Function to run belief propagation on a node 'k'

Inputs: A, b, sigma - Linearisation parameters obtained from SLR u, W - Old mean and variance of node 'k' E - matrix containing info about the edges which can communicate z - message(distance) matrix between two nodes R - Variation of measured message 'z' Outputs: ui, Wi - updated mean and variance for node 'k'

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%-------------------------------------------------------------------------

function [ui, Wi] = doBP(A, b, sigma, u, W, k, E, z, R)

  % Kalman update for all neighbouring nodes.
  for p=1:113
    if (E(p,k)&&(p~=k))

      alpha = z(p,k) - A(:,1:2,p,k)*(transpose(u(p,:))) - b(p,k);
      H = A(:,3:4,p,k);
      T = R + sigma(p,k) +
 A(:,1:2,p,k)*W(:,:,k)*transpose(A(:,1:2,p,k));

      ze = H*(u(k,:)');
      S = H*W(:,:,k)*(H') + T;
      shi = W(:,:,k)*(H');
      a = u(k,:)' + shi*(S^(-1))*(alpha - ze);
      Ae = W(:,:,k) - shi*(S^(-1))*(shi');

      u(k,:) = a';
      W(:,:,k) = Ae;
    end
  end
  ui = u(k,:);
  Wi = W(:,:,k);
end
```

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Not enough input arguments.

Error in doBP (line 14)
    if (E(p,k)&&(p~=k))
```

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