Student Research Position

BMEN E 3998 Projects in BME or BMEN E 9100 M.S. Projects

Analysis of Tongue Kinematics in Abnormal Breastfeeding Patterns

Breastfeeding is very important for infants' growth and development during their first months. Recently, we resolved a century long scientific controversy regarding the physical mechanisms used by the infant to extract milk during breastfeeding. A major part of this work was based on a new objective and dynamic analysis of ultrasound video clips acquired during breastfeeding. This work was recently published in PNAS and gained impressive attention from lactation consultants. The next phase of this project is to explore the kinematics of abnormal breastfeeding patterns in infants with pathologies such as tongue-tie and other oral and facial problems that interfere with normal patterns of breastfeeding. We look for excellent students (at the level of Senior or Master) who can efficiently get involved in a project of image processing and advanced analysis of the data.

The project will be conducted under the supervision of Prof. David Elad (visiting professor from Tel Aviv University), Prof. Andrew Laine and Mrs. Catherine Watson Genna, a professional lactation consultant (IBCLC -NYC, www.cwgenna.com).

Reference:


For more information contact Prof. David Elad at: de2219@columbia.edu