



Uniruledness of some moduli spaces of stable pointed curves

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We prove uniruledness of some moduli spaces $\bar{M}_{g,n}$ of stable curves of genus g with n marked points using linear systems on nonsingular projective surfaces containing the general curve of genus g . Precisely we show that $\bar{M}_{g,n}$ is uniruled for $g=12$ and $n \leq 5$, $g=13$ and $n \leq 3$, $g=15$ and $n \leq 2$. We then prove that the pointed hyperelliptic locus $H_{g,n}$ is uniruled for $g \geq 2$ and $n \leq 4g+4$. In the last part we show that a nonsingular complete intersection surface does not carry a linear system containing the general curve of genus $g \geq 16$ and if it carries a linear system containing the general curve of genus $12 \leq g \leq 15$ then it is canonical.

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