ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

7. Lie Groups and Lie Algebras

1991 MS Classification: 17, D, 99
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About Bol algebras

We give the foundation of Bol algebra that can be seen as an algebraic structure apearing under the infinitesimal description of smooth local Bol loop. The structure can also be look as a Lie triple system equipped more with an anticommutative bilineary operation verfying supplmentaries conditions. We introduse the notion of **isotopy of Bol algebras** which is a correct generalisation of the notion of isotopy of (global) loops to the case of local analytic Bol loop. Using the notion of embeding of Bol algebras into Lie algebras, we give the classification of Bol algebras of low dimension. We describe the Bol 3-webs related to Bol algebras and application to differential geometry and theory of relativity. References: L. -V. Sabinin, and P. -O. Mikheev, Quasigroups and differential geometry, *Quasigroups and loops, Theory and application, Berlin, Heldermann Verlag* (1990), 357–430 T. -B. Bouetou, On Bol algebras, *Webs and Quasigroups, Tver, Tver state University,* (1995), 75–83.