Record Nr. UNINA9910300615003321 Autore Correia Fabrice **Titolo** Nothing To Come: A Defence of the Growing Block Theory of Time // by Fabrice Correia, Sven Rosenkranz Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 **ISBN** 3-319-78704-7 Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (XII, 197 p. 6 illus.) Collana Synthese Library, Studies in Epistemology, Logic, Methodology, and Philosophy of Science, , 0166-6991;; 395 Disciplina 146.4 Soggetti Analysis (Philosophy) Space sciences Mathematical physics Logic **Physics** Analytic Philosophy Space Sciences (including Extraterrestrial Physics, Space Exploration) and Astronautics) Mathematical Applications in the Physical Sciences History and Philosophical Foundations of Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Chapter 1. Taking Tense Seriously -- Chapter 2. Existence, Nota di contenuto Quantification and Identity -- Chapter 3. Temporal Relations --Chapter 4. The Growing Block -- Chapter 5. The Other Contenders --Chapter 6. The Epistemic Objection -- Chapter 7. Bivalence, Future Contingents and the Open Future -- Chapter 8. Classical Theories of Time, and Relativity -- Chapter 9. Spatiotemporaryism. This monograph is a detailed study, and systematic defence, of the Sommario/riassunto Growing Block Theory of time (GBT), first conceived by C.D. Broad. The book offers a coherent, logically perspicuous and ideologically lean formulation of GBT, defends it against the most notorious objections to be found in the extant philosophical literature, and shows how it can be

derived from a more general theory, consistent with relativistic

spacetime, on the pre-relativistic assumption of an absolute and total temporal order. The authors devise axiomatizations of GBT and its competitors which, against the backdrop of a shared quantified tense logic, significantly improves the prospects of their comparative assessment. Importantly, neither of these axiomatizations involves commitment to properties of presentness, pastness or futurity. The authors proceed to address, and defuse, a number of objections that have been marshaled against GBT, including the so-called epistemic objection according to which the theory invites skepticism about our temporal location. The challenge posed by relativistic physics is met head-on, by replacing claims about temporal variation by claims about variation across spacetime. The book aims to achieve the greatest possible rigor. The background logic is set out in detail, as are the principles governing the notions of precedence and temporal location. The authors likewise devise a novel spacetime logic suited for the articulation, and comparative assessment, of relativistic theories of time. The book comes with three technical appendices which include soundness and completeness proofs for the systems corresponding to GBT and its competitors, in both their pre-relativistic and relativistic forms. The book is primarily directed at researchers and graduate students working on the philosophy of time or temporal logic, but is of interest to metaphysicians and philosophical logicians more generally.