

# A note on Griffiths infinitesimal invariant for curves

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Given a generic curve of genus  $g \geq 4$  and a smooth point  $L \in W_{g-1}^1(C)$ , whose linear system is base-point free, we consider the Abel-Jacobi normal function associated to  $L^{\otimes 2} \otimes \omega_C^{-1}$ , when  $(C, L)$  varies in moduli. We prove that its infinitesimal invariant reconstructs the couple  $(C, L)$ . When  $g=4$ , we obtain the generic Torelli theorem proved by Griffiths.

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