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Autore	SADOUL, Georges
Titolo	Dalla fine della 2. guerra mondiale ai giorni nostri : aggiornato al 1972 sotto la direzione di Goffredo Fofi / Georges Sadoul
Pubbl/distr/stampa	Roma : Feltrinelli economica, 1977
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Collana	SC/10 ; 40
Disciplina	791.4309
Soggetti	Cinematografo - Storia
Collocazione	XIII.2. 369/2(XVI C 42/2)
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
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Autore	Bedrossian Jacob
Titolo	Dynamics near the Subcritical Transition of the 3D Couette Flow II
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Descrizione fisica	1 online resource (148 pages)
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Classificazione	35B3576E0576E3076F0676F1035B4076F25
Altri autori (Persone)	GermainPierre MasmoudiNader
Disciplina	620.1/064 620.1064
Soggetti	Viscous flow - Mathematical models Stability Shear flow Inviscid flow Mixing Damping (Mechanics) Three-dimensional modeling Partial differential equations -- Qualitative properties of solutions -- Stability Fluid mechanics -- Hydrodynamic stability -- Parallel shear flows

	Fluid mechanics -- Hydrodynamic stability -- Nonlinear effects Fluid mechanics -- Turbulence -- Transition to turbulence Fluid mechanics -- Turbulence -- Shear flows Partial differential equations -- Qualitative properties of solutions -- Asymptotic behavior of solutions Fluid mechanics -- Turbulence -- Turbulent transport, mixing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title page -- Chapter 1. Introduction -- 1.1. Linear behavior and streaks -- 1.2. Statement of main results -- 1.3. Notations and conventions -- Acknowledgments -- Chapter 2. Outline of the proof -- 2.1. Summary and weakly nonlinear heuristics -- 2.2. Choice of the norms -- 2.3. Instantaneous regularization and continuation of solutions -- 2.4. formulation, the coordinate transformation, and some key cancellations -- 2.5. The toy model and design of the norms -- 2.6. Design of the norms based on the toy model -- 2.7. Main energy estimates -- Chapter 3. Regularization and continuation -- Chapter 4. Multiplier and paraproduct tools -- 4.1. Basic inequalities regarding the multipliers -- 4.2. Paraproducts and related notations -- 4.3. Product lemmas and a few immediate consequences -- Chapter 5. High norm estimate on ² -- 5.1. Zero frequencies -- 5.2. Non-zero frequencies -- Chapter 6. High norm estimate on ³ -- 6.1. Zero frequencies -- 6.2. Non-zero frequencies -- Chapter 7. High norm estimate on ¹ -- 7.1. Transport nonlinearity -- 7.2. Nonlinear stretching -- 7.3. Forcing from non-zero frequencies -- 7.4. Dissipation error terms -- Chapter 8. High norm estimate on ¹_{} -- 8.1. Linear stretching term 1 -- 8.2. Lift-up effect term -- 8.3. Linear pressure term 1 -- 8.4. Nonlinear pressure -- 8.5. Nonlinear stretching -- 8.6. Transport nonlinearity -- 8.7. Dissipation error terms -- Chapter 9. Coordinate system controls -- 9.1. High norm estimate on -- 9.2. Low norm estimate on -- 9.3. Long time, high norm estimate on -- 9.4. Shorter time, high norm estimate on -- 9.5. Low norm estimate on -- Chapter 10. Enhanced dissipation estimates -- 10.1. Enhanced dissipation of ³ -- 10.2. Enhanced dissipation of ² -- 10.3. Enhanced dissipation of ¹ -- Chapter 11. Sobolev estimates -- 11.1. Improvement of (2.45c)and (2.45b). 11.2. Improvement of (2.45a) -- Appendix A. Fourier analysis conventions, elementary inequalities, and Gevrey spaces -- Appendix B. Some details regarding the coordinate transform -- Appendix C. Definition and analysis of the norms -- C.1. Definition and analysis of -- C.2. The design and analysis of _{ } -- Appendix D. Elliptic estimates -- D.1. Lossy estimates -- D.2. Precision lemmas -- Bibliography -- Back Cover.
Sommario/riassunto	"This is the second in a pair of works which study small disturbances to the plane, periodic 3D Couette flow in the incompressible Navier-Stokes equations at high Reynolds number Re. In this work, we show that there is constant , independent of Re, such that sufficiently regular disturbances of size for any exist at least until and in general evolve to be due to the lift-up effect. Further, after times , the streamwise

dependence of the solution is rapidly diminished by a mixing-enhanced dissipation effect and the solution is attracted back to the class of "2.5 dimensional" streamwise-independent solutions (sometimes referred to as "streaks"). The largest of these streaks are expected to eventually undergo a secondary instability at . Hence, our work strongly suggests, for all (sufficiently regular) initial data, the genericity of the "lift-up effect streak growth streak breakdown" scenario for turbulent transition of the 3D Couette flow near the threshold of stability forwarded in the applied mathematics and physics literature"--