z) \notin \tau_2$	$*$	$d$	$a$
$\tau_3$	$c$	$e$	$b$
$\vdots$	$\vdots$	$\vdots$	$\vdots$

Negative tables with short tuples

More expressives, More compact, More efficient

Interested? Come and see us!