1. Record Nr. UNINA9910466410603321

Titolo	Human forces in engineering / / edited by Aleks David Atrens, Andrej Atrens
Pubbl/distr/stampa	Berlin ; ; Boston : , : De Gruyter, , [2018] ©2018
ISBN	3-11-053526-2 3-11-053512-2
Edizione	[First edition.]
Descrizione fisica	1 online resource (170 pages)
Collana	De Gruyter Textbook
Disciplina	303.483
Soggetti	Engineering - Social aspects Engineering - Political aspects Engineering - Economic aspects Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Frontmatter -- Preface -- Contents -- Acknowledgements -- List of Contributors -- Engineering in the modern world / Atrens, Aleks D. / Atrens, Andrejs -- Psychology / Atrens, Aleks D. / Saeri, Alexander K. -- Socio-political analysis / Head, Brian -- Engineering economics / Knights, Peter -- The economics of climate change / Quiggin, John -- The leadership challenge for engineers / Grigg, Trevor -- Concluding remarks
Sommario/riassunto	This book aims to provide engineers with an overview knowledge of disciplines such as sociopolitics, psychology, economics, and leadership. Engineers are disproportionately represented in senior management and in leadership roles, and many work outside typical engineering roles. Vital to their success are technical skills, but also, crucially, an understanding of the societal setting within which engineering takes place. Engineers that leverage their technical and analytical abilities with an understanding of the social context are enormously successful, both professionally and in terms of broader impact. This book originated from a recognition that this capacity of engineers can be enhanced with an understanding of the 'human

forces', the phenomena that underpin and govern human interactions. The key ideas were assembled with domain experts from each field, to provide the key critical insights and how these might be practically applied by engineers. The authors provide the basis for the learning necessary to guide high-level strategic decisions, manage teams of diverse skillsets in complex environments, communicate in the context of management and decision-making, and to excel at the interface between a technical discipline and non-scientific fields. Prof. Andrej Atrens is Professor of Materials Engineering at The University of Queensland (UQ). He has experience in Universities and Research Institutes in Switzerland, Thailand, Canada, France, Germany, Sweden, China, USA, Fiji and Australia. Dr. Aleks Atrens is an Honorary Research Fellow at The University of Queensland (UQ). He earned his BE (Hons) in Chemical Engineering in 2007, and his PhD in 2011, both at UQ, where he has subsequently been a lecturer and researcher.