۱.	Record Nr.	UNINA9910778949703321
	Autore	Jones Norman <1938->
	Titolo	Structural impact / / Norman Jones [[electronic resource]]
	Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2012
	ISBN	1-139-19977-3
		1-107-22870-0
		1-280-56844-5
		1-139-20568-4
		0-511-82062-3
		1-139-20349-5
		1-139-20208-1
		1-139-20647-8
		1-139-20489-0
	Edizione	[Second edition.]
	Descrizione fisica	1 online resource (xvii, 584 pages) : digital, PDF file(s)
	Classificazione	SCI041000
	Disciplina	624.1/76
	Soggetti	Structural dynamics
		Impact
		Girders
		Plates (Engineering) Shells (Engineering)
		Materiale a stampa
	Note generali	Litle from publisher's bibliographic system (viewed on 05 Oct 2015).
	Nota di bibliografia	Includes bibliographical references and indexes.
	Nota di contenuto	 Machine generated contents note: 1. Static plastic behaviour of beams; 2. Static plastic behaviour of plates and shells; 3. Dynamic plastic behaviour of beams; 4. Dynamic plastic behaviour of plates; 5. Dynamic plastic behaviour of shells; 6. Influence of transverse shear and rotatory inertia; 7. Influence of finite displacements, 8. Strain rate sensitive behaviour of materials; 9. Dynamic progressive buckling; 10. Dynamic plastic buckling; 11. Scaling laws.
	Sommario/riassunto	Structural Impact is concerned with the behaviour of structures and components subjected to large dynamic, impact and explosive loads

which produce inelastic deformations. It is of interest for safety calculations, hazard assessments and energy absorbing systems throughout industry. The first five chapters introduce the rigid plastic methods of analysis for the static behaviour and the dynamic response of beams, plates and shells. The influence of transverse shear, rotatory inertia, finite displacements and dynamic material properties are introduced and studied in some detail. Dynamic progressive buckling, which develops in several energy absorbing systems, and the phenomenon of dynamic plastic buckling are introduced. Scaling laws are discussed which are important for relating the response of small-scale experimental tests to the dynamic behaviour of full-scale prototypes. This text is invaluable to undergraduates, graduates and professionals learning about the behaviour of structures subjected to large impact, dynamic and blast loadings producing an inelastic response.