

# تکنولوژی‌های نو در آموزش الکترونیکی

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**Abstract:** Computing is one of the fastest growing and most rapidly evolving disciplines. These changes have had profound effects on many areas of practice. In recent years exciting new areas within the field of computing have emerged including cloud computing, internet of things, smart sensors, business intelligence, business process modeling, services computing, data centres, data mining, a focus on smart cities and planet, and cyber-security. The same has taken place in various subfields of computing including the area of computational intelligence. This presentation will discuss the impact of emerging technologies, and the applications of computational intelligence on education.

Areas in the field of computational intelligence which have the potential to impact online education practices include computer vision, gesture based interfaces, games, intelligent and affective tutoring systems, life-like agents and natural language processing. I will present these technological developments and the novel research I have undertaken with teams at Unitec, Massey University, and Auckland University in New Zealand. These include the world's first affective educational system 'Eve', educational games, 'Dr Eve', machine vision and facial expression and gesture recognition, and machine translation technologies that promise to revolutionize practices in online education in the coming years.

## About Prof Abdolhossein Sarrafzadeh

Dr Sarrafzadeh has a PhD in Computing, and over 20 years of academic and industrial experience. Currently Professor and Head of Department of Computing at Unitec Institute of Technology in Auckland, New Zealand, Dr Sarrafzadeh is an experienced academic leader, established researcher and has established excellent industry networks. Dr Sarrafzadeh is internationally known for his work in the areas of computational intelligence, adaptive user interfaces, software engineering and machine translation. In recent years, he has developed one of the world's first real-time facial expression and gesture recognition systems. He has also developed a novel vision based targeted advertising system which has been patented in New Zealand and internationally. Dr Sarrafzadeh is one of the founders and director of the Centre for Computational Intelligence in Cyber Security (CICS) at Unitec, which collaborates with institutions in NZ, Japan, Australia and the US, including several industry partners.

Dr Sarrafzadeh's pioneering research work has had significant impact and has gained publicity with a number of radio and major newspaper interviews including interviews with CBS Evening News, TV1, TV3, TV9, World TV, RadioNew Zealand National, NewstalkZB and others as well as numerous international media articles including Le Monde in France, the Dominion Post and the New Zealand Herald. Dr. Sarrafzadeh has served on the editorial boards of journals, program and organizing committees of numerous international conferences, and is also a popular invited speaker at international conferences and symposiums. He has supervised over 40 Masters and Doctoral theses and examined a number of PhD theses. His research has attracted research funding and produced over 140 publications.