HABIBA KADIRI, University of Lethbridge
New bounds for $\psi(x; q, a)$

The prime number theorem in arithmetic progressions establishes that, for a and q fixed coprime integers, then $\psi(x; q, a)$ is asymptotic to $\frac{x}{\phi(q)}$ when x is large. We discuss new explicit bounds for the error term which provide an extension and improvement over the work of Ramaré and Rumely. Such results depend on new results about the zeros of the Dirichlet L-functions of respectively Platt and Kadiri. In addition our method makes use of smooth weights. This is joint work with Allysa Lumley.