Abstract for an invited poster at "The First Pakistan International Biophysics Symposium including 1st National Biophysics Student Meeting and Research Competition", Department of Biomedical Engineering, NED University of Engineering & Technology, Karachi, Pakistan, June 2nd - 3rd 2012.

How to implement the teachings of nature?

Severin Ehret¹, Nicolas Neumann-Micheau¹, Peter Piccottini¹, Ille C. Gebeshuber^{2,3}

Division of Biomimetics in Energy Systems, Carinthia University of Applied Sciences (CUAS), Villacher Strasse 1, 9800 Spittal an der Drau, Austria
Institute of Microengineering and Nanoelectronics (IMEN), Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Malaysia
Institute of Applied Physics, Vienna University of Technology, Wiedner Hauptstrasse 8-10/134, 1040 Wien, Austria

email: severin.ehret@edu.fh-kaernten.ac.at

In the course of the last half century the concept of biomimetics has become ever more refined. Various sub-disciplines developed and found their way into the curricula of colleges, into R&D departments and influenced the way scientists investigate natural systems. However, researchers and engineers that can integrate the knowledge and skills required to tackle the interdisciplinary field of biomimetics remain scarce. In an attempt to team young graduates from a variety of academic backgrounds and to qualify them to overlook the field of biomimetics in energy systems, a homonymous M.Sc. program has been established at the Carinthia University of Applied Sciences. As few programs with a comparable approach exist so far, innumerable new approaches are likely to arise from the work of interdisciplinary groups striving to cross barriers that still exist between engineers and scientists, between developers and investors. One of the most crucial elements to the success of this endeavour is to bring together young, motivated and qualified people. Costly experimental effort, in contrast, can be minimized if existing knowledge and experimental data is re-evaluated. Keeping furthermore in mind that Pakistan, as well as many developing countries, possesses a great natural diversity makes this approach seem very well suited to boost innovation here.