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	authors	• Vladimir Kozlov • Jari Taskinen	**authors**	• V. Kozlov • J. Taskinen	DUPLICATES	376
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	id	id-6316163010247574111	**id**	id-6710548294645891965		
	abstract	A first order differential equation with a periodic operator coefficient acting in a pair of Hilbert spaces is considered. This setting models both elliptic equations with periodic coefficients in a cylinder and parabolic equations with time periodic coefficients. Our main results are a construction of a pointwise projector and a spectral splitting of the system into a finite dimensional system of ordinary differential equations with constant coefficients and an infinite dimensional part whose solutions have better properties in a certain sense. This complements the well-known asymptotic results for periodic hypoelliptic problems in cylinders (Kuchment) and for elliptic problems in quasicylinders (Nazarov). As an application we give a center manifold reduction for a class of non-linear ordinary differential equations in Hilbert spaces with periodic coefficients. This result generalizes the known case with constant coefficients (Mielke).	**abstract**	A first order differential equation with a periodic operator coefficient acting in a pair of Hilbert spaces is considered. This setting models both elliptic equations with periodic coefficients in a cylinder and parabolic equations with time periodic coefficients. Our main results are a construction of a pointwise projector and a spectral splitting of the system into a finite dimensional system of ordinary differential equations with constant coefficients and an infinite dimensional part whose solutions have better properties in a certain sense. This complements the well-known asymptotic results for periodic hypoelliptic problems in cylinders (Kuchment) and for elliptic problems in quasicylinders (Nazarov). As an application we give a center manifold reduction for a class of non-linear ordinary differential equations in Hilbert spaces with periodic coefficients. This result generalizes the known case with constant coefficients (Mielke).		
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