

Piotr Augustyniak
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Professional Profile

Highly developed:	biomedical signal processing (including electrocardiology) visual pursuit and human perception
Proven ability to:	medical electronic equipment
Good working knowledge of:	academic teaching, curricula etc.

Academic Qualifications

Degrees:

M.Sc. - 10.11.1989, from AGH University of Science and Technology, Krakow, (electronics)
thesis title: *"Interface between the electronystagmograph and the analyzing microcomputer"* (in Polish).

Ph.D. - 11.06.1996, from AGH University of Science and Technology, Krakow, (electronics, with honors)
thesis title: *"The application of adaptive time-frequency filtering in calculation of diagnostic parameters from the electronystagmogram"* (in Polish).

habilitation - 5. 07. 2004, from AGH University of Science and Technology, Krakow, (automatics and robotics)
dissertation title: *"Adaptive discrete representation of electrocardiogram"* (in Polish).

professor degree - 26. 02. 2013, from the President of Poland (technical sciences)

Research Interest

- ECG-based steganography (transparent embedment of auxiliary data),
- Noise studies and non-uniform sampling of the ECG,
- Videoplethysmography (distant visual measurement of blood pulse),
- Behavioral studies in elderly (tracking of daily living activities),
- Affective computing (physiological measurements of emotional status),
- Human-computer interfaces,

Scholarships and Awards

2009 Medal of Polish Education Commission

2009, 2015 Team Award for Didactic Achievements (first degree) from AGH-UST Rector

2009, 2010, 2012, 2014, 2015, 2016 Individual Award for Scientific Achievements (second or third degrees)
from AGH UST Rector

2011 Honorary Polish Congress Ambassador

2015 Medal for Long Standing Service (Silver Grade)

Employment History

- At AGH University of Science and Technology, Krakow Poland (<https://www.agh.edu.pl/>):
 - 1.12.1989 - research assistant (medical electronics)
 - 1.10.1995 - assistant professor (medical electronics)
 - 26.06.2006 - 30.09.2012 - head of the Multidisciplinary School of Engineering in Biomedicine
 - 1.02.2007 - associate professor (biomedical engineering)
 - 1.12.2016 - full professor (biomedical engineering)
 - 1.01.2018 - head of the Department of Biocybernetics and Biomedical Engineering

- At Aspel S.A. Zabierzow, Poland (<http://www.aspel.com.pl/>):
26.05.1997 - 31.07.2008 – research engineer (ECG interpretation software)
- At School of Finances of Law, Bielsko-Biala, Poland (<https://wsfip.edu.pl/>):
1.10.2004 – 30.06.2014 - associate professor (information technology)

Publications (best/most recent)

1. Jaromir Przybyło, Eliaz Kańtoch, **Piotr Augustyniak**, *Eyetracking-based assessment of affect-related decay of human performance in visual tasks*, Future Generation Computer Systems, vol. 92, 2019, pp. 504–515, **IF=3.999**
2. Agnieszka Swierkosz, **Piotr Augustyniak**, *Optimizing Wavelet ECG Watermarking to Maintain Measurement Performance According to Industrial Standard*, Sensors, vol. 18(10), 2018, paper 3401, **IF=2.455**
3. **Piotr Augustyniak**, Grażyna Ślusarczyk, "Graph-based representation of behavior in detection and prediction of daily living activities", Computers in Biology and Medicine, vol. 95, 2018, pp. 261-270 doi: 10.1016/j.compbiomed.2017.11.007 **IF=2,168**
4. **Piotr Augustyniak**, Magdalena Smoleń, Zbigniew Mikrut and Eliaz Kańtoch "Seamless Tracing of Human Behavior Using Complementary Wearable and House-Embedded Sensors" Sensors, vol. 14(5), 2014, pp. 7831-7856, **IF: 2.964**
5. **Piotr Augustyniak** *Autoadaptivity and optimization in distributed ECG interpretation*. IEEE Trans on Information Technology in Biomedicine, vol. 14 no 2, 2010, pp. 394-400, **IF: 1,69**

Major Grants (as Principal Investigator)

- Title: Perceptual method for compression of electrocardiogram
Period: 1999-2002
Centre: AGH University of Science and Technology (8T11E00717)
Funds: State Committee for Scientific Research: EUR 58.000
Number of persons: 10
- Title: Optimization of the software of cardiac telemonitoring recorder
Period: 2004-2007
Centre: AGH University of Science and Technology (3T11E 00127)
Funds: State Committee for Scientific Research: EUR 115.000
Number of persons: 12
- Title: Investigation of multimodal sensing of selected physiological parameters in human with assessment of their utility in the premise infrastructure of disabled
Period: 2008-2012
Centre: AGH University of Science and Technology (N N518 426736)
Funds: State Committee for Scientific Research: EUR 212.000
Number of persons: 15

Presentations/Conferences

Over 200 conference presentations.

Invited lectures/ Keynotes:

- International Conference on Information Technology in Biomedicine 2008
- Conference on Medical Informatics and Technologies 2011
- Conference on Measurement and Modeling in Medicine 2011
- International Conference on Innovative Technologies in Biomedicine 2013
- 21-st Polish Conference on Biocybernetics and Biomedical Engineering 2018

Supervising/Reviewing Activity

- Individual student guidance:
Bachelor graduates: 35
Master graduates: 57
Ph.D. supervised: 9
- Reviews of applications for academic degrees:
Ph.D.: 22
habilitation: 9
professor degree: 8
- Reviews of grant proposals, midterm- or final reports: 142
- Reviews of journal submissions: 89

Professional Memberships

- Polish Society of Medical Physics - since 1995
- Polish Association Biomedical Engineering - since 2003
- IEEE Engineering in Biology and Medicine Society (M'2004, SM'2009)
- IEEE Signal Processing Society (President of Poland Chapter 2019-21)
- International Society of Electrocardiology – since 2005
- Elected member of the Committee for Technical Sciences, Polish Academy of Arts and Sciences (2011 – 2020)
- Elected member and Board member of the Committee for Biocybernetics and Biomedical Engineering, Polish Academy of Science (2011 – 2020)
- Member of Polish Committee for Standardization, expert of Technical Committee KT 302 for Medical Information Technology

Extra-Circular Activities

- administrating the own BME website: <http://inzynieria-biomedyczna.com.pl/> (in Polish),
- travel and amateur filmmaking,
- mountain hiking, skiing and sailing (occasionally running),
- amateur acoustic guitar playing and singing.

Languages

- mother tongue: Polish,
- advanced: English, French,
- basic: German, Russian

Other Skills

- computer programming: C/C++, HTML, PHP, Matlab
- office management: financial responsibility, fundraising, career planning, disabled workers, etc.
- conference planning, organizing and chairing,
- computer graphics and advertising: Adobe Photoshop, Corel Draw, Inkscape, Adobe Premiere