

cases	doc_1		doc_2		decision	id
	authors	<ul style="list-style-type: none"><li>Van Hoang Nguyen</li></ul>			NOT DUPLICATES	1879
	title	The sharp higher order Lorentz--Poincaré and Lorentz--Sobolev inequalities in the hyperbolic spaces	authors	<ul style="list-style-type: none"><li>Van Hoang Nguyen</li></ul>		
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	urls	<ul style="list-style-type: none"><li>http://arxiv.org/pdf/2001.03950v1</li><li>http://arxiv.org/abs/2001.03950v1</li><li>http://arxiv.org/pdf/2001.03950v1</li></ul>	doi			
	id	id4216556976846945573	urls	<ul style="list-style-type: none"><li>http://arxiv.org/pdf/2001.04018v1</li><li>http://arxiv.org/abs/2001.04018v1</li><li>http://arxiv.org/pdf/2001.04018v1</li></ul>		
	abstract	In this paper, we study the sharp Poincaré inequality and the Sobolev inequalities in the higher order Lorentz--Sobolev spaces in the hyperbolic spaces. These results generalize the ones obtained in \cite{Nguyen2020a} to the higher order derivatives and seem to be new in the context of the Lorentz--Sobolev spaces defined in the hyperbolic spaces.	id	id6111209584354708703		
	versions		abstract	Let $W^{1L^{p,q}}(\mathbb{H}^n)$ , $1 \leq q, p < \infty$ denote the Lorentz-Sobolev spaces of order one in the hyperbolic spaces $\mathbb{H}^n$ . Our aim in this paper is three-fold. First of all, we establish a sharp Poincaré inequality in $W^{1L^{p,q}}(\mathbb{H}^n)$ with $1 \leq q \leq p$ which generalizes the result in \cite{NgoNguyenAMV} to the setting of Lorentz-Sobolev spaces. Second, we prove several sharp Poincaré-Sobolev type inequalities in $W^{1L^{p,q}}(\mathbb{H}^n)$ with $1 \leq q \leq p < n$ which generalize the results in \cite{NguyenPS2018} to the setting of Lorentz-Sobolev spaces. Finally, we provide the improved Moser-Trudinger type inequalities in $W^{1L^{n,q}}(\mathbb{H}^n)$ in the critical case $p = n$ with $1 \leq q \leq n$ which generalize the results in \cite{NguyenMT2018} and improve the results in \cite{YangLi2019}. In the proof of the main results, we shall prove a Pólya--Szegő type principle in $W^{1L^{p,q}}(\mathbb{H}^n)$ with $1 \leq q \leq p$ which maybe is of independent interest.		
			versions			