



St. Xavier's Gait Lab

In Collaboration with

Orthopaedic and Rehabilitation Engineering Center

Marquette University, Milwaukee, WI, USA.

THE ONLY MOTION ANALYSIS LABORATORY OF MUMBAI, INDIA

**COMPREHENSIVE CARE FOR CHILDREN WITH CEREBRAL PALSY
AND NEURO MUSCULAR DISODRDERS**

**THE FIRST AND ONLY MOTION ANALYSIS LAB IN INDIA TO OFFER A
HIGHLY SUBSIDIZED GAIT ASSESSMENT FOR CHILDREN**

GAIT ANALYSIS

BY

XAVIER INSTITUTE OF ENGINEERING

Mahim West, Mumbai

In Collaboration With

OREC
Orthopaedic & Rehabilitation
Engineering Center

Marquette University, Milwaukee, Wisconsin – USA

What Is Gait Analysis?

The Gait and Motion Analysis Laboratory uses state-of-the-art computer technology to capture a 3-D image of a child's walk. Electrodes and reflective markers that are placed on the child measure muscle activity and track motion of body segments. This data, along with a physical examination, can help the team identify specific ways to help improve the child's ability to walk, step and run.

This is the only Gait Analysis Lab in India to offer a highly subsidised motion assessment
We can, therefore, offer our patients the best care possible when evaluating gait and motion challenges and help them reach their full potential.

Who Can Benefit From Gait Analysis?

- Many children with cerebral palsy (CP), spina bifida and other neuromuscular conditions have difficulty walking.
- Walking, stepping or running, can be unsteady or awkward resulting in falls or even injuries.
- As children grow, gait problems can become worse due to changes in the bone or severe muscle tightening.
- When left untreated, gait problems can lead to pain, fatigue, weakness and/or loss of walking ability.
- Children for whom surgery is planned can be referred for a gait analysis. A detailed physical assessment will be performed followed by motion analysis. The report will be available in 3- 4 days and this will help the surgeon in planning treatment of individual child.

Motion analysis may benefit patients with the following medical conditions:

- **CEREBRAL PALSY**
- **MYELOMENINGOCELE**
- **CLUBFOOT**
- **OSTEOGENESIS IMPERFECTA**
- **CHARCOT-MARIE-TOOTH DISEASE (HSMN)**
- **LIMB DEFORMITIES**

STEPS FOR GAIT ANALYSIS

- **HISTORY**
- **PHYSICAL EXAMINATION**
- **STATIC AND VIDEO CAMERA RECORDING**
- **MOTION ANALYSIS**
- **REPORTING**

THE PROCESS OF MOTION ANALYSIS

- **ADHESIVE-BACKED MARKERS PLACED ON TRUNK, LEGS AND FEET**
- **TO ENSURE THE MARKERS ARE FULLY VISIBLE WEAR SHORTS SO THAT THE LIMB IS FULLY EXPOSED**
- **SPECIALIZED CAMERAS WORKING IN CONJUNCTION WITH REFLECTIVE MARKERS CAPTURE PATIENT MOTION WHILE COMPUTER CONVERTS THAT MOTION INTO DATA**
- **AN INDIVIDUAL REPORT IS CREATED FROM RECORDED DATA**
- **A MULTIDISCIPLINARY TEAM MAKES RECOMMENDATIONS BASED ON THE REPORT**
- **THE EXAMINATION IS PAINLESS AND TYPICALLY COMPLETED IN UNDER TWO HOURS**

GAIT LAB TEAM :



DR. GERALD HARRIS, PhD, PE
TECHNICAL ADVISOR
PROFESSOR BIO MEDICAL ENGINEERING
DIRECTOR, OREC
MARQUETTE UNIVERSITY, MILWAUKEE, WI, USA



Fr. Dr. JOHN ROSE SANTIAGO, S.J, PhD
DIRECTOR, GAIT LAB
XAVIER INSTITUTE OF ENGINEERING
MAHIM, MUMBAI.

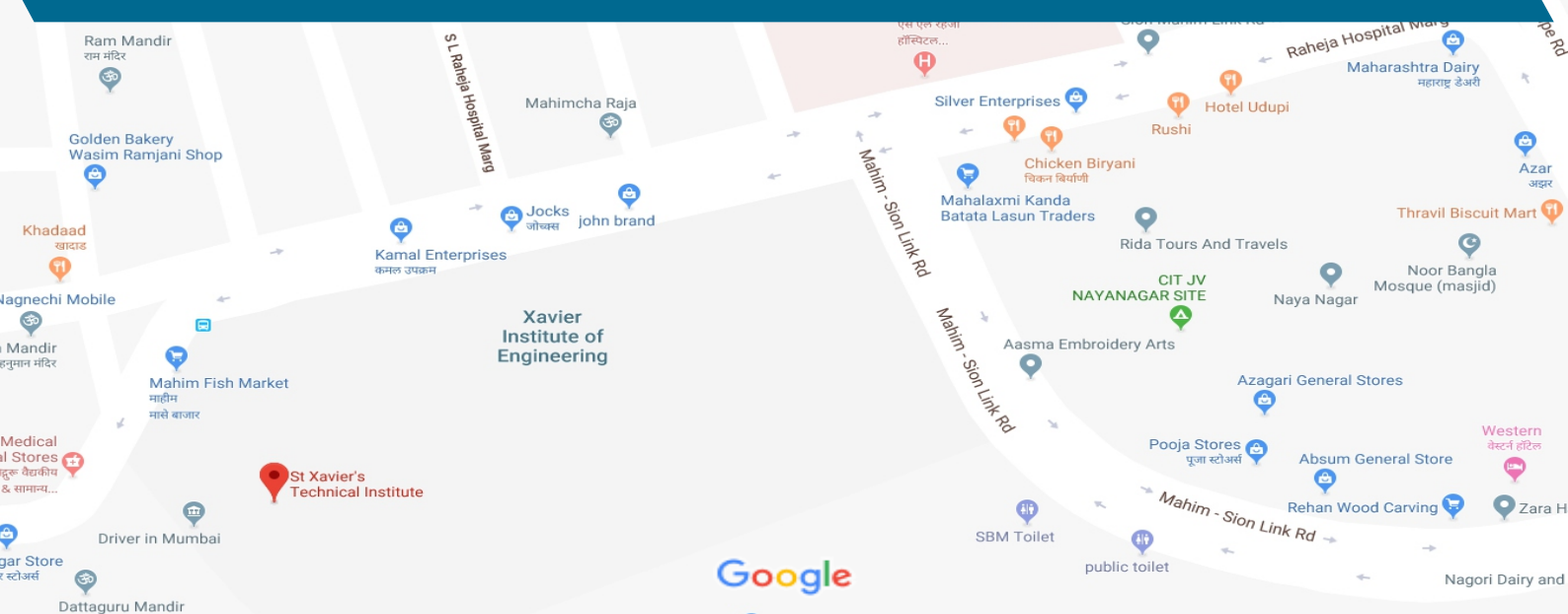


Dr. ATUL BHASKAR
FRCS Orth, FRCS, M.S,DNB, MCh Orth
PAEDIATRIC ORTHOPAEDIC FELLOWSHIP
(SickKids – TORONTO)
PAEDIATRIC ORTHOPAEDIC SURGEON
CONSULTANT FOR MOTION ANALYSIS LAB



Dr. JACOB RAMMER, PhD
RESEARCH ASSISTANT PROFESSOR
GAIT LAB, OREC, MARQUETTE UNIVERSITY
MILWAUKEE, WI, USA

Route :



BOOK AN APPOINTMENT

“CARING FOR PERSONS WITH CEREBRAL PALSY”
THIS SERVICE IS OFFERED AT A HIGHLY SUBSIDISED COST

Do You Know a Child Who
Needs Expert Specialty Care ?

For Appointments / Consultation : 9892176485

Dr. Atul Bhaskar : 9821622992