

# Colorings of plane graphs - some open problems

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We give a survey on present situation in solving several problems concerning facial vertex colorings of plane graphs where constrains on colorings are given on faces of graphs. We will discuss cyclic (rainbow) colorings, facial odd colorings, facial non-repetitive colorings, and facial packing colorings in general plane graphs and also in some subfamilies of them. More detailed information about these colorings can be found in our surveys [1] and [2].

## REFERENCES

- [1] J. Czap, S. Jendroľ, Facially-constrained colorings of plane graphs: A survey, *Discrete Math.* 340 (2017) 2691–2703.
- [2] J. Czap, S. Jendroľ, Facial colorings of plane graphs, *J. Interconnection networks* 19 (2019) 1940003.