

cases	doc_1		doc_2		decision	id
	authors	<ul style="list-style-type: none"><li>• Ruixin Wang</li><li>• Prateek Jaiwal</li><li>• Harsha Honnappa</li></ul>	authors	<ul style="list-style-type: none"><li>• Ruixin Wang</li><li>• Prateek Jaiwal</li><li>• Harsha Honnappa</li></ul>	DUPLICATES	72
	title	Estimating Stochastic Poisson Intensities Using Deep Latent Models	title	Estimating Stochastic Poisson Intensities Using Deep Latent Models		
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	id	id7575504968492767499	id	id3725695005711230567		
	abstract	We present methodology for estimating the stochastic intensity of a doubly stochastic Poisson process. Statistical and theoretical analyses of traffic traces show that these processes are appropriate models of high intensity traffic arriving at an array of service systems. The statistical estimation of the underlying latent stochastic intensity process driving the traffic model involves a rather complicated nonlinear filtering problem. We develop a novel simulation methodology, using deep neural networks to approximate the path measures induced by the stochastic intensity process, for solving this nonlinear filtering problem. Our simulation studies demonstrate that the method is quite accurate on both in-sample estimation and on an out-of-sample performance prediction task for an infinite server queue.	abstract	We present methodology for estimating the stochastic intensity of a doubly stochastic Poisson process. Statistical and theoretical analyses of traffic traces show that these processes are appropriate models of high intensity traffic arriving at an array of service systems. The statistical estimation of the underlying latent stochastic intensity process driving the traffic model involves a rather complicated nonlinear filtering problem. We develop a novel simulation methodology, using deep neural networks to approximate the path measures induced by the stochastic intensity process, for solving this nonlinear filtering problem. Our simulation studies demonstrate that the method is quite accurate on both in-sample estimation and on an out-of-sample performance prediction task for an infinite server queue.		
	versions		versions			