Record Nr. UNINA9910403766003321 Autore Mohsen Alamir Titolo Design to Manufacture of Complex Building Envelopes: Single Layer Envelopes: Mullion-Transom Systems + 3D printed Metal Nodes / / by Alamir Mohsen Wiesbaden:,: Springer Fachmedien Wiesbaden:,: Imprint: Springer Pubbl/distr/stampa Vieweg, , 2020 ISBN 3-658-30204-6 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (XIII, 230 p.) Collana Mechanik, Werkstoffe und Konstruktion im Bauwesen, , 2512-3246 ; ; 56 Disciplina 729.1 Soggetti Construction industry—Management Buildings—Design and construction Building information modeling **Construction Management Building Construction and Design Building Information Modeling** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- State of the Art -- Methods of manufacturing / AM of Metals -- Design Development -- Proof of Concept -- Li3-Method --Summary and Outlook. Sommario/riassunto This book discusses a new method for the design and engineering of complex façades. Based on the file-to-factory concept, the method combines parametric design approaches and additive manufacturing. Parametric design and additive manufacturing are both growing trends that open up new possibilities. Parametric design approaches change how planners / designers perceive building details. Further, new engineering concepts are needed to cope with the increasing complexity of architectural geometries due to the rapid developments in areas such as facade systems, modeling software and digital

manufacturing techniques. The Content • Introduction • State of the Art • Methods of manufacturing / AM of Metals • Design Development • Proof of Concept • Li3-Method • Summary and Outlook The Author

Alamir Mohsen received his bachelor degree in Architecture in 2007. From 2007 to 2012, he worked as a technical architect and designer at various international companies in Cairo, Egypt, where he planned and designed several projects in the Middle East. From 2012 to 2014, he completed his master's degree in Façade Engineering at the University of Applied Sciences in Detmold, Germany. From 2014 to 2018, he worked as a façade engineer at Bollinger und Grohman Ingenieure in Frankfurt, Germany. From 2014 to 2019, he was a research assistant and lecturer at the Technical University Darmstadt. In 2018, he found his startup Lithium Architects GmbH in Frankfurt, and since then has served as company's CEO.