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	authors	<ul style="list-style-type: none">J. J. Rodriguez-VegaW. A. ZÃ±iga-Galindo	authors	<ul style="list-style-type: none">J. J. Rodriguez-VegaW. A. Zuniga-Galindo		
	title	ELLIPTIC PSEUDODIFFERENTIAL EQUATIONS AND SOBOLEV SPACES OVER p-ADIC FIELDS	title	Elliptic Pseudo-Differential Equations and Sobolev Spaces over p-adic Fields		
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	urls	<ul style="list-style-type: none">https://www.semanticscholar.org/paper/be41ec61628f6f4fc900388c5fa204cc74b1322a	urls	<ul style="list-style-type: none">http://arxiv.org/pdf/0907.5545v1http://arxiv.org/abs/0907.5545v1http://arxiv.org/pdf/0907.5545v1		
	id	id-223822321197391399	id	id3328982446956603113		
	abstract	We study the solutions of equations of type $f(D)u=v$, where $f(D)$ is a p-adic pseudodifferential operator. If v is a Bruhat-Schwartz function, there exists a distribution E , a fundamental solution, such that $u \in E$ is a solution. However, it is unknown to which function space E belongs. We show that if $f(D)$ is an elliptic operator, then $u \in E$ belongs to a certain Sobolev space, and we give conditions for the continuity and uniqueness of u . By modifying the Sobolev norm, we establish that $f(D)$ gives an isomorphism between certain Sobolev spaces.	abstract	We study the solutions of equations of type $f(D,\alpha)u=v$, where $f(D,\alpha)$ is a p -adic pseudo-differential operator. If v is a Bruhat-Schwartz function, then there exists a distribution E_{α} , a fundamental solution, such that $u \in E_{\alpha}$ is a solution. However, it is unknown to which function space E_{α} belongs. In this paper, we show that if $f(D,\alpha)$ is an elliptic operator, then $u \in E_{\alpha}$ belongs to a certain Sobolev space. Furthermore, we give conditions for the continuity and uniqueness of u . By modifying the Sobolev norm, we can establish that $f(D,\alpha)$ gives an isomorphism between certain Sobolev spaces.		
	versions		versions			