

Handwritten characters strokes with mass cubics and their singularities

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In handwriting analysis, the strokes are mainly analysed. A stroke starts at a dot and takes a direction. A geometrical representation for this situation could be based on the rational Bézier curves representation with mass points [1] [2]. A mass point is either a weighted point or a vector. Mass points are used to describe rational Bézier curves. In a handwritten character sketched by a curve some asymptotic directions, double point or cusp can be met. The rational cubics are one answer element. After the state of art on handwriting in connection to computers for representation and recognition, and a recall of rational Bézier curves with mass points, the paper focuses on the cubics based on mass points and their singularities [3],[4]. In the two last papers, the singularities are studied on the point of view of weighted points with non negative weights. A recent work has been led on cubics in the mass points representation system including vectors [5]. The figure 1 shows a stroke model (left), a representation letter (center) and some singularities (right). The representation of such strokes in handwriting characters can be useful in any signature modeling where numerous strokes based on dots and directions occur. It prepares a new way for signature recognition.

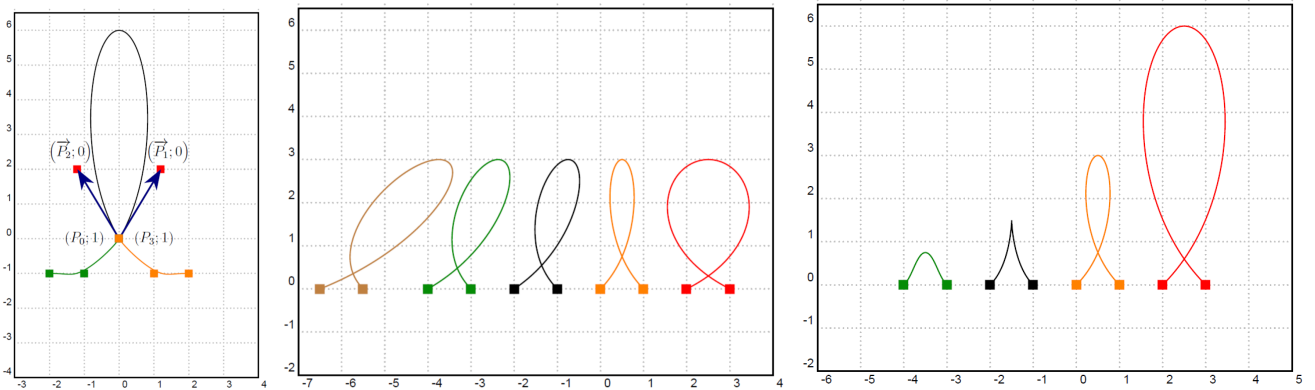


Figure 1: Mass cubics, left : 3 sketched arcs , center : modelling a letter l , right : singularities

References

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