

**Kurilić, Miloš S.; Todorčević, Stevo**

**Posets of copies of countable non-scattered labeled linear orders.** (English) Zbl 07204024

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Summary: We show that the poset of copies  $\mathbb{P}(\mathbb{Q}_n) = (\{f[X] : f \in \text{Emb}(\mathbb{Q}_n)\}, \subset)$  of the countable homogeneous universal  $n$ -labeled linear order,  $\mathbb{Q}_n$ , is forcing equivalent to the poset  $\mathbb{S} * \pi$ , where  $\mathbb{S}$  is the Sacks perfect set forcing and  $1_{\mathbb{S}} \Vdash \text{“}\pi \text{ is an atomless separative } \sigma\text{-closed forcing”}$ . Under CH (or under some weaker assumptions)  $1_{\mathbb{S}} \Vdash \text{“}\pi \text{ is forcing equivalent to } P(\omega)/\text{Fin”}$ . In addition, these statements hold for each countable non-scattered  $n$ -labeled linear order  $\mathbb{L}$  and we have  $\text{ro sqP}(\mathbb{L}) \cong \text{ro sqP}(\mathbb{Q}_n) \cong \text{ro sq}(\mathbb{S} * \pi)$ .

**MSC:**

06-XX Order, lattices, ordered algebraic structures

**Keywords:**

countable homogeneous universal  $n$ -labeled linear order; sacks forcing;  $\sigma$ -closed forcing

**Full Text:** DOI

**References:**

- [1] Cameron, P.; Laflamme, C.; Pouzet, M.; Tarzi, S.; Woodrow, R., Overgroups of the Automorphism Group of the Rado Graph, *Asymptotic Geometric Analysis*, 45-54, Fields Inst Commun., vol. 68 (2013), New York: Springer, New York · [Zbl 1266.05052](#)
- [2] Fraïssé, R., *Theory of Relations*, Revised edition, with an Appendix by Norbert Sauer *Studies in Logic and the Foundations of Mathematics*, vol. 145 (2000), Amsterdam: North-Holland Publishing Co., Amsterdam
- [3] Jech, Thomas, *Descriptive Set Theory*, *Set Theory*, 493-578 (1997), Berlin, Heidelberg: Springer Berlin Heidelberg, Berlin, Heidelberg
- [4] Kunen, K.: *Set Theory. An Introduction to Independence Proofs*. North-Holland (1980) · [Zbl 0443.03021](#)
- [5] Kurilić, MS, Posets of copies of countable scattered linear orders, *Ann. Pure Appl. Logic*, 165, 3, 895-912 (2014) · [Zbl 1297.06001](#) · [doi:10.1016/j.apal.2013.11.005](#)
- [6] Kurilić, MS, Forcing with copies of countable ordinals, *Proc. Amer. Math. Soc.*, 143, 4, 1771-1784 (2015) · [Zbl 1386.03065](#) · [doi:10.1090/S0002-9939-2014-12360-4](#)
- [7] Kurilić, MS, Different similarities, *Arch. Math. Logic*, 54, 7-8, 839-859 (2015) · [Zbl 1373.03049](#) · [doi:10.1007/s00153-015-0443-x](#)
- [8] Kurilić, MS, Posets of isomorphic substructures of relational structures, *Zb. Rad. (Beogr.)*, 17, 25, 117-144 (2015) · [Zbl 06749575](#)
- [9] Kurilić, MS; Todorčević, S., Forcing by non-scattered sets, *Ann. Pure Appl. Logic*, 163, 1299-1308 (2012) · [Zbl 1250.03102](#) · [doi:10.1016/j.apal.2012.02.004](#)
- [10] Kurilić, MS; Todorčević, S., The poset of all copies of the random graph has the 2-localization property, *Ann. Pure Appl. Logic*, 167, 8, 649-662 (2016) · [Zbl 1432.03059](#) · [doi:10.1016/j.apal.2016.04.001](#)
- [11] Kurilić, MS; Todorčević, S., Copies of the Rado graph, *Adv. Math.*, 317, 526-552 (2017) · [Zbl 1423.03189](#) · [doi:10.1016/j.aim.2017.06.037](#)
- [12] Kurilić, M.S., Todorčević, S.: Copies of ultrahomogeneous tournaments and related structures, submitted
- [13] Lachlan, AH, Countable homogeneous tournaments, *Trans. Amer. Math. Soc.*, 284, 2, 431-461 (1984) · [Zbl 0562.05025](#) · [doi:10.1090/S0002-9947-1984-0743728-1](#)
- [14] Mwesigye, F.; Truss, JK, Countably categorical coloured linear orders, *MLQ Math. Log. Q.*, 56, 2, 159-163 (2010) · [Zbl 1192.03007](#) · [doi:10.1002/malq.200910005](#)
- [15] Simon, P., Sacks forcing collapses  $\aleph_c$  to  $\aleph_b$ , *Comment Math. Univ. Carolin.*, 34, 4, 707-710 (1993) · [Zbl 0797.03053](#)

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