



John Buntin, Professor
Department of Biological Sciences

Professor Buntin's research deal with how hormones interact with the brain to influence behavior. His particular focus during much of his career has been on maternal behavior and the pituitary hormone prolactin. During the course of this research Professor Buntin has made a number of fundamental breakthroughs in understanding prolactin's actions at the neural circuit and cellular/molecular level. Many of these advances have been made possible by the systematic and insightful way he has developed and characterized a unique avian model system to study these questions. This work has important implications for reproduction and rearing offspring in all vertebrate species including our own.

Dr. Buntin has been very productive and his work is held in very high regard. One of the more objective criteria one can use to support this assertion is his success in competing for extramural funding. It is very difficult to get a regular research grant (R01) from the National Institute of Health. It is even more difficult to have it renewed over several funding periods. Dr. Buntin's main NIH grant was funded without interruption for over 20 years. This alone places him among the best established scientists. However, NIH chose to further recognize the quality of his work by selecting him for a MERIT award in 1989. This mechanism rewards the best scientists by allowing them to continue their work for extended periods before competitive review and places him in the very top group of NIH investigators. In addition to funding, other metrics such as the rate at which his work is cited and the quality of the journals he chooses to publish in clearly place him in the top bracket of scholars inside and outside of UWM.



Michael Fendrich, Professor
Director, Center for Addiction and Behavioral Health Research (CABHR)
Helen Bader School of Social Welfare

Professor Fendrich has been instrumental in the development of additional research proposals and ultimately successful grants while at UWM. These efforts have been centered on cutting edge research examining substance abuse. In addition, Professor Fendrich is a nationally recognized expert in substance abuse research and serves on many national panels for federal agencies, such as the National Institute of Health, as a reviewer of research proposals. He also serves on the editorial boards of two major addiction journals. He is currently working on a number of federally funded projects, including an evaluation of a drug treatment court in Milwaukee, the first of its kind in the history of the city. Additionally, one of his recent projects include an important linkage to private industry conducting research on a new biomarker for heavy alcohol consumption. This is an example of a public/private partnership to address a serious issue facing the community and private business.

Professor Fendrich is a first-rate scholar who continues to pursue research on substance abuse that will serve to address the serious nature of addiction and its varied consequences for society. One of his more recent presentations, for example, was a joint collaboration between CABHR and Miller-Coors examining high-risk drinking among college students. The product of the partnership was a nationally attended conference held at UWM on high-risk drinking and the importance of a prevention message to students. This initiative was truly multidisciplinary and involved many scholars from varied disciplines.

Under Professor Fendrich's direction, CABHR has expanded its focus to include researchers in nursing, communications, psychology, and gerontology, exploring such diverse topics as depression, trauma, delinquency, child maltreatment, and criminal justice issues as well. This has led to the creation of an ongoing summer research methods seminar, hosted by CABHR, and directed toward improving the research skills of faculty.

Professor Fendrich has secured funding from a diverse set of funders ranging from NIH to local governments, across private and public sources, and for more theoretical and basic science studies to very practical applied efforts to improve local community health. Because of his measurement focus and his analytic acumen, he can be involved in a diverse set of scholarship and evaluation activities. It is remarkable how well he weaves a focus on topics he has programmatically undertaken across these diverse types of grants. He connects very refined theoretical and scholarly collaborators that may not have research focused careers or high-level training into projects that promote their advancement. He is able to help those how come to work with him to do their best work and to carefully develop the research and interpret the results. In modeling this approach to mentoring and to conducting research he has been instrumental in the training of several scientists who have gone on to successful careers in their own right.



Marleen Pugach, Professor
School of Education
Department of Curriculum and Instruction

The major focus of Professor Pugach's work is her research on the role of and need for collaborative models across the areas of general and special education.

Professor Pugach began this work in her role as the Coordinator of the Dean's Grant project at the University of Illinois from 1978-1982. At that time, the federal legislation concerning the education of all children, including children with disabilities, had just been passed. It led to the mandate to educate all children in the least restrictive environment possible and focused on mainstreaming many students with disabilities into regular classrooms rather than isolating them in self contained special education settings. Dr. Pugach is one of the most respected scholars, nationally and internationally, in the area of collaboration between general and special educators. Further, her advocacy for models of inclusion of special education students is a consistent theme throughout her work. This has naturally led her to also focus on issues of equity, diversity and social justice. As a result of this commitment, she has been able to direct her research to help define teacher education at UWM and throughout the national and international education community.

Her role as a highly regarded scholar is reflected in a number of awards and honors which include her role as a visiting scholar at the University of Otago in New Zealand, at Arizona State University, and her Fulbright at the University of Alberta. In addition, she has received several prestigious awards from national organizations. These include the Merrill Award for Excellence in Teaching and Teacher Education from the International Council for Exceptional Children and the Margaret Lindsey Award from the American Association of Colleges for Teacher Education for significant impact on teacher education through research.

Most recently, Professor Pugach has been working with the Council of Chief State School Officers in partnership with the American Association of Colleges for Teacher Education to study the collaborative Programs in General and Special Education. This work has led to an action guide for policy makers.

Professor Pugach is a researcher with a long history of significant contributions to teacher education.



Vladislav Yakolev, Professor
Department of Physics

Professor Yakolev's research is focused on applications of advanced optical spectroscopy to biological and medical imaging. He has developed a broadband nonlinear Raman microscopy which he successfully applied for the number of biological problems, where precise and immediate knowledge of the chemical content is extremely important.

Professor Yakolev's career path is varied and substantial. First, he made significant optical engineering contributions that helped move femtosecond lasers from laboratory tools into systems that could be used to solve applied real-world problems – in this case some of the very first work in using femtosecond lasers for surgery (now a billion dollar industry). After his industrial work, Dr. Yakolev went onto research at the University level where he helped pioneer some of the first broadly tunable, ultrashort pulse (<30fs) optical parametric amplification systems. He applied these systems to unique problems – demonstrating the first possibility of coherent control of molecular systems for examples. Further, he helped break one of the most significant barriers in chirped pulse amplification – gain narrowing. By careful control of dispersion, and the first demonstration of gain flattening filters that could be used in Ti:sapphire regenerative amplifiers, Dr. Yakolev was a key member of the team that produced amplified sub-20-fs pulses all the way to the joule level for the first time. In addition, he played a significant role in producing ultrafast x-rays with these energetic, ultrashort pulse laser systems demonstrating some of the very first ultrafast x-ray diffraction experiments.

Dr. Yakolev's creativity has continued as a valued faculty member at the University of Wisconsin-Milwaukee. There he has developed novel forms of microscopy and applied them to significant biological (e.g. molecular motors) and materials science problems (e.g. photonic crystals). The strongest metric of his success is the ability to bring in competitive peer-reviewed grants. Presently Dr. Yakolev has two NIH and two NSF grants. This is a very remarkable achievement.

In summary, Dr. Yakolev has made significant optical contributions both from an engineering and scientific perspective and has done so over a period of almost twenty years.