FUNCTION:
  diff_norm

PURPOSE:
  Computes the difference norm between 2 matrices of equal size

PARAMETERS:
  A - matrix A
  B - matrix B
  m - number of rows in A and B
  n - number of cols in A and B

RETURNS:
  difference norm

NOTES:
  */

double diff_norm(double** A, double** B, size_t m, size_t n) {
  double diff, norm = 0.0;
  size_t i, j;

  for( i = 0; i < m; i++ ) {
    for( j = 0; j < n; j++ ) {
      diff = A[i][j] - B[i][j];
      norm += diff * diff;
    }
  }

  return norm;
}