

**Ortaçgil, Ercüment**

**A remark on the topology of higher order frames.** (English) [Zbl 1061.53017](#)

Slovák, Jan (ed.) et al., The proceedings of the 23th winter school “Geometry and physics”, Srní, Czech Republic, January 18–25, 2003. Palermo: Circolo Matematico di Palermo. Suppl. Rend. Circ. Mat. Palermo, II. Ser. 72, 171-176 (2004).

A  $k$ th-order  $G$ -structure on a differentiable manifold  $M$  may be considered as a subbundle of the  $k$ th-order frame bundle  $F^k(M, GL_k)$  of  $M$ . The author studies the bundle projection  $P^2 \rightarrow P^1$  and the homomorphism projection  $G^2 \rightarrow G^1$  of a second- and first-order  $G$ -structure on  $M$ ,  $P^2(M, G^2)$  and  $P^1(M, G^1)$ , respectively. The existence of the second-order flat lifts is proved and certain characteristic classes are defined in terms of a gauge sequence worked out by the author in [Proc. (Conf. of DGA Brno, 1998), 273–283, Masaryk Univ., Brno, 1999] or [Second- order connections via gauge sequence, preprint; per bibs.].

For the entire collection see [\[Zbl 1034.53002\]](#).

Reviewer: [Demetra Demetropoulou-Psomopoulou \(Thessaloniki\)](#)

**MSC:**

**53C10**  $G$ -structures

**57R20** Characteristic classes and numbers in differential topology