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Announcements of new results

*Commentationes Mathematicae Universitatis Carolinae*, Vol. 37 (1996), No. 3, 657

Persistent URL: <http://dml.cz/dmlcz/118874>

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**ANNOUNCEMENTS OF NEW RESULTS**  
(of authors having an address in Czech Republic)

SOLUTION OF PAOLO LIPPARINI'S PROBLEM

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In [*Algebra Univ.* **33** (1995), p.167, Problem (e)] Paolo Lipparini asked for Mal'cev condition characterizing congruence modular and  $n$ -permutable,  $n > 3$ , varieties.

First we need

**Theorem 1.** *For a variety  $V$ , the following conditions are equivalent:*

- (1)  $V$  is congruence modular;
- (2) there are 6-ary terms  $s_1, \dots, s_m$  such that
 
$$y = s_j(x, x, x, y, x, y), 1 \leq j \leq m,$$

$$x = s_1(y, x, x, x, y, y),$$

$$s_i(x, y, x, x, y, y) = s_{i+1}(y, x, x, x, y, y), 1 \leq i \leq m,$$

$$y = s_m(x, y, x, x, y, y)$$
 are identities in  $V$ .

Now we can answer the above mentioned problem.

**Theorem 2.** *For a variety  $V$  and an integer  $n$ ,  $n > 3$ , the following conditions are equivalent:*

- (1)  $V$  is congruence modular and  $n$ -permutable;
- (2) there are 5-ary terms  $t_1, \dots, t_{n-1}$  such that
 
$$y = t_j(x, x, y, x, y), 1 \leq j \leq n - 1$$

$$x = t_1(y, x, x, y, y),$$

$$t_i(x, x, y, y) = t_{i+1}(y, x, x, y, y), 1 \leq i \leq n - 1,$$

$$y = t_{n-1}(x, x, x, y, y)$$
 are identities in  $V$ .