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**Some geometric-arithmetic aspects of separated variable curves.** (English) [Zbl 1360.11076](#)

Blançœil, Vincent (ed.) et al., Singularities in geometry and topology 2011. Proceedings of the 6th Franco-Japanese symposium on singularities, Fukuoka, Japan, September 5–10, 2011. Tokyo: Mathematical Society of Japan (MSJ) (ISBN 978-4-86497-026-6/hbk). Advanced Studies in Pure Mathematics 66, 161-172 (2015).

**Summary:** The paper shows certain geometric-arithmetic aspects with some new observations in consideration of variables separated curves, e.g. relationships with generalized Chebyshev polynomials, Chebyshev pencils, local variant at infinity of Stothers-Mason abc-theorem, Stothers-Langevin pairs, Pell-Abel conics (or polynomial Pell equations), Belyi maps, etc. Several case studies and open problems are discussed.

For the entire collection see [\[Zbl 1320.14001\]](#).

**MSC:**

- 11G30** Curves of arbitrary genus or genus  $\neq 1$  over global fields
- 14H10** Families, moduli of curves (algebraic)
- 14H50** Plane and space curves

**Keywords:**

[Chebyshev polynomial](#); [Stothers-Mason abc-theorem](#); [Stothers-Langevin pair](#); [Pell-Abel conics](#)