Functional linear regression with derivatives

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Titre	Functional linear regression with derivatives
Type de publication	Article de revue
Auteur	Mas, André [1], Pumo, Besnik [2]
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Type	Article scientifique dans une revue à comité de lecture
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Mots-clés	differential operator [3], functional data [4], linear regression model [5], penalisation [6], spectrometric curves [7]
Résumé en anglais	We introduce a new model of linear regression for random functional inputs taking into account the first-order derivative of the data. We propose an estimation method that comes down to solving a special linear inverse problem. Our procedure tackles the problem through a double and synchronised penalisation. An asymptotic expansion of the mean square prevision error is given. The model and the method are applied to a benchmark dataset of spectrometric curves and compared with other functional models.
URL de la notice	http://okina.univ-angers.fr/publications/ua156 [8]
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Liens

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[3] http://okina.univ-angers.fr/publications?f[keyword]=19887
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