Joint projects with the following academic groups:

Servicio de Registro y Admisión de Pacientes - Facultad de Odontología
Servicio de Prótesis Buco Maxilo Facial - Facultad de Odontología
Escuela Universitaria de Tecnología Médica – Facultad de Medicina
Departamento de Medicina Intensiva - Facultad de Medicina
Departamento de Fisiopatología - Facultad de Medicina
Departamento de Nefrología – Facultad de Medicina
Cátedra de Anestesiología - Facultad de Medicina
Cátedra de Gastroenterología - Facultad de Medicina
Instituto de Física - Facultad de Ingeniería (IFFI)
Instituto de Computación - Facultad de Ingeniería (INCO)
Instituto de Física - Facultad de Ciencias
Centro de Investigaciones Nucleares (CIN) - Facultad de Ciencias
Espacio Interdisciplinario de la Universidad de la República (EIUR)
Escuela Universitaria Centro de Diseño (EUCD)

International project partners academic groups:

Informed Ltd. - Argentina
Wollongong University - Australia
Monash University - Australia
Centro Interdisciplinar de Tecnologías UFRGS - Brasil
Simon Fraser University - Canada
Universidad de Valparaíso - Chile
Universidad de Patras - Grecia
Universidade Federal Ciencias da Saude de Porto Alegre UFCSPA - Brasil

Collaborating Institutions:

Fondo Nacional de Recursos

Fundación Julio Ricaldoni

Fundación Teletón Uruguay

Technology Transfer and Commercialization:

REDIENTE and CALANEST for commercialization under contracts by:

BULLSEYE
SOLUCIONES INFORMATICAS

The nib is part of the Institute of Electrical Engineering of the Faculty of Engineering
www.iie.fing.edu.uy

Morosoli Award 2008 to the National Culture

Continuing education courses:

For professional producers or equipment maintenance.

Teachers, postgraduates and collaborators:

Florencia Arbío docente nib, Henia Balter CIN, Sergio Basalo, Marcelo Belén, Arturo Briva Fisiopatología, Fernando Brum, Juan Bussi FQuim, Henry Cohen Gastroenterología, Alicia Da Rosa Fpat, Marcelo David, Laura De Castellet, Ana Erosa INCO, Horacio Failache IFFI, Jacques Fauquex, Liliana Gadola Nefrología, **Daniel Geido docente nib**, Alvaro Gómez IIE, Gabriel González-Sprinberg FCien, **Rodolfo Grosso docente nib**, Javier Hurtado Fisiopatología, **Freddy Kugelmass docente nib, Jorge Lobo docente nib,** Susana Lorenzo doctoranda, Fernando Machado Emergencia y Trauma, Eduardo Mizraji FCien, Carlos Negreira FCien, José Pedro Podestá, Sylvia Piovesan FOdont, Francisco Pracca Medicina Intensiva, Gregory Randall IIE, Karina Rando Anestesiología, Carolina Rabin FCien, Adriana Redin, Sebastián Ressi, Inés Salveraglio FOdont, Rafael Sanguinetti, Cristina Santos Lab. Funcional Respiratorio, **Eduardo Santos maestrando y docente nib**, Martín Silva, Fernando Silveira IIE, **Franco Simini Coordinador del nib**, Roberto Soler FOdont, Daniel Thevenet maestrando, Cristina Touriño Cultivos Celulares, Jorge Triñanes INCO, Verónica Umpierre Gastroenterología, **Luciana Urruty EUCD y docente nib,** Martín Vallarino y Horacio Venturino entre otros.

Present at HOSPITALAR 2010, 2011, 2012 in Sao Paulo, Brazil and Expomédica 2012 in Montevideo.

Uruguay XXI and Fundación Julio Ricaldoni support nib within the Uruguay Stand at HOSPITALAR fair in Sao Pablo, Brazil, 22 to 25 May, 2012.

núcleo de ingeniería biomédica
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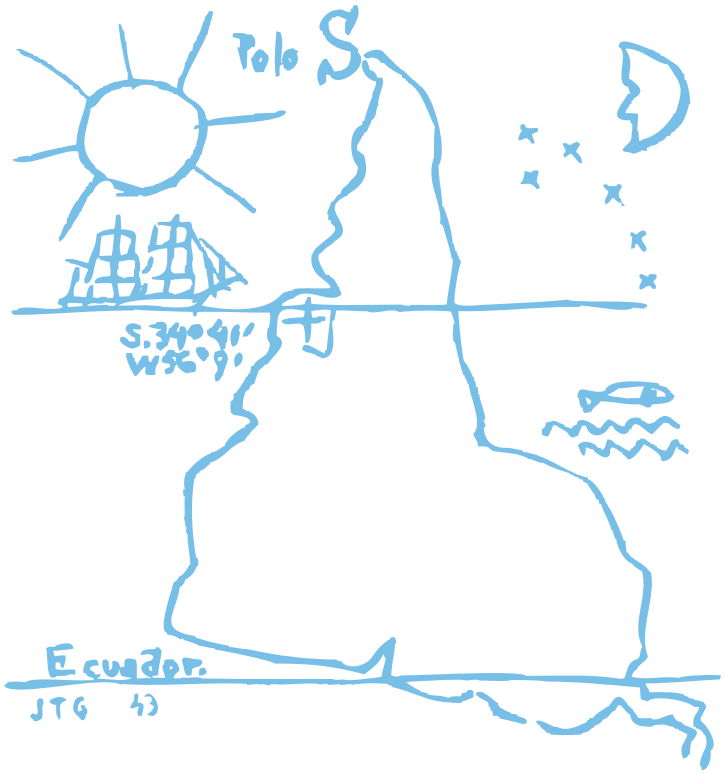
nib
biomedical engineering department

UNIVERSIDAD DE LA REPUBLICA
URUGUAY



Schools of Medicine and Engineering
of the Universidad de la República
URUGUAY

Training Professional Innovators

Based in the University Hospital of Montevideo, **nib** is faced daily by biomedical instrumentation problems derived from clinical practice and research. Students and staff are required to innovate producing prototypes after development and research.

"In Hospital" Training

Internships of students (both undergraduate and graduate) in Hospitals allow them to acquire experience in biomedical instrumentation and sanitary infrastructure as well as patient and operator safety measures, under remote supervision of **nib** staff.

Biomedical Engineering Postgraduate Studies

Within the Electrical Engineering Program, selecting a Biomedical Engineering Thesis topic and graduate assignments, a personalized graduate training may be defined and defended. Additionally in 2012 a Biomedical Engineering Doctorate program may be applied for at the PROINBIO (Biomedical Research Program of the School of Medicine).

Commercialization

Prototypes with potential dissemination are offered to Industry for under commecialization contracts with the Universidad de la República. In 2012 two software products are on the market under UR license, a phototherapy lamp is sold and a new prototype commercialization contract is being negotiated.

Consulting and Tests

nib is avaliable for Industry or Government bodies to test devices and for consulting. On going consulting to the National Health Insurance Fund of Uruguay (FNR) for patient and operator safety in Health Care Institutions since 2006: interdisciplinary teams analyse electrical networks and biomedical instrumentation management to foster best practices and standard compliance. nib also performs tests and custom defined measures for Industry.

Prototype Development

PREMAX

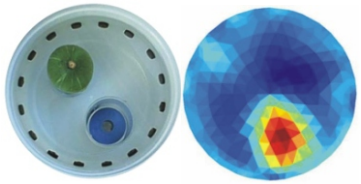
Maximum lung pressure and SNIFF measurements for respiratory rehabilitation and sports medicine (ready for commercialization by Industry)

CALORNAT

Baby temperature servocontrol for open incubators and home settings (ready for commercialization by Industry).

IMPETOM

Impedance tomography to image pulmonary oedema on a continuous basis.



ABDOPRE

Intraabdominal pressure reduction control by an bladder catheter.

SIMVENT

Patient simulator to test mechanical ventilators.

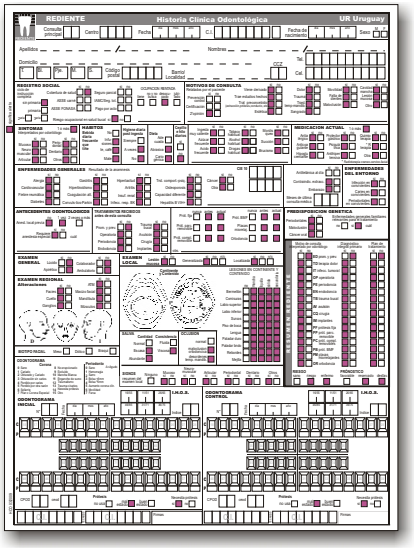
Other prototypes are described in www.nib.fmed.edu.uy : PANTOJO prótesis ocular móvil, BiliLED neonatal phototherapy (CONTROLES S.A.), PESOPAC "in bed" patient weight, i.a..

Computer Systems for Quality of Attention

With the experience of IT systems developed in Uruguay for Latin America and the Caribbean (PAHO/WHO).

REDIENTE

Clinical records and dental care Quality Assurance with personal Dental Passport



CALANEST

Anesthesia records and quality control

CALANEST and REDIENTE are disseminated by Bullseye under Universidad de la República license.

TRAUMAGEN

Access to DICOM images of patient hospitalized available in the cloud and TRAUMA clinical record.

GEULMAPA + GULMOVIL

Ultraviolet radiation detection from moving vehicles (bus, trucks, trains) and display of UV risk maps with accumulated doses, for dermatological disease prevention.

HEMOLÓGICA

Safety system to manage blood donation and reception on a national basis.

MENUOJO

Mouse driver based on head band detected eye movements. Easy to operate eye tracker because no cameras are involved.