1014-34-978 Anatoly B. Korchagin* (anatoliy.korchagin@ttu.edu), Department of Mathematics and Statistics, Texas Tech University, Lubbock, TX 79409-1042. On equations of limit cycles with prescribed topology.

We consider the Bautin, Dolov-Kuzmin, Dolov-Mulko, Dolov-Pavlyuk, and Winkel equations of limit cycles with prescribed topology. We also offer one more such an equation. This topic is related to the second part of Hilbert's 16th problem. (Received September 26, 2005)