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	Nota di contenuto	1. Collaborative Workshop for Women in Mathematical Biology (R. Segal, B. Shtylla, S. Sindi) -- 2. Connecting Actin Polymer Dynamics Across Multiple Scales (C. Copos, B. Bannish, K. Gasior, R.L. Pinals, M.W. Rostami, A.T. Dawes) -- 3. Modeling RNA:DNA Hybrids with Formal Grammars (N. Jonoska, N. Obatake, S. Poznanovic, C. Price, M. Riehl, M. Vazquez) -- 4. Secondary Structure Ensemble Analysis via Community Detection (H. Du, M.M. Ferrari, C. Heitsch, F. Hurley, C.V. Mennicke, B. D. Sullivan, and B. Xu.)- 5. How Do Interventions Impact Malaria Dynamics Between Neighboring Countries? A Case Study with Botswana and Zimbabwe (F. Agusto, A. Goldberg, O. Ortega, Joan Ponce+ , Sofya Zaytseva, S. Sindi, Sally Blower) -- 6. Investigating the Impact of Combination Phage and Antibiotic Therapy (S. Banuelos, H. Gulbudak, M.A. Horn, Q. Huang, A. Nandi, H Ryu, R. Segal) -- 7. Mathematical Modeling of Retinal Degeneration (E. Camacho, A. Dobreva, K. Larripa, A. Radulescu, D. Schmidt, I. Trejo) -- 8. A Framework for Performing Data-Driven Modeling of Tumor Growth with Radiotherapy Treatment (H. Cho, A.L. Lewis, K.M. Storey, R. Jennings, B. Shtylla, A.M. Reynolds, H.M. Byrne).
	Sommario/riassunto	This volume tackles a variety of biological and medical questions using mathematical models to understand complex system dynamics.

Working in collaborative teams of six, each with a senior research mentor, researchers developed new mathematical models to address questions in a range of application areas. Topics include retinal degeneration, biopolymer dynamics, the topological structure of DNA, ensemble analysis, multidrug-resistant organisms, tumor growth modeling, and geospatial modeling of malaria. The work is the result of newly formed collaborative groups begun during the Collaborative Workshop for Woman in Mathematical Biology hosted by the Institute of Pure and Applied Mathematics at UCLA in June 2019. Previous workshops in this series have occurred at IMA, NIMBioS, and MBI.