



**Dyah Ekashanti
Octorina DEWI**

**Home Country
Indonesia**

**Degree
PhD in Biomedical
Engineering**

**Expertise
Image Processing and
Analysis**

**Research Focus
3D Ultrasound
Imaging**

**Host University
University of
Groningen,
The Netherlands**

**Fellowship Awarded
2006**

Dyah Ekashanti Octorina Dewi was born and raised in Surabaya, Indonesia. She and her brother come from a traditional Moslem Javanese family where culture still dominates daily life. However, education is always the priority in her family.

Following high school Dyah moved to Bandung, Indonesia to continue studying informatics, in which she obtained a bachelor's degree, followed by a master's degree in electrical engineering. With the support of her parents she pursued higher education and is now a doctoral student in biomedical engineering at the University Medical Center Groningen-University of Groningen in The Netherlands.

Her interest in biomedical imaging applications inspired her to work on researching the development of an image analysis and visualization system to determine the 3D geometry of the spine of scoliotic patients. In her work she utilizes 3D ultrasound imaging to create images of the human spine that enable medical practitioners to follow scoliosis progression.

Scoliosis is a three-dimensional deformity of the spine that often decreases the quality of life of sufferers. It becomes severe when an extreme increase in the degree of curvature of the spine occurs. Because scoliosis progression requires frequent observation during treatment, ultrasound imaging is proposed for this because it is radiation-free and it is capable of acquiring accurate 3D representations of the spine.

In her research Dyah is concentrating on an automatic approach to obtaining spinal features. This approach is expected to allow medical practitioners to follow the progression of scoliosis more frequently and accurately. Dyah hopes her research will help orthopedic surgeons monitoring the progression of scoliotic patients decide the best form of treatment. When she finishes her studies,

Dyah plans to apply for a teaching position at Bandung Institute of Technology (ITB) in Indonesia.